The Dynamic Journey: Insights into the Challenges and Facilitators Encountered in Implementing the Dynamic Approach to School Improvement

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September 2018

This dissertation is submitted for the degree of
Doctor of Philosophy

Faculty of Education • University of Cambridge

Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.

It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University of similar institution except as declared in the Preface and specified in the text.

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Julia A. Griaznova

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Abstract

The research study presented in this dissertation provides insight into the process of implementing the dynamic model of school improvement from the perspective of the practitioners. The Dynamic Approach to School Improvement (DASI) is a theory-based and evidence-driven model designed by Creemers and Kyriakides (2012) to improve educational practice in schools. While the dynamic model has been studied extensively through quantitative means, little is known about the practitioner perspective and experience implementing this approach. Teachers are thought to influence the extent of improvement observed by schools in the course of reform because they apply and engage with reform initiatives directly (Mendenhall, Iachini, & Anderson-Butcher, 2013). I base this study on the premise that teacher experience with DASI is essential knowledge for further development of the dynamic approach. I specifically focus this study on teacher experience with challenges and supports encountered over the life span of the reform, as these factors can influence practitioner motivation and engagement with the improvement process.

This exploratory multiple-case study was undertaken in four English primary schools. Over the course of the 2015-2016 school year, I worked individually with four schools to introduce the DASI framework and support the implementation of an improvement project reflective of the schools' needs. Data collected for this study gave rise to several key findings. First, elements of the DASI framework were identified by practitioners in a number of cases to function as facilitators for improvement, suggesting that for participating schools the structure of the dynamic model was supportive of the improvement process. A second finding of this study was that that teachers identified some of the same barriers and supports as have been noted in prior school improvement research. Time, buy-in, inter-disciplinary partnerships and teacher collaboration were identified by practitioners in this study as factors that had an impact on their experience with reform (Rhodes & Houghton-Hill, 2000; Mendenhall, Iachini, & Anderson-Butcher, 2013; Ainscow, Dyson, Goldrick, & West, 2016). Additionally, the school culture appeared to have a significant influence over the reform effort as well as the development of factors into supports or barriers. The final finding of this study was that practitioner perception of reform success appeared to be influenced by the number and severity of barriers and facilitators teachers experienced in the course of reform.

Acknowledgements

I would like to thank the following individuals and entities for their support,

Cambridge University Trust, your generosity allowed me to pursue my dreams. I am endlessly grateful for your support.

My supervisor, Panayiotis Antoniou for standing by me through both MPhil and PhD. Your encouragement and feedback helped me through the toughest days.

The schools that joined the project and took me along on their journey. I am thankful for your time, honestly and willingness to share your stories.

My parents, Надежда Николаевна Грязнова and Александр Ливерьевич Грязнов, who sacrificed so much for me, supported me in every possible way and believed in me with unfaltering certainty. I could have never done this without you.

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Chapter 1: Introduction

1.1 Overview

This exploratory multiple-case study was undertaken in four English primary schools to explore the perceived impact of, and staff response to, the Dynamic Approach to School Improvement (DASI) framework. DASI is a theory-based and evidence-driven model designed by Creemers and Kyriakides (2012) to improve educational practice in schools. Over the course of a school year, I worked in partnership with four schools to introduce the DASI framework and support the implementation of an improvement project reflective of the schools' needs. I collected data from numerous sources over the life span of the project to develop a multidimensional picture of each school's journey. Action plans and staff interviews were analysed to explore teacher perceptions towards the improvement project, and learn of the challenges and supports they encountered over the life span of the reform. I structure this thesis in six chapters, locating the literature review and methodology chapters in the beginning, then presenting the findings and discussion chapters in the second half of the work. In this chapter I briefly discuss the concept of an effective school, introduce the field of school improvement, and following, reflect on the role of teachers in school improvement initiatives. Then, I proceed to share my own experience with school improvement and how I came to develop and undertake this project. I conclude the chapter by discussing the rationale and research aims of this study, as well as the contribution it makes to the field.

1.2 What is an Effective School?

It is a deceptively simple question. Before an answer can be given it begs the resolution of yet another query – what is the purpose of school? (Bogotch, Miron, & Biesta, 2007). Were I to canvass opinion arbitrarily, I would be hard pressed to present two identical answers. Even in the field of educational effectiveness the objective of education and the definition of what constitutes an effective school vary according to the theoretical lens through which the scholar perceives the question (Chapman, 1991). The goals of education and how schools should achieve those goals continue to be topics of debate both within academia and outside of it. The construction of what a school is, and its essential purpose, is influenced greatly by the social, political and economic climate of a nation (Reynolds, et al., 2014). In present day society, some establish that the purpose of education is above all to instill moral values in citizens, while others emphasise the acquisition of social or labour skills, and others still insist it is to imbed knowledge and a passion for learning (Arifeen, 2012).

While society wrestles with these questions, education policies that establish school purpose and direction are set out by national governments. Globally, education policies have been significantly influenced by the ever encroaching tide of globalization and specifically the knowledge economy discourse (Kolokitha, 2016). The World Bank establishes that economic development of nations is tied to the education outputs of those nations (World Bank Institute, 2007). Knowledge economy discourse is promoted by international organizations, such as the World Trade Organization and OECD, whose influence is evident in present day national and international education policies. In addition to economic growth, the knowledge economy is promised to widen participation in education, encourage lifelong learning, and promote equity and social justice (Unger, 2019). However, Engle (2015) argues that in competing for economic dominance, governments pay lip service to broad school outcomes, while implementing policies that emphasise job training as the purpose of schools. Indeed, politicians around the world have taken up the mantra that schools must prepare citizens who are able to compete in the global economy. In this international 'education race', the winners produce a highly skilled workforce, thereby asserting the influence of their country globally (Kolokitha, 2016). Thus, politically, effective schools are necessarily high achieving schools because high achieving schools are expected to produce the desired work force. Around the world standardized tests have become the primary measure of school success, and high grades may provide schools with additional funding, while unsatisfactory results may lead to intervention from the local bodies. Schools in many countries, UK and United States among them, are held accountable for student performance first and foremost, to the near exclusion of anything else (Townsend, MacBeath, & Bogotch, 2016).

This is a worrying trend, for a number of reasons. First, academic outcomes are not necessarily an accurate measure of a school's effectiveness in generating those outcomes. A low-attaining school may be highly effective if it meets students' needs and supports them in making significant academic progress over the course of the year (Teddlie, & Stringfield, 1993). Yet such a school would still be identified as failing, if, despite making significant personal progress, students still score below the national averages (Chapman, et. al., 2016). Second, the current overwhelming focus on attainment eclipses other purposes and outcomes of schools. Reynolds et al., (2014) stress the need for scholars working in the fields of educational effectiveness and school improvement to increase the type of outcomes on which school effectiveness is evaluated. Much of the research in these fields does often rely on measures of student attainment because this outcome remains understandably a key goal of

schooling and it is one for which schools are held responsible (Kelly, & Clarke, 2016). Additionally, other potential purposes of education, such as the development of empathy, a global citizenship mindset or leadership skills, are not always easy to document, and assessment of school effectiveness in producing these outcomes is even more challenging. However despite these barriers there has been a marked, and welcome, increase in the number of qualitative studies examining a broad range of school outcomes. Recent studies have looked at student well being, mental health, motivation, behaviour, attitude towards school, aspirations, and student enjoyment of education (Can, et al., 2017; Van De Gaer, Pustjens, Van Damme, & De Munter, 2009; De Fraine, Landeghem, Van Damme, & Onghena, 2005; Modin, & Ostberg, 2009; Elbe, et al., 2017; Van Landeghem, Van Damme, Opdenakker, De Fraine, & Onghena, 2002). There is a growing recognition and support of the multiple purposes and outcomes of education, and discourse on the need to gauge school effectiveness beyond student achievement is slowly moving towards realization. A notable example is the 2015 PISA test, which included a collaborative problem solving element alongside academic measures (OECD, 2017).

In this section I briefly reviewed how effective schools are conceptualized socially, politically and academically. At the conclusion I return to the original question. What is an effective school? It is still today a Pandora's box of a concept, and there is no one single universally supported definition. At this juncture I present definitions of school effectiveness that align most closely with my perception of the concept. Townsend (1994) categorises an effective school as an institution that provides a high quality education which achieves both affective and academic goals. In such a school all students show progress across these outcomes as measured by numerous in-school and external measuring techniques. Luyten, Visscher, and Witziers, (2005) define an effective school as one that meets students' needs and prepares students for life after school, which encompasses both their personal development and their ability to enter the work force. I cite these definitions at the end rather than the beginning because present day understandings of the purpose of school, and notions of what constitutes an effective school must be understood in the context of the history, the practical reality, and the complexity that to this day surrounds these concepts.

1.3 A Brief Introduction to the Field of School Improvement

Schools have long experienced reform of one type or another, and the academic field of school improvement began to take shape in the 1970s (Hopkins, & Reynolds, 2001). In a relatively short time, the field has gone through major changes in perspective and direction. In this section I provide a brief primer to the subject, delving deeper into the history and trends in the following chapter. Quite likely the most cited definition of school improvement is the one provided by David Hopkins, who defines school improvement as a "strategy for educational change that enhances student outcomes as well as strengthening the school's capacity for managing change" (1996, p. 32). Hopkins (2001) later expanded on this definition, emphasising that change is achieved through altering both classroom practice and school policy in ways that facilitate teaching and learning. Another well-known definition of school improvement is provided by Harris, (2002) who explains school improvement by categorising two objectives of the endeavour - to promote school wide organizational advancement and to support achievement of all students. Similar themes are identified by other scholars, who establish that school improvement is a process of change undertaken with the goal of uplifting student outcomes (Barth, 1990; Sammons, Davis, Day, & Gu, 2014; Coe, 2009). Thus, presently school improvement is seen to be entwined with improving student outcomes. It is then perhaps unsurprising that global interest in school improvement is at an all-time high, as international education rankings such as PISA and TIMSS have unintentionally turned student achievement into a worldwide competition (Bates, 2014; Bush, 2017; Altrichter & Kemethofer, 2015). Once published, country rankings make national news across the world, often creating a media frenzy as perceived success or failure is made public. England has not remained untouched by this phenomenon and improvement efforts, whether grassroots or nationally driven, have become a never ending cycle for English schools (Bates, 2014). Yet, a great many improvement projects are implemented on short term basis, initiated and dropped within a term, as schools feel pressured to keep up with educational trends (Coe, 2009; Hall, 2018). The desire for quick, high impact results also contributes to the merry go round of improvement initiatives (Harris, & Chrispeels, 2006; Kelly, & Clarke, 2016). If the newly implemented improvement approach fails to provide spectacular results immediately, it is quickly forgotten in the pursuit of another.

This was, in the early years of the field, also a trend in school improvement research, as countless studies reported findings from one off projects based on obscure strategies that were rarely if ever repeated again (Harris, Chapman, Muijs, & Reynolds, 2013). However, with the development of models and frameworks, the academic field of school improvement

has devoted much attention to systemic, longitudinal research, and significant progress has been made in explaining factors key to attaining successful reform. Yet, much of the process of improvement that transforms a struggling school into an effective one still remains a mystery (Reynolds, 2016). Recent research still shows that schools rarely if ever improve in a linear manner and at a steady, unrelenting pace (Bellei, Vanni, Valenzuela, & Contreras, 2016). The process of school improvement is unpredictable and it remains unclear why under similar contexts some school improvement initiatives are successful while others are not. Furthermore, difficult as it is to achieve, change in student outcomes is even more challenging to retain, as numerous findings indicate that there is little stability in the improvement that has been achieved, over time (Elmore, & City, 2007; Townsend, MacBeath, & Bogotch). Researchers working in the field of school improvement have begun to address these points, seeking to identify key structures and independent variables present in the school context that impact the rate and degree of success (Hallinger, & Heck, 2011). Unsurprisingly, the school staff, and namely the teachers, are seen to play a major role in school improvement.

1.4 Teachers and School Improvement Initiatives

Teddlie, & Stringfield (2006) emphasise the significant role of teachers in school improvement initiatives by reflecting that "Students don't learn at the principal's knee or that of the reform designer. They learn in a classroom, under the direct tutelage of a teacher." (p. 34). As individuals who engage with students for half a dozen hours every weekday, it is undeniable that teachers play a vital role within the school. Numerous scholars have found that at the classroom level, teachers influence student achievement more than any other variable (Hanushek, & Rivkin, 2007; Rockoff, 2004; Kirkpatrick, & Johnson, 2014). Time has seen the role of teachers expand to include an array of responsibilities outside of the classroom; in addition to their fixed workload, teachers are now expected to engage in activism, take on leadership roles that once belonged to headteachers and deputy heads, and implement school improvement initiatives as part of their regular duties (Bartlett, 2004). It is the teachers' role in reform that has come to the attention of scholars working in the field of educational effectiveness and school improvement. In practice, teachers are responsible for the day to day implementation of tasks associated with school improvement and are seen as having significant impact on the success or failure of reform (Stoll, Earl, Anderson, & Schildkamp, 2016). Yet when teachers are the centre of study, historically the focus has overwhelmingly been on cases of resistance and improvement failure. Teacher resistance is a

popular topic in the fields of educational effectiveness and school improvement, and there is much written about how to combat teacher opposition and incentivize engagement in school reform (Knight, 2009). LEAs, school heads and other scholars are the intended audience of this literature, which not infrequently propagates a top down approach to school reform. Although teachers possess specialist knowledge pertaining to the practical aspects of school improvement, theirs is a voice rarely at the forefront of literature relevant to the field (Kirkpatrick, & Johnson, 2014). While plenty has been written about what teachers should do differently in the course of reform for the school to achieve successful improvement, few studies have asked teachers about what they struggle with in the process of change. Teacher experience with the challenges and facilitators encountered in the course of implementing school improvement initiatives has not been studied in great depth (Orange, 2014). What research has been done in this area, identified a variety of factors that influence teachers and their participation in school reform. Quality and availability of resources, peer collaboration, school culture, burn out, buy-in, efficacy, school leadership, and prior experience with school improvement, are all factors that have been noted as sources of challenge or support by teachers engaged in various forms of school improvement (Bellei, Vanni, Valenzuela & Contreras, 2016; Hanushek, & Rivkin, 2007; Kirkpatrick, & Johnson, 2014; Weingarten, 2012; Knight, 2009; Ainscow, Dyson, Goldrick, & West, 2016; Bush 2017). In addition to the aforementioned factors, it has been noted that it is not enough for teachers to just go through the motions of implementing school improvement; for reform to result in lasting change, it must resonate with and be relevant to the teachers in question. Jošić, Džinović, and Ćirović (2014) emphasise that "…there are no successful changes if teachers are not motivated to change themselves, if they do not see the sense and purpose of their engagement in those changes, and if they do not develop different teaching practice" (p. 232). Therefore, it is vital for school improvement initiatives to take into account the context of the school and learn what is important, applicable and feasible for teachers involved in implementation so as to meaningfully engage staff in changing practice in the long-term. I oriented the undertaken research towards the study of the teacher experience in implementing the DASI approach for these reasons and also due to personal investment in the topic.

1.5 Personal Context

My interest in school improvement arose from repeated exposure to the field both in theory and practice throughout my studies and subsequent employment in education. Prior to pursuing graduate studies, I had a chance to experience school improvement initiatives in a number of diverse schools, and have seen the field through the lens of an undergraduate student, early childhood educator, and teacher. I entered each field placement and job with enthusiasm common to newcomers but soon began to experience a sense of déjà vu as I watched familiar patterns repeat time and again. Principals would welcome each new project with goodwill and interest but as the year went on, teacher engagement and active participation in improvement initiatives often faded, and interventions that seemed so promising fell by the wayside. The frameworks and theories I learned about in my studies were often missing in the improvement strategies that were being implemented, and degree of success was tough to identify as assessments of outcomes, formal or otherwise, were rarely carried out. While working in the field I took part in a dizzying array of initiatives myself. One school seamlessly traded ten minutes of independent reading for ten minutes of exercise midway through the year, without much evident impact on either area. I suspect that this case was influenced in no small part by the fact that the allotted ten minutes were scheduled right in the middle of the first period, and teacher compliance was less than absolute. In another school, a girl's leadership initiative provided sporadic and loosely related lunch time seminars to a handpicked group of students, and culminated inexplicably not with a project but the group's attendance of a pop concert. Additionally, I encountered both sides of the great technology debate, and the two opposing initiatives were implemented for the same purported outcome. One school introduced a ban on technology in the classroom so as to promote student attentiveness, while the other school devoted teacher professional development days to training staff how to integrate student phones and laptops in their lessons - so as to promote student attentiveness. Despite my burgeoning interest in the field of improvement, I was soon exhausted of supporting one project after another, and began to view the plethora of initiatives I encountered at each school as burdensome. Thus, feeling somewhat ambivalent about what I experienced in practice, I decided to pursue graduate studies in leadership and school improvement to examine the field from the other side.

Over the course of my graduate studies I came to be introduced to the DASI framework, which captured my attention for a number of reasons. After years of trendy, transient initiatives, I was pleased to find a framework that had been systemically studied and evaluated for validity and impact. Similarly, I appreciated that DASI was relevant both

academically and practically, being an approach that is theory driven and rooted in evidence based practice. Consequent research on DASI brought to my awareness the rigorous evaluation of impact and effectiveness involved in each study of this model. While the idea of conducting a similar project greatly appealed to me, I was cognizant of the fact that a study of such magnitude was beyond what I could achieve by myself within the confines of the PhD program. Nevertheless I was eager to learn more about DASI and with the assistance of my supervisor, established contact with Leonidas Kyriakides and Bert Creemers. The scholars were supportive of my interest, and were willing to share select research instruments should I pursue my own project on DASI. With these instruments and a largely qualitative approach, a study that was previously outside of my means, was now feasible. While the study I have undertaken draws knowledge from prior research on the DASI framework, I maintain ownership of the venture by selecting an area that is under researched and to which I have a particular connection. Coming myself from a teaching background, I am interested in learning the teacher perspective on the dynamic model, and that is where I turned the focus of the study.

1.6 Research Aims, Contribution and Significance

This study was undertaken to explore the lived experience of teachers as they implement an improvement project based on the DASI framework. In particular, I was interested to learn what obstacles and supports teachers experienced, as they went about the project. This is an area of the DASI framework that has not been studied in great depth previously, and this thesis begins to lay the foundation for future research. The DASI framework, although proven effective, has had variable impact across the multitude of schools that have implemented this approach to improvement (Creemers, & Kyriakides, 2012). It is not yet understood why some schools are more successful than others when implementing the dynamic model. In this study, I consider the experience of teachers in implementing DASI, which is a factor that could potentially have an impact on how effectively the dynamic model is applied and consequently how successful the reform is in the long term. I selected an exploratory case study method of research, seeking only to gather new data in this area of study rather than to explain the phenomenon or provide cause and effect conclusions (Cohen, Manion, & Morrison, 2011). Given that this thesis is exploratory in nature, generalizability of findings is neither possible nor was intended at the outset, rather the goal was to study an area of the DASI framework that received little attention and to lay the groundwork for future studies.

The school level was at the forefront of my mind during the development of this study, as it was important for me to engage in research that had real-world impact. My background is in teaching, and in my experience, too little of the research that takes place in schools is done for the simultaneous benefit of the researcher and the schools involved. Oftentimes, the school staff is required to undertake additional work day to day to support researchers that produce theory or practice recommendations years later. While such research is indisputably valuable, it does little in terms of providing present day feedback and support for the participating schools (Stoll, 1996; Reynolds, 2001). As such, one of the goals of this research, was for the study itself, to be useful for the participating schools in real time. The schools which chose to participate in the study all planned and implemented a yearlong improvement project relevant to their specific context. Thus, the extra work undertaken by the school staff was done for the betterment of their school as well as for the benefit of the study.

This thesis also contributes to the DASI framework by providing analytic groundwork from which future, explanatory research studies can develop (Verma, & Malik, 1999). Although the findings are not generalizable beyond the sample, through this research I was able to develop beginning insights into the process of implementing the DASI approach in England, as well as the challenges and supports teachers encounter in the duration. Such knowledge provides a starting point for future work that may in time change how the DASI initiatives are implemented. The results of this research provide practitioners, researchers and stakeholders with valuable information regarding the practical aspects of implementing an improvement approach, and shed light on some of the reasons school improvement initiatives succeed or fail. If practitioners and other stakeholders are aware of and prepared to address challenges to school improvement initiatives, the success rates and the degree of improvement experienced by schools may be higher. The findings of this study are beneficial to multiple stakeholders in the field of school improvement, including the schools which took part, and researchers working to further theoretical development of the DASI framework.

Chapter 2: Literature Review

2.1 Overview – Literature Review

I begin this chapter by discussing educational effectiveness and school improvement, both historically and in the present context. Next, I detail some of the criticisms that these fields have faced over the years. Following, I introduce the DASI framework and compare it to several other models of school improvement. In the section that follows I discuss the structure of the dynamic framework in greater detail. In the second half of this chapter, I examine school improvement initiatives from the teacher perspective, and consider the barriers and supports teachers experience while participating in school reform. To conclude this chapter I present the research questions and objectives of the study.

2.2 Educational Effectiveness and School Improvement

Educational effectiveness and school improvement originated as two distinct traditions (Creemers, & Kyriakides, 2008). The field of educational effectiveness set out to learn what makes a school effective, and which factors influence students' social and educational attainment (Fidler, 2001). In the same period, school improvement research was focused on exploring the process of change, seeking to learn how schools could be made better (Hopkins, 1996). These two traditions experienced rapid growth and change, each transitioning through five overlapping phases in the fifty years since their conception. The subsections that follow detail the evolution of these fields from their formation to the present interconnected iteration. This topic closes with a discussion of some of the major criticisms that these traditions continue to face.

2.2.1 Educational Effectiveness Research

Creemer, and Kyriakides (2008) define educational effectiveness research (EER) as one "which aims to develop the knowledge base about what works in education and why" (p. 5). Researchers working in this field seek to pinpoint factors at the system, school, classroom and student level that can account for the differences observed in student outcomes (Reynolds, 2001). The key objective of this field is to resolve why some teachers, classrooms and schools are more effective than others (Creemers, Kyriakides, & Sammons, 2010). The foundation of research in educational effectiveness can be traced back to the early 1970s, when the results of several studies suggested that school factors had only a modest influence on student outcomes whereas family background had impressive significance (Harris, 2001). In response, Edmonds (1979), and Rutter, Maughan, Mortimore, Ouston, and Smith (1979),

among others, engaged in effectiveness studies, seeking to gather evidence that schools could indeed impact students' lives (as cited in Reynolds, et al., 2014). Early studies of educational effectiveness demonstrated ideologies of equity and social justice in that they sought to show that every child, regardless of their background, could learn in effective schools (Hopkins, & Reynolds, 2001). This period of educational effectiveness research was also concerned with developing insight into the extent of the differences in student outcomes between schools. Although a young field of study at the time, EER quickly gained political attention, due to the rising sentiment that schools were weakening and students were leaving unprepared for the demands of the real world (Reynolds, Kelly, & Chapman, 2016). Politically, the still developing EER field was convenient because it allowed governments to shift responsibility for student outcomes to individual schools (Townsend, MacBeath, & Bogotch, 2016). Starting from the 1980s, many countries, UK among them, began to implement policies that gave schools more responsibility over their own management. Schools began to feel great pressure to produce high student outcomes, now that they were 'freed' from central control (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). The double edged sword that was self management went hand in hand with increased accountability, and in this too educational effectiveness research findings were used by politicians (Kelly, & Clarke, 2016).

In the mid 1980s EER entered the second phase of its development. In this period scholars had begun to seek out which specific factors allowed some schools to be more effective at supporting student achievement than others (Reynolds, 2001). Factors of influence were found to exist at multiple levels, including the system, school, classroom and student, and studies began to use multilevel methodologies to explore these levels further. In this period of EER, scholars produced lists of factors that described effective schools; at this time effective schools were defined as ones that added value and produced high student outcomes (Creemers, Kyriakides, & Sammons, 2010). It is these lists that were used by various governments for the purpose of accountability, and set off the international trend for national education reform. Measurement tools and external assessments were developed on the basis of EER research, and used to evaluate school effectiveness (Reynolds, Kelly, & Chapman, 2016). In England, Ofsted integrated EER into its inspection framework, and accountability was introduced through the Education Act of 1980 and the Education Reform Act of 1988 which mandated schools to report student assessment results both to the public and the government (Reynolds, Teddlie, Chapman, & Stringfield, 2016). Although these actions were undertaken to increase educational effectiveness nationally, the rise of performativity and accountability in this period began to put ever more pressure on individual

schools and teachers; failure to produce high outcomes could result in special measures or the closure of the school.

The third wave of educational effectiveness research evolved through the 1990s. In this period, educational effectiveness research produced models that sought to explain why and how factors influenced student achievement (Creemer, & Kyriakides, 2008). Some models focused on economic factors, calculating financial input being invested into schools and considering output in terms of student achievement. Other models were developed around social factors, such as family background, and socio-economic status (Hopkins, & Reynolds, 2001). Methodological techniques in EER increased in complexity, reflecting the advancement of concepts within the tradition. In addition to the study of factors and outcomes in terms of input/output, research turned to the study of input/process/output (Reynolds, et al., 2014). First large scale reviews of EER research also took place during this period, summarising key findings of the field to date (Reynolds, Teddlie, Chapman, & Stringfield, 2016). The field of EER continued to hold political attention, and countries continued to pass policies and legislations that mandated schools to implement local or national reform initiatives, and integrate the educational effectiveness knowledge base into daily practice. The General Accounting Office in the United States reported in 1989 that the greater half of the school districts were implementing, or planning to implement educational effectiveness research for the purposes of improvement (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). Schools internationally were beginning to engage in more reforms than ever before, though the extent to which these reforms were rooted in the EER knowledge base has been questioned (Reynolds, et al., 2014).

The 2000s brought about the fourth phase of educational effectiveness research (Reynolds, Teddlie, Chapman, & Stringfield, 2016). In this period, EER devoted greater attention to the classroom and system levels of education, as well as to longitudinal and experimental studies to better understand the multilevel factors that influence schools (Creemers, Kyriakides, & Sammons, 2010). Closer ties between EER and the school improvement research tradition led to an increase in qualitative and mixed method studies, and a greater consideration of school context. Research continued to benefit from better design, sampling and the development of more precise statistical software (Creemer, & Kyriakides, 2008). Structural equation modelling and more advanced multilevel modelling analysis allowed researchers to study indirect relationships between levels, factors and student outcomes (Chapman, et al., 2016). Such improvements led to greater insight into interschool differences, as well as within school differences with regards to outcomes.

Additionally, the fourth phase of EER is marked by the internationalization of the field (Kelly, & Clarke, 2016). Multinational joint research has allowed for the comparison of schools and factors across countries (Reynolds, et al., 2014). Moreover, international assessments like TIMSS and PISA also provide valuable information for the EER field about global educational effectiveness and trends. However, some scholars warn about the pitfalls of this development, questioning the use of similar strategies and assessments in different countries. Mortimore (2001) argues that approaches aiming to increase educational effectiveness must be congruent with the existing education system, cultural attitudes, and political and economic realities of the country in question. Additionally, Mortimore (2001) and Stoll, Wikeley, and Reezigt (2002) question whether globalisation pushes emerging nations to embrace internationally popular templates of reform and assessment that may not serve them well.

Fourth phase processes in EER continue alongside the emerging fifth phase of development that came with the turn of the decade. In this phase, educational effectiveness is conceptualized as a dynamic entity in which factors and relationships exist at, and interact across and within levels, and produce changeable outcomes for schools at all effectiveness levels (Chapman, et al., 2016). EER has also expanded its gaze to study not only schools or districts but entire education systems, internationally (Reynolds, Kelly, & Chapman, 2016). Simultaneously, greater attention is being devoted to teachers, and their roles in educational effectiveness and school reform (Reynolds, et al., 2014). Recent reviews of the field have identified areas of strength and weakness in EER, and put forth future directions for the evolution of this tradition (Reynolds, et al., 2014; Chapman, et al., 2016). As EER continues to evolve, it looks to have a greater impact on policy, and practitioners, and to engage in research that looks to the future of what education and effectiveness could be (Chapman, et al., 2016).

2.2.2 School Improvement Research

Current definitions of school improvement reflect both its history and evolution, referencing the tradition's more recent focus on enhancing student outcomes through changing practices and policy at the school and system levels, as well as its long lasting commitment to developing the school's own ability to implement and adapt to change (Hopkins, 2001). Hopkins, Stringfield, Harris, Stoll and Mackay (2014) locate the first phase of school improvement in the work of Miles (1967, 1975), who connected the theory of organizational development to organizational health in schools. These papers raised the topic

of organizational culture and education quality, and described dimensions of healthy organizations, discussing such factors as morale and adaptability, ideas which continue to reverberate in the field of school improvement to this day (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). Much of school improvement in this period took the form of school self-renewal on the basis of organizational development techniques (Fullan, Miles, & Taylor, 1980). This same period also marks the start of concentrated research into the process of school change, which so defines the field of school improvement. Studies by McLaughlin (1993) and Sarason (1982) raised the importance of school culture, engagement with the change process, and challenges associated with externally mandated innovation. This early research set the direction for the field and informed the following stages of the school improvement tradition.

The second phase of school improvement research can be traced through the 1980s. In the beginning of this period, research was practitioner focused and often practitioner initiated. Action research, where practitioners took on the role of researcher and engaged in improvement projects based in their own schools gained popularity (Harris, & Chrispeels, 2006). These grassroots efforts were generally restricted to a specific class or even individual students, with the goal of developing practical strategies which could be applied by educators in the classroom (Hopkins, Ainscow, & West, 1994). Student achievement was selected as a goal no more frequently than any other outcome, and practitioner focus could be turned to any objective that was deemed to be an area of need (Hopkins, & Reynolds, 2001). Teacher ownership of improvement was high in this period, however, there was little theoretical backing or systemic research. This period of school improvement was also influenced by the system wide change in school management in multiple countries. United States, England, and several provinces in Canada and Australia moved towards de-centralization of school governance, embracing the concept of self-managing schools (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). Individual schools were given more responsibility over themselves while the powers of district, board and local education authorities were decreased. Self-management carried with it the anticipation of improved student outcomes, and school were expected to use their newfound management abilities to engage in self-reform (Wrigley, 2005). School self-evaluation became a staple in school improvement attempts, though the success of this technique was reported to be tepid at best because few schools were able to successfully proceed to the stage of developing and implementing change strategies after identifying priorities for change (Reynolds, et al., 2014).

These struggles were noted and the third wave of school improvement in the 1990s began to offer schools practical approaches for project development, management and realization (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). This period also saw the wide spread implementation of models for school improvement, such as Coalition of Essential Schools and Success for All (Fullan, 2001; Slavin, et al., 1996). These models were designed for whole school reform, and integrated school improvement and educational effectiveness research. Models for improvement varied greatly in focus and degree of prescription, and outcomes of these programmes were similarly diverse. Some schools experienced great success under models developed in this period while other did not, demonstrating that improvement, even under a programme, was difficult to achieve and sustain (Harris, & Chrispeels, 2006). Nonetheless schools continued to engage in improvement initiatives at an ever increasing rate, as many countries invested significant funds in financing national and local reform efforts with the goal of raising student achievement (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). The second generation of improvement models followed the first in this period, including programmes such as Improving the Quality of Education for All (IQEA), and High Reliability Schools (Hopkins, Ainscow, & West, 1994; Hopkins, 2002; Schaffer, Reynolds, & Stringfield, 2006). Although the second generation of models were similarly whole school focused, they also sought to support changes in teacher behaviour and skill levels (Harris, & Chrispeels, 2006). Many of these models took into account school context, teacher ownership and emphasised the need for schools to develop a culture that was open to change. Politically, the focus in this period continued to remain on accountability and many countries introduced national assessments; Benavot, and Köseleci, (2015) report that over half of developed and developing countries have implemented some form of national assessment since the 1990s.

In the 2000s school improvement research entered a fourth phase of growth. A number of different developments mark this phase. One was the recognition that schools are not an island on to themselves, but part of a broader system of education, and wide scale improvement requires cooperation between the levels (Reynolds, Kelly, & Chapman, 2016). System level reform came to the forefront of the field, alongside the acknowledgment that districts and local education authorities have a role to play in school improvement, a welcome turnaround from the rhetoric of the 1980s (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). Similarly, research into interschool collaboration and professional learning communities has indicated that school networks can support school improvement (Muijs, 2010; Chapman et al., 2010). However, these developments do not indicate a loss of interest

in the school level, rather current discourse suggests the need for joint implementation of both top-down and bottom-up approaches (Harris, & Chrispeels, 2008). At the school level, improvement research in this period focused on leadership in connection with school culture, teacher professional development and school networks. Transformational leadership, instructional leadership, system leadership and distributed leadership were studied at length, and found to a greater or lesser extent to be linked to gains in student outcomes (Fullan, 2005; Harris, 2010). International research in the field of school improvement saw developments in this period as well. Large scale international assessments were not a new innovation, the International Association for the Evaluation of Educational Achievement (IEA) had implemented numerous such assessments since 1964 (Chmielewski, Mundy, & Farrell, 2017). However, the 2000s saw the wide scale implementation and political recognition of international assessments. Primary and secondary analysis of data collected through PISA, TIMSS and PIRLS, developed by OECD in the first instance, and IEA in the case of the latter two, has provided researchers in the field of school improvement with unprecedented insight into the global systems of education (Chapman, et al., 2016). The data collected through these assessments has also allowed for national and international comparisons of education systems over time which has had not insignificant impact on education policy in some countries (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). Critics concerned with this direction warn about the increasing homogenization observed in education systems internationally, the repercussions of which cannot be fully foreseen (Kelly, & Clarke, 2016; Chmielewski, Mundy, & Farrell, 2017). This echoes some of the sentiments observed in the field of educational effectiveness in the same period, which is not surprising as school improvement and educational effectiveness research continues to intermingle. The relationship endures in the following phase as well.

The focus in the fifth phase of school improvement research remains on the study of system change, and systemic improvement. Differentiation has been recognized as a need not only for successful reform at the school level, but similarly at the system level (Reynolds, et al., 2016). Systemic reform must be sensitive to the national context, and account for all of the parts that make up the system (Datnow, Hubbard, & Mehan, 2005; Stoll, Wikeley, & Reezigt 2002). This requires continued study of national systems of education, with a consideration for all of the components that form the whole, and the relationships that exist between the different levels. Sustaining system reform over time is another key avenue of study for researchers in this period because the dynamic nature of schools and systems of education requires a similarly flexible approach (Mourshed et al. 2010). Hopkins, Stringfield,

Harris, Stoll, and Mackay, (2014) identify a need for the development of a repertoire of school and system level strategies, which would be able to meet the needs of schools and systems at different points in the reform process. International research continues to be a major focus in this phase of school improvement and vise versa, global engagement with the school improvement knowledge base remains high. As with the field of educational effectiveness, recent reviews of school improvement research have helped to summarize existing knowledge and mark out future directions (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014; Chapman, et al., 2016).

2.2.3 Critiques of Educational Effectiveness and School Improvement Research

The fields of educational effectiveness and school improvement have faced a number of criticisms over the years. I begin with a brief summary of the early critiques, and then focus the proceeding narrative on two concerns that continue to receive attention today. First reviews of education effectiveness and school improvement research found that the rapid growth of the fields made the development of a collective approach within each field difficult (Harris, et al., 2013; Reynolds, et al., 2014). In the early phases of these traditions, the same factors and features were defined, measured and analysed in a myriad of ways, which slowed the development of a cumulative research base for both EER and school improvement research (Townsend, MacBeath, & Bogotch, 2016). Both school improvement and educational effectiveness have also been accused of being under theorized, studying relationships between various indicators without providing enough explanation for why and how characteristics and factors interact (Luyten, Visscher, & Witziers, 2005). Additionally the first phases of educational effectiveness research were critiqued for missing out on context given the principally quantitative methodology embraced by the tradition; simultaneously, early school improvement research received reproach for lacking generalizability due to its largely qualitative study base. Another recurring criticism is the continuing disconnect between research and practice. Many of the approaches being implemented in schools still do not originate from the educational effectiveness and school improvement knowledge base (Creemer, & Kyriakides, 2008). Many of the aforementioned criticisms have been addressed and resolved, but two overarching concerns persist. First, student context has been a sore point between educational sociologists and scholars in the fields of EER and school improvement since the 1990s. Second, there are continuing concerns over how the knowledge base of school improvement and educational effectiveness is underused or misused politically.

In the late 1990s, numerous publications by external critics, largely educational sociologists, condemned educational effectiveness and school improvement researchers for turning a blind eye to student and school context (Scheerens, Bosker, & Creemers, 2001). Thrupp (1999, 2001), Grace (1998), Slee, Weiner, and Tomlinson (1998), and Slee and Weiner (2001), criticised effectiveness and improvement researchers for overstating the school effect and for promoting the idea that every school can be effective regardless of circumstance if they embrace characteristics of effective schools. Research findings in this period were beginning to give indication that not only was school improvement more difficult to achieve than expected, but that schools in socio-economically disadvantaged areas struggled to improve significantly more than their wealthy counterparts (Muijs, Harris, Chapman, Stoll, & Russ, 2005). Thrupp (1999) argues that effectiveness levels of schools are better explained by the student body composition and its effect on the school functioning, than by any approaches or initiatives implemented at the school level. The same author explains further that teachers in disadvantaged schools are not necessarily ineffective but rather overwhelmed by challenges, and generic effectiveness characteristics promoted by educational effectiveness researchers sell teachers false hope. Critics additionally assert that effectiveness and improvement researchers historically refused to examine factors of school location, as well as student socio-economic status, ethnicity, and special needs, because these were either too controversial or too challenging to address (Slee, & Weiner, 2001).

Researchers working within the traditions of school improvement and educational effectiveness addressed the criticisms promptly, acknowledging some deficits in research and defending other areas. Effectiveness researchers categorically refute the critic's accusation that school effects are overemphasised in educational effectiveness research, noting that more sophisticated techniques of analysis suggest that over 30 percent of variance is attributed to the school (Luyten, Tymms, & Jones, 2009; Chapman et al., 2016). Additionally, researchers working in the field of educational effectiveness contest the claim that EER chose not to engage with disadvantaged schools because it was too controversial a topic, pointing to the fact that the entire tradition was founded on the concepts of equity and social justice. Furthermore, while context specific factors were not studied extensively in the first EER studies, research was being conducted in disadvantaged schools, to the extent that there was a marked oversampling in the early years of effectiveness research (Chapman et al., 2016). On the other hand, there is general agreement that factors relating to school and student context did not receive enough emphasis in the early years of educational effectiveness research, but this was neither due to ignorance nor motivated by a particular agenda (Reynolds, et al.,

2014). EER originated in a time when many argued that schools had little to do with student outcomes, and researchers sought to prove that schools could indeed make a difference, which led to a singular focus on the school level. Researchers did not initially investigate the effects of the school location, or student characteristics because at the time these were seen as unalterable and outside the influence of the school (Luyten, Visscher, & Witziers, 2005). At the outset, educational effectiveness researchers attempted to develop universal lists and approaches so as to be useful to all practitioners, and to legitimize the field in the eyes of politicians who desired 'one size fits all' solutions (Reynolds, et al., 2016). As EER and school improvement research evolved, the traditions have admitted the deficits of earlier approaches and embraced the need to develop context specific strategies. Current reviews of the field emphasise the need to develop a range of strategies that would support schools in different circumstances, and at different levels of effectiveness (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014; Chapman, et al., 2016). Despite numerous articles published on this topic by both critics of EER and those working within the field, this criticism has not been fully resolved. Many of the critics feel that school improvement and educational effectiveness researchers have not done enough to address the points of contention, and schools in difficulty continue to be overlooked (Bogotch, Mirón, & Biesta, 2007).

A second persisting criticism of educational effectiveness and school improvement researchers is their lack of control over how findings are used by politicians. School improvement and educational effectiveness both received high levels of political interest early in their development, and it can be argued that rather than influencing education policy, findings have been used to serve political agenda (Reynolds, Kelly, & Chapman, 2016). One notable example goes back to the 1980s, when EER's push to assert that schools were able to make a difference regardless of student background was used by politicians to shift responsibility for student well being and outcomes onto individual schools. The reported success of some schools that were facing challenging circumstances was used to promote the idea that unfavorable student outcomes were the direct result of school failure (Townsend, MacBeath, & Bogotch, 2016; Wrigley, 2005). Rea and Weiner (1998) argue that EER's refusal to discuss student factors and the limits of schooling has contributed to societal dissatisfaction with schools and the culture of blame. This was not the message the field of EER wanted to send, and it would not be the last time politicians used EER piecemeal to justify questionable education policy. This raises the question of why a field that receives so much political attention struggles to have the desired political impact. Some critics blame school improvement and effectiveness researchers for being willfully blind to the detrimental

political consequences that may arise from their work, while others go even further to say that the field of EER is driven entirely by political ideology given that much of the research is government funded (Luyten, Visscher, & Witziers, 2005; Slee & Weiner, 2001). Political influence over EER is said to be observed in the field's focus on the cognitive outcomes of education, and the continued use of standardized testing for evaluation of school effectiveness (Coe, & Fitz-Gibbon, 1998).

These criticisms have not gone unheard and scholars working in the field of EER have addressed many of the points presented by the opposition. With regards to the influence of political funding, EER scholars argue that this viewpoint is overly simplistic and further note that the research of critics is often funded by the same government grants (Luyten, Visscher, & Witziers, 2005). Educational effectiveness researchers also defend the use of student attainment for measurement of school effectiveness, arguing that cognitive outcomes will always be one of the goals of education, and that it is an important factor to assess because it has been linked to participation in higher education, and wages in adulthood (Crissey 2009; French, Homer, Popovici, & Robinsto, 2014; Kelly, & Clarke, 2016). However, the field of EER has accepted the need to evaluate schools on a broader range of factors, and recent research gives greater attention to affective and social outcomes (Modin, & Ostberg, 2009; De Fraine, Landeghem, Van Damme, & Onghena, 2005; Elbe, et al., 2017). Scholars in the field of EER have also addressed the unintended political use of EER findings, pointing to the often incongruent nature of politics and research. Where researchers typically support consistency and long term programs, policy makers generally have a short term orientation that revolves around election timelines, and look to implement new, exciting, quick fix solutions which will present well to the media (Scheerens, Bosker, & Creemers, 2001; Reynolds, et al., 2016). Additionally, in developing policy, governments are greatly influenced by economic factors, forces of globalization and the desire to distance themselves from any potentially controversial topics; in the hands of policy makers EER findings often become distorted to satisfy the demands of these competing priorities (Luyten, Visscher, & Witziers, 2005). This is not to say that the field of EER is absolved from all responsibility. Thrupp (2001) encourages researchers to be aware of the political sphere and suggests that scholars must learn how to work with policy makers to avoid the misrepresentation of their data. Similarly, there have been calls for researchers working in the field of educational effectiveness to advocate more vocally on education policy (Scheerens, Bosker, & Creemers, 2001; Reynolds et al., 2016). Many researchers have heard and answered this call to action,

and as education effectiveness and improvement research fields continue to grow, there is hope that these traditions will acquire greater impact in both policy and practice.

Educational effectiveness and improvement research has produced valuable data about effective schools and the process of improvement; however, both fields have also garnered a number of criticisms about the work that was done to date. Researchers working in the fields of educational effectiveness and school improvement have demonstrated that they are willing to hear and learn from criticism and many of the foundational issues have been acknowledged and addressed (Scheerens, Bosker, & Creemers, 2001). Simultaneously, researchers have refuted the criticisms they felt were unwarranted, and sought to clarify areas of conflict. While some criticisms have been resolved, critics continue to take issue with EER's handing of student context, and the political use of effectiveness and improvement findings (Luyten, Visscher, & Witziers, 2005; Bogotch, Mirón, & Biesta, 2007; Townsend, MacBeath, & Bogotch, 2016). As school improvement and educational effectiveness research continues to evolve, it is likely that old criticisms will continue to be resolved and new areas of contention will arise. The willingness of researchers working in these fields to engage with criticism has and will continue to support future growth and advancement of educational effectiveness and school improvement research.

2.3 Models of School Improvement

Since the 1980s, the number of educational effectiveness and school improvement models on the market has grown exponentially (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). A non-exhaustive list of well known, heavily implemented, whole-school improvement programs includes such models as the Accelerated Schools Project, School Improvement Partnership Programme, Improving Quality of Education for All, High Reliability Schools, Extra Mile Programme, Success for All, Core Knowledge, The Modern Red Schoolhouse, Comer School Development Program, Coalition of Essential Schools, and the Manitoba School Improvement Programme (Kidron & Darwin, 2007). Models matter in effectiveness and improvement research because they attempt to explain how schools improve, and provide educators with a roadmap towards achieving school improvement (Datnow, Hubbard, & Mehan, 2002). Approaches towards improvement can vary significantly model to model. Some comprehensive school improvement programmes are highly prescriptive and supply schools with training and lesson plans, while others establish the guiding principles and leave the particulars of strategy development up to the school (Stoll , Wikeley & Reezigt, 2002). Models of improvement also differ widely in foci; some

programmes emphasise pedagogical practice, while others give primacy to school culture or teacher professional development. In this section I will briefly describe and compare the Dynamic Approach to School Improvement, the model on which this study is based, with three other school improvement models: Improving Quality of Education for All, Accelerated Schools Project, and the Comer School Development Program. These three models have been selected because they are whole school improvement programmes that have been implemented in numerous sites and have demonstrated positive outcomes in published peer-reviewed studies. Admittedly, a dozen other models also fit these criteria, so the choice was also influenced by the similarity of these programmes, whether in development, guiding principles or actionable strategies to the dynamic model. I elected to look for models with related features rather than wholly contrasting ones, so as to identify similarities and differences between a like group, rather than attempting to compare apples and oranges. The overview of each model is quite concise, and this section only considers the key features of the programmes in question.

The Dynamic Approach to School Improvement (DASI) establishes that promoting student learning is at the heart of school improvement (Creemers, & Kyriakides, 2008). It is a multi-level model which addresses the student level, classroom level, school level, and system level. At each level DASI identifies a series of factors of educational effectiveness that have been found in prior research to be associated with student outcomes (Creemers, & Kyriakides, 2015). The major steps of implementing the dynamic approach include establishing clarity and consensus about school improvement, conducting school self-evaluation, designing improvement strategies and a then engaging in a cyclical process of conducting formative and summative evaluations and modifying the action plan (Creemers, & Kyriakides, 2010). Schools that implement the dynamic model to enact classroom level or school level change select their priority for improvement from the factors identified at the associated level after conducting the school self-evaluation. DASI is not a highly prescriptive model and teachers develop and implement their own improvement strategies (Creemers, & Kyriakides, 2012). However each school is supported in project development and implementation by the advisory and research team who provide a handbook of example strategies as well as ongoing technical expertise. The dynamic model has been implemented internationally at over 100 different schools in such countries as Cyprus, Canada, Greece, Belgium, and Netherlands (Creemers, & Kyriakides, 2008; Creemers, & Kyriakides, 2015).

The overarching goal of Improving Quality of Education for All (IQEA) is to grow the school's capacity to manage change (Harris, & Young, 2000). The model identifies six

areas of importance: staff development, involvement, leadership, co-ordination, enquiry and reflection, and collaborative planning (Hopkins, Beresford, & West, 1998). These are presented in the form of propositions which describe the necessary behaviours in each area for the development of a school culture that can sustain continuous improvement. Teachers are supported in their improvement effort by university staff, who provide support both in the planning stage, and throughout the lifespan of the reform (Jackson, 2000). IQEA model puts teachers at the forefront, and the developers describe their approach to reform as one rooted in action research, wherein researchers 'work with rather than working on' schools (Hopkins, & Ainscow, 1993). Evaluation is a key aspect of IQEA, with formative and summative assessments occurring throughout the lifespan of the improvement effort so as to judge progress, outcomes and identify what is working and what is not (Jackson, 2000). IQEA has been widely implemented in England, having been applied at over 40 different schools (Harris, & Young, 2000).

Cultural change is at the heart of the Accelerated Schools Program (ASP) (Maxwell, Huggins, & Scheurich, 2010). The three principles of ASP are as follows: unity of purpose, empowerment with responsibility and building strengths (Lee, & Lo, 2007). Through these principles ASP seeks to support the school in developing a single vision shared by all stakeholders, empower all teachers to take responsibility in the process of change, and utilize the skills and knowledge of every staff member of the school (Crissman, Spires, Pope, & Beal, 2000). ASP facilitators guide schools through five steps of implementation during which the school staff take stock, forge a vision, set priorities, organize a new form of governance, and engage in the inquiry process (Rowan, & Miller, 2007). In addition to these 'big wheel' processes, teachers also engage in 'little wheel' changes in their own classrooms to create an effective learning environment and promote powerful learning in pupils (Rowan, & Miller, 2007). Further to these three principles and five steps, the Accelerated Schools Program emphasises a set of beliefs, including "equity, communication and collaboration, participation, community spirit, schools as centres of expertise, risk taking, reflection, experimentation and discovery, and trust" (Lee, & Lo, 2007, p. 181). The ASP model is not prescriptive; schools develop their own processes that are relevant to the school context with the support of trained ASP facilitators. The Accelerated Schools Program was first implemented in practice in 1986, and since then has been applied in over 500 schools in the United States (Maxwell, Huggins, & Scheurich, 2010).

The Comer School Development Program (SDP) establishes that to achieve academic success, schools must first address pupil's social and emotional needs (Cook, & Hirschfield,

2008). SDP seeks to activate all of the adults present in the lives of students to support pupils' holistic development; the program establishes that the collaborative involvement of teachers, parents, social workers and any other stakeholders in the student's life is necessary to achieve the desired outcome (Datnow, Hubbard, & Mehan, 2002). The program has nine main components: three teams, three operations, and three guiding principles. The three teams are the school planning and management team, the student and staff support team, and the parent team (Haynes, 1996). The three operations are the development of the comprehensive school plan, establishment of the staff development plan, and regular monitoring and assessment (Cook, & Hirschfield, 2008). The three guiding principles establish no-fault problem solving, consensus in decision making and collaboration. Prior to project implementation, school principals undergo training at Yale, and then take time to train their staff in the SDP approach (Comer, & Emmons, 2006). Trainers from SDP centers visit school districts on average twice a year to assess quality of implementation, and offer support. The Comer School Development Program has been implemented in more than 300 schools in the U.S. and internationally since 1968 (Datnow, Hubbard, & Mehan, 2002).

Although each programme of improvement is quite distinct, a number of similar features are present program to program. Parallels can be made between models in their level of prescription, incorporation of practitioner-researcher collaboration, and in their approach to evaluation. None of the four programs described above are highly prescriptive. Under the guidance of DASI, IQEA, ASP or SDP schools develop their own school improvement actions and strategies (Maxwell, Huggins, & Scheurich, 2010; Datnow, Hubbard, & Mehan, 2002). These models offer varying amounts of support and training prior and throughout the reform effort, but outside of following the overarching process, schools are not expected to implement prescribed lesson plans or compulsory step-by-step strategies (Hopkins, & Ainscow, 1993). All of the models also provide schools with researcher-facilitators. While the programmes differ in the exact role attributed to the outside facilitators, and the number of visits this personnel makes to the schools, all models recognize that improvement has been found to be more successful when schools have access to and support from facilitators with research or model expertise (Creemers, & Kyriakides, 2015; Harris, & Young, 2000). Another important similarity between all four of the models is their approach towards evaluation. Both summative and formative evaluation is included in every single framework. All programs stress the need for the school to engage in regular self evaluation so as to monitor implementation progress and assess whether modifications must be made to the action plans or strategies being applied (Cook, & Hirschfield, 2008; Rowan, & Miller, 2007).

Additionally, summative evaluation of outcomes is included in every framework to gauge the impact and outcomes of the improvement effort (Jackson, 2000; Creemers, & Kyriakides, 2012). The similarities do not conclude at those already discussed; all four programmes also reference quite a few of the same factors of influence, such as teacher collaboration, and development of a shared vision. The presence of so many parallels across these four models is not unexpected given that all of the models consulted educational effectiveness and school improvement knowledge base in the process of programme development.

Points of resemblance aside, these four models of improvement were developed under different guiding principles, and the main programme components reflect these varied priorities. Here I will focus specifically on the key conceptual areas that are emphasised by the IQEA, ASP and SDP models of improvement but are not expressed to the same degree in the dynamic model. Both IQEA and ASP devote significant attention to the school culture, and seek to engage cultural changes with the goal of achieving sustained improvement (Harris, & Young, 2000; Maxwell, Huggins, & Scheurich, 2010). Community spirit, trust, shared leadership, and involvement are all principles and propositions of ASP and IQEA that place cultural change at the heart of all improvement efforts conducted under the guidance of these models (Hopkins, & Ainscow, 1993; Crissman, Spires, Pope, & Beal, 2000). The dynamic model does incorporate factors that relate to the school culture, such as teacher communication and collaboration, but these are optional areas of focus and not built in to the framework as part of the improvement process. Under the dynamic model cultural change is assumed to be an outcome of the change processes, whereas ASP and IQEA establish cultural change as the key process and goal of improvement effort (Creemers & Kyriakides, 2015; Rowan, & Miller, 2007; Hopkins, Beresford, & West, 1998). There are differences in conceptual principles between the Comer School Development Program and the dynamic model as well. The SDP places the student context and social wellbeing at the forefront of the improvement initiative (Cook, & Hirschfield, 2008). A key feature of SDP is the development of strong home-school relationships so as to engage all of the adults in students' lives to support the "needs of the whole child" (Datnow, Hubbard, & Mehan, 2002, p.152). While the dynamic model incorporates the student level, and discusses how factors related to the student context affect their outcomes, school improvement under DASI focuses on the classroom and school levels (Creemers, & Kyriakides, 2012). Similarly, parental partnership is an area that schools can focus on under the dynamic model of improvement, but under SDP, parents are included as key partners in every improvement effort (Creemers, & Kyriakides, 2008; Comer, & Emmons, 2006). Student and community context, as well as the

culture of the school, all have great significance for every aspect of the school's functioning, and the dynamic model would benefit from integrating processes that address these areas into the framework.

Schools are more likely to be successful in their reform efforts if they implement a research-based school improvement model rather than attempt wholly self-developed improvement (Reynolds, et. al. 2014). Due to its dynamic nature, DASI has been recognized in effectiveness and improvement literature as a promising theoretical framework and model for improvement (Chapman, et. al., 2016). However, as comparison with other successful models for reform has demonstrated, there are areas in which the dynamic model could improve itself. The success of DASI is in its continued evolution and this was one of the reasons why I selected this model - I hoped that this study would contribute to further growth of the dynamic framework. In the section that follows I describe the dynamic approach to school improvement in greater detail.

2.4 The Dynamic Approach to School Improvement

The Dynamic Approach to School Improvement (DASI) is a theory-based and evidence-driven model that was developed for the purpose of improving educational practice in schools (Antoniou, Kyriakides, & Creemers, 2015). It is both a theory of school improvement and a model for implementing change (Creemers, & Kyriakides, 2015). The dynamic model evolved out of the comprehensive theory of educational effectiveness developed by Creemers in 1994 (Creemers, & Kyriakides, 2008; Creemers, 1994). Characteristics of DASI were influenced by critical reviews of research findings, as well as other existing models in educational effectiveness and school improvement paradigms (Creemers, Kyriakides, & Antoniou, 2013a). It is a multi-level model, and recognizes four levels of influence: student, classroom, school, and system (see Figure 1, overleaf). This study is concerned with the school level and an overview of this level is provided in the section that follows. Brief descriptions of the other levels of influence identified by the dynamic model are provided in Appendix A.

The dynamic model establishes that the student, classroom, school and system levels are interrelated, and factors that reside within them have both direct and indirect influence on student outcomes (Creemers, & Kyriakides, 2012). The dynamic model explains relationships between variables that have been shown to influence student outcomes and integrates theory to try to explain why these specific variables are important (Creemers, & Kyriakides, 2015). DASI considers both the relationships that exist between factors on the same level, and relationships between factors that exist on different levels. Factors which influence student outcomes also interact with each other, which in turn affects how these variables impact student outcomes (Reynolds, & Walberg, 1990). Thus, the model assumes that "the relation of some effectiveness factors with achievement may not be linear" (Creemers, & Kyriakides, 2012, p. 24). Due to this, the impact of factors residing on different levels needs to be measured in different ways. As the result, the dynamic model provides differentiated measurements of the levels; this is represented by the magnifying glass on Figure 1 (Antoniou, Kyriakides, & Creemers, 2015). Specifically, policy factors at the school and system level need to be measured with regards to the context of the school, and over a period of time, whereas classroom level factors require more frequent measurement according to set criteria and dimensions (Creemers, & Kyriakides, 2008). A more detailed description of the five measurement dimensions is provided in Appendix B.

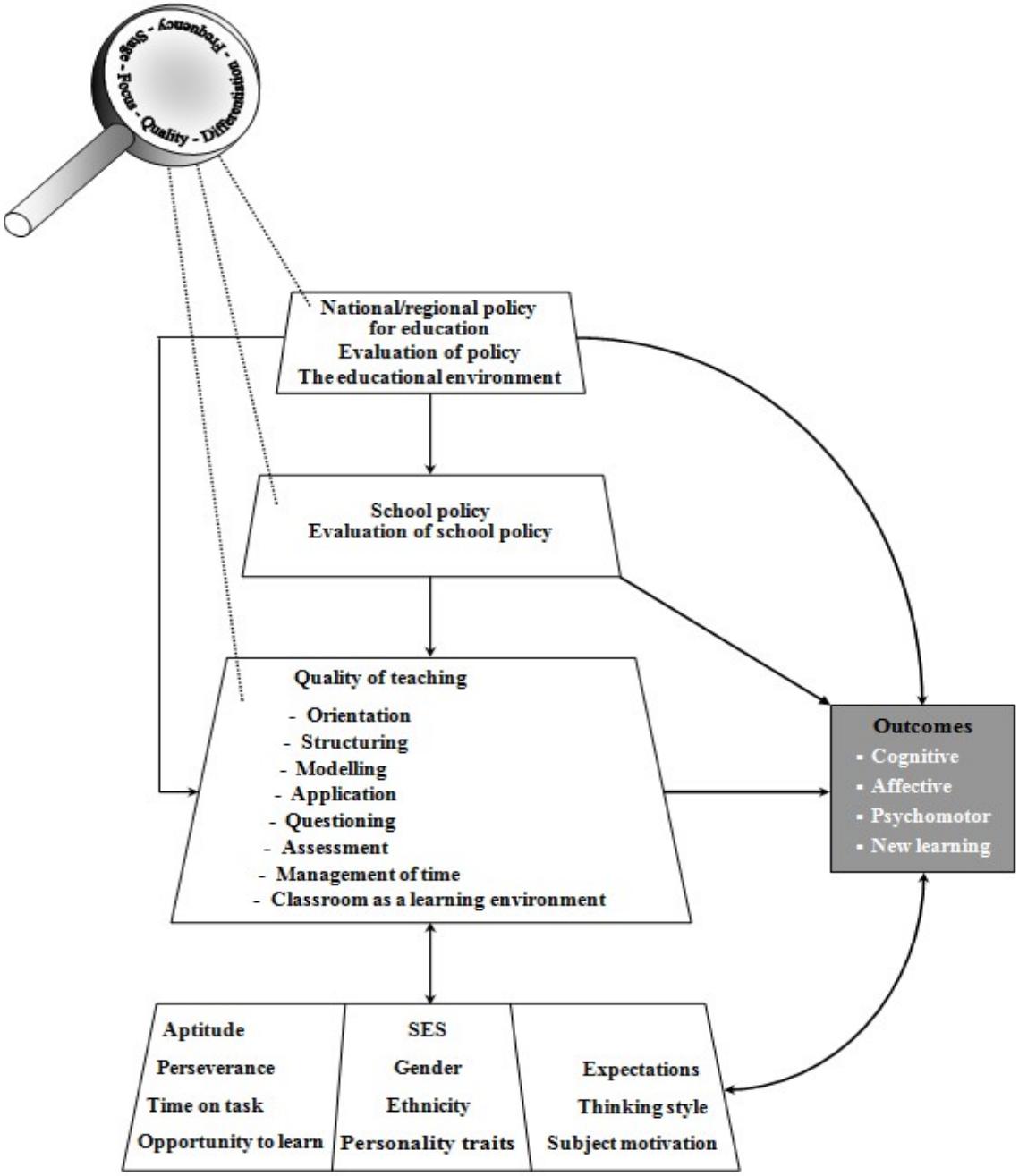

Figure 1. The dynamic model of school improvement (Creemers, & Kyriakides, 2012, p. 23)

Perhaps the most significant difference between prior approaches to school improvement and DASI, is that the dynamic model is an evolving theoretical framework. Since the model's inception, multiple international studies have established validity and reliability of DASI (Creemers, & Kyriakides, 2012; Demetriou, & Kyriakides, 2012; Janosz, Archambault, & Kyriakides; Kyriakides, 2008; Kyriakides, Creemers, & Antoniou, 2009). These studies, a sample of which I describe below, examined the impact and effectiveness of DASI and the findings were used by Creemers and Kyriakides (2012) to further evolve the framework. In the 2007-2008 school year, Demetriou & Kyriakides (2012) selected 60 elementary schools in Cyprus to examine the impact of DASI on student achievement through a multi-treatment experiment. The schools were split into four groups of which three received different types of intervention, while the schools in the fourth group received no intervention and served as the control group for the study (Demetriou & Kyriakides, 2012). The results of this research indicate that while all experiment groups saw improvement in student outcomes, the group of schools which implemented the DASI model of improvement experienced the greatest impact on student achievement across a range of student outcomes (Demetriou, & Kyriakides, 2012).

In a similar context, Kyriakides, Creemers, & Antoniou, (2009) examined teacher effectiveness and student outcomes in Greek, religion, and mathematics, in 50 elementary schools in Cyprus. The study split the schools into two experimental groups, of which one utilized the Holistic approach to school improvement whereas the other implemented the DASI model. At the conclusion of the study, Kyriakides, Creemers, & Antoniou, (2009) found that DASI was more effective in increasing teacher effectiveness as compared to the Holistic approach. Furthermore, this study resulted in the development of 5 stages of teaching skills, with teachers at a higher developmental stage providing more effective instruction. The following year, a Canadian study tested the validity and applicability of DASI and specifically the 5 stages of teaching established in previous research (Janosz, Archambault, & Kyriakides, 2011). The study, which was conducted in seven elementary schools in Montreal, provided support to the developmental stages of teaching and demonstrated that the DASI framework can be used to develop teacher abilities (Janosz, Archambault, & Kyriakides, 2011).

The DASI framework has also been examined through international studies. Under the funding of the Daphne III Programme, Kyriakides, Bosker, Muijs, Papadatos, & Petegem (2011) implemented the DASI framework to address bullying in select schools in England, Cyprus, Greece, Netherlands and Belgium. The results of this study indicated that, although

impact was different across schools, for all countries, every participating school that used the DASI model to address the issue of bullying saw a greater reduction in bullying than control schools (Creemers, & Kyriakides, 2012). These quantitative studies all provide empirical support to the key structures of the DASI model (Creemers, & Kyriakides, 2012; Heck, & Moriyama, 2010; Creemers, & Kyriakides, 2010).

2.4.1 School Level Factors

A large degree of variance in student achievement is associated with the classroom processes (Townsend, 2007). However, the classroom does not exist in isolation, and classroom level practice of a school is both directly and indirectly influenced by the school level. The factors emphasised by Creemers and Kyriakides (2015) at the school level, are ones that have been found in prior research to influence teaching, learning, and the classroom environment. The school level of the dynamic model has four overarching factors: school policy on teaching, evaluation of school policy on teaching, school policy on the learning environment, and evaluation of the learning environment (see Figure 2, overleaf). School policy on teaching, and school policy on the learning environment, are both further broken down into variables. School policy on teaching is discussed in terms of quantity of teaching, quality of teaching and provision of learning opportunities. Additionally this factor is concerned with the strategies undertaken by staff towards the improvement of teaching (Creemers, & Kyriakides, 2012).

School policy on the learning environment incorporates the following variables: resources, partnerships, student behaviour outside the classroom, teacher collaboration and values favouring learning (Creemers, & Kyriakides, 2015). These factors are assumed by the dynamic model to play a significant role in the development of the school learning environment, which is recognized to be an important feature in student learning (Creemers, & Kyriakides, 2008). The school level also includes two evaluative factors, which evaluate the school policy on teaching, and the school learning environment. School policy on these four factors may be expressed through formal documents or informally discussed in staff meetings. Creemers and Kyriakides (2008) also emphasise that simple existence of policy on these factors in not enough, teachers must be aware of school policies and understand how to implement them. To summarize, schools that implement the dynamic model with the focus on the school level factors, locate their improvement effort in one or more of the following areas of the school functioning: quantity of teaching, provision of learning opportunities, quality of teaching, student behaviour outside the classroom, collaboration and interaction

between teachers, partnership policy, provision of sufficient learning resources to students and teachers, and evaluation of school policy. Changes in these areas are expected to occur both in practice and at the school policy level, so as to embed the new strategies into the typical functioning of the school. Appendix C describes how school practitioners go about implementing the dynamic model of improvement at the school level.

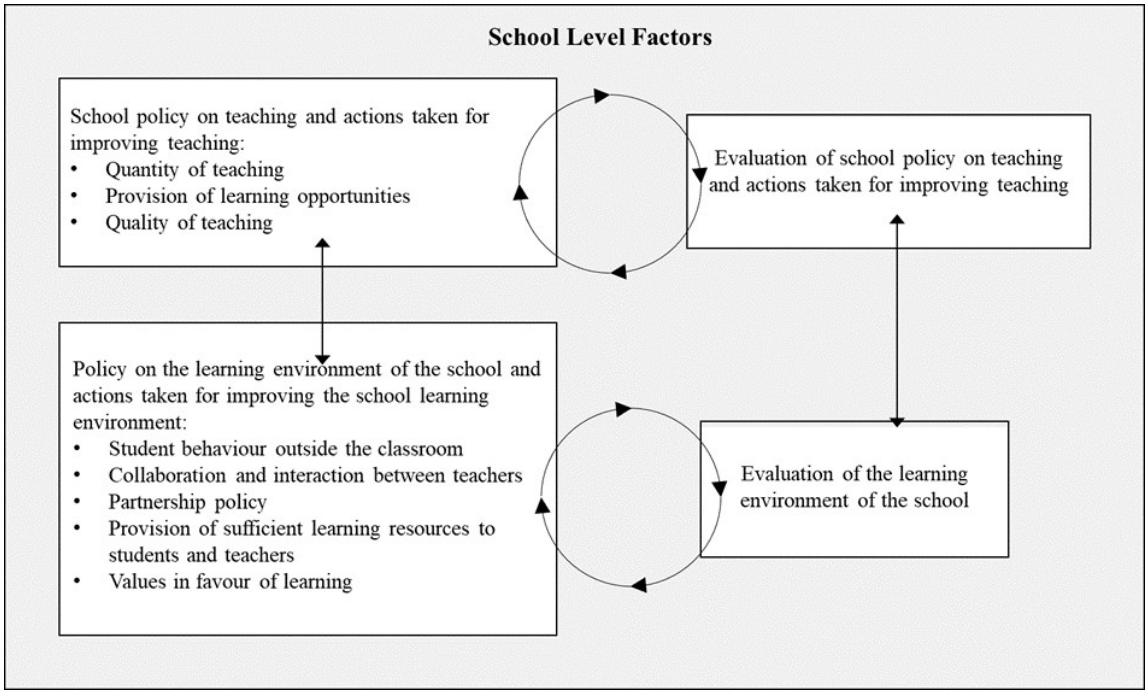

Figure 2. School level factors (Creemers, & Kyriakides, 2012, p.39)

2.5 Teacher Experience with School Improvement Initiatives

One of the persisting challenges in educational effectiveness and school improvement research is that reforms do not dependably produce similar outcomes school to school (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014; Reynolds, et al., 2014). A fair few studies have sought to identify potential factors which may explain differences in improvement outcomes between schools. Particular interest has been devoted to teachers, due to their significant influence on just about every area of the school functioning. Teachers have a considerable impact on student achievement, and interclass variation in student outcomes has been found to occasionally be greater than interschool differences (Townsend, 2007; Datnow, Hubbard, & Mehan, 2005). Additionally, educators apply policy in practice and more often than not implement reform first hand. Due to their all-encompassing

involvement in all aspects of the school affairs, teachers are thought to significantly influence the extent of improvement observed by the school in the course of reform (Kirkpatrick, & Johnson, 2014; Yoon, 2016). In the early years of educational effectiveness and school improvement traditions, researchers assumed that practitioners would quickly embrace findings from studies and imbed new techniques and approaches into their routine practice (Stoll, Earl, Adnerson, & Schildkamp, 2016). The lack of wide-spread uptake prompted much discourse on the topic of teacher resistance to reform (Knight, 2009).

However, numerous scholars have come forward to stress the importance of listening to teacher voice on this topic and to explore teacher experiences with and perspectives on school improvement. In particular, recent research examines the challenges and facilitators teachers experience in the course of implementing reform, seeking to identify if and how these factors influence the outcome of the initiatives (Mendenhall, Iachini, & Anderson-Butcher, 2013). In addition to the numerous day to day challenges teachers encounter in their routine work, school improvement initiatives often produce unforeseen obstacles which complicate and impede the successful implementation of school reform (Knight, 2009). Challenges are harmful to the improvement effort, as in some cases they may overwhelm teachers to the point of disengagement, and in others prevent practitioners from applying the model as intended. Nesselrodt, Stringfield, and Schaffer, (1997) suggest that identifying and removing barriers to reform may be more effective than changing the type of, or increasing the amount of, improvement initiatives. Scholars have begun to identify challenges to reform, and seek teacher feedback on tackling these barriers, so as to increase the likelihood of a successful improvement. Existing research on barriers to school improvement identifies time constraints, difficulties with inter-disciplinary collaboration and teacher resistance to change as challenges that are encountered in the course of implementing school improvement initiatives (Rhodes & Sydney Houghton-Hill, 2000; Jackson, & Bedford, 2005; Thornberg, 2014; Mendenhall, Iachini, & Anderson-Butcher, 2013; Jošić, Džinović, & Ćirović, 2014).

Although school improvement brings with it a number of challenges for teachers, practitioners also report the existence of factors that support the reform effort. It is important to be aware of the factors which support teachers in their reform effort so as to assure that these are present or provided to staff engaging with improvement initiatives. Supportive factors may alleviate the impact of barriers and facilitate practitioners' engagement with and efforts in implementing reform (Mendenhall, Iachini, & Anderson-Butcher, 2013). Research on this topic identified school culture, teacher efficacy, engagemen, buy-in, supportive leadership, and effective peer collaboration as factors that teachers find to be supportive to

implementation (Hallinger & Heck, 2010; Anderson-Butcher, Iachini, Flaspohler, Bean, & Wade-Mdivanian, 2010; Gu, & Day, 2013; Mendenhall, Iachini, & Anderson-Butcher, 2013; Dolph, 2017). Through the support they provide teachers, these factors are thought to increase the likelihood of a successful intervention.

It is necessary to develop a broader base of knowledge regarding factors that support or hamper teacher engagement with school improvement so as to address these issues early (Jošić, Džinović, & Ćirović, 2014). If teacher concerns are heard and addressed, and requisite supports are put into place, school improvement initiatives are much more likely to garner the requisite buy-in and engagement so vital for successful long-term improvement (Mendenhall, Iachini, & Anderson-Butcher, 2013). In the sections that follow, I provide an overview of existing research on the challenges and supports teachers face in the course of engaging with school improvement initiatives.

2.5.1 Time, Resources and Burn Out

Teachers have never had a light workload, but their roles have expanded tremendously as of late (Gu, & Day, 2013). In addition to their daily grind, teachers are now mandated to pursue regular professional development, engage in school improvement projects and take on additional leadership duties (Knight, 2009). While none of these developments are negative, they are undeniably time consuming and difficult to merge with an already full schedule. Thirty percent of teachers leave the profession within their first five years of work, and work overload is identified as the main cause (NCSL, 2004; Jackson, & Bedford 2005). With finite hours in the day, teachers focus first and foremost on areas that require immediate attention. This press of immediacy leaves school improvement projects, which are often viewed as transient, on an indefinite backburner.

Findings from multiple studies have identified time to be a barrier to teacher engagement with school improvement (Mendenhall, Iachini, & Anderson-Butcher, 2013). Jošić, Džinović, and Ćirović, (2014) found that teachers missed project meetings, and failed to implement improvement programs fully, specifically due to a shortage of time. Songer, Lee, and Kam, (2002) examined barriers to inquiry based teaching and found that practitioners had limited time to devote to learning, planning, and applying a new program. Additionally, lack of resources, with regards to space, teaching materials, and technology proved to be a hindrance to implementation of inquiry based teaching. Time restrictions also hamper practitioner engagement with regards to professional development; almost half of the teachers who completed the TALIS survey, cited the overburdened and rigid school timetable

as a barrier to participation in professional development (TALIS, 2008). Muijs, and Harris (2006) similarly found that professional development programs encounter time as an obstacle to their implementation. Teachers express that they are overwhelmed with routine work, leaving limited time in their schedule to engage with professional development programs. What is more, the scholars report that teacher desire to participate in professional development and school improvement is negatively affected by the dearth of time and resources (Muijs, & Harris, 2006). Negative predispositions towards reform have been found to stem from the added workload and resulting shortage of time (Rhodes, & Houghton-Hill, 2000). Time becomes a barrier to improvement in that it negatively influences both teacher attitudes towards improvement and their ability to implement the reform (Gu, & Day, 2013). This is a serious challenge to school improvement and has been found to exist internationally and across various types of improvement approaches.

It will then come as no surprise that teaching is routinely voted to be one of the topmost stressful professions in England (Gu, & Day, 2013). Multiple national and international studies have found much of the same - teaching is stressful (Pas, Bradshaw, & Hershfeldt, 2012; Travers, & Cooper, 1996). Stress is not something to take lightly, as it is one of the key triggers of burnout. Hakanen, Bakker, and Schaufeli, (2006) note that burnout results from a number of reasons, but the common understanding is that stress, often originating from a disequilibrium between demands, time and resources in the workplace, is one of the triggers. In teachers, burnout exhibits in exhaustion and cynicism towards their profession, as well as a feeling of reduced professional efficacy (Hakanen, Bakker, & Schaufeli, 2006). Burnout is also a factor in the low retention rates of new teachers (Gu, & Day, 2013). Overload and potential for burn-out came up as a barrier in a study on school improvement by Rhodes and Houghton-Hill (2000), wherein the school leadership was concerned about teacher wellbeing in long-term, time intensive reform initiatives. While other studies have not made any direct connections between burnout and its impact on school improvement initiatives, the causes of burnout - lack of time and lack of resources - have been found to be obstacles experienced by teachers in the process of school improvement (Jošić, Džinović, & Ćirović, 2014; Pas, Bradshaw, & Hershfeldt, 2012). Lack of resources has a significant impact not only on teacher wellbeing but also on their ability to perform their job (Pas, Bradshaw, Hershfeldt, 2012). Chapman and Harris, (2004) found lack of resources to be particularly critical in schools serving low-SES populations. Shortage of equipment or lesson material, limited space, and a tight budget, restrict the opportunities and avenues available to teachers, and also complicate the application of school reform initiatives

(Jošić, Džinović, & Ćirović, 2014). Therefore, the factor of resources, both physical and time based must be considered and addressed prior to the implementation of school improvement projects, as a deficiency of assets may lead to teacher burnout, potential disengagement from the initiative, and subsequent lacklustre results of the program in question.

Time is an ever present challenge in schools, and one that has a perceptible impact on teacher engagement with school reform. Improvement initiatives are time consuming, and are unarguably an additional burden on teachers because these pursuits require teachers to attend extra meetings, take part in additional planning, and devote time to implementation (Friend, & Cook, 1990). Recent research on school improvement indicates that it is likely that some school improvement initiatives do not succeed because teachers cannot apply the project as envisioned in the time, and with the resources, available to them. Moreover, lack of time may result in practitioner burnout and give rise to a negative predisposition towards school reform (Muijs, & Harris, 2006). It is imperative for school leaders to support teachers by creating conditions that are supportive of improvement, which can be done in part by providing practitioners with the time and resources required to authentically engage with improvement and implement the initiative in full.

2.5.2 Interdisciplinary Collaboration

Interdisciplinary cooperation in the school setting occurs for a host of reasons. Most often, outside professionals such as psychologists, social workers, health care professionals, subject specialists and researchers enter the school to work in the capacity of a consultant or to provide practitioners with training and professional development. Interdisciplinary collaboration is also frequently incorporated as part of school improvement initiatives, wherein researchers and other specialists work in partnership with teachers to support the reform effort (Thornberg, 2014). A recent study by Kuijpers, Houtveen, and Van de Grift, (2018) concluded that rigorous, and long term professional support in the course of school improvement has a positive impact on the effort. However, interdisciplinary collaboration is fraught with challenges which hamper the benefits associated with this factor.

Thornberg (2014) found that teachers often struggle to meaningfully engage with outside professionals. The school setting reinforces ‘professional ethnocentricity’, which is the tendency to consider your own practice and theory as superior to that of others. Development of in-groups and out-groups between teachers and external consultants is common, and creates an ‘us versus them’ mindset (Moskowitz, 2005). These perspectives prevent authentic inter-professional collaboration and are an obstacle to successful school

improvement. Teachers have been found more likely to engage in inter-school collaboration and share knowledge 'in-group' rather than seek advice from a consultant in a complementary field (Rubinson, 2002). Furthermore, teachers are unlikely to actively participate in school improvement projects when the approach of the consultant diverges significantly from their own practice and educational ethos (Slonski-Fowler & Truscott, 2004). Lack of integration and mistrust on the part of the practitioner results in a loss of buy-in to what the consultants are propagating. Spratt, Shucksmith, Philip, and Watson, (2006) found that teachers question the quality of intervention led by individuals who don't have a background in teaching. Practitioners doubt the usefulness and applicability of information distributed by professionals with no classroom or school experience, and in some cases respond by disengaging from consultation. Integration of outside professionals into the school culture was additionally hindered when consultants behaved in ways that disturbed class time, such as checking their phones or repeatedly leaving the classroom in the middle of the lesson (Thornberg, 2012; Deppeler, 2016). On the other hand, consultants felt excluded from the school environment, reporting that they were not informed about the routines, or commonly used vocabulary between staff.

Another barrier to a well-developed collaborative partnership between teachers and consultants is a difference in perspectives and objectives. Teachers often feel that data collection, and outcomes are placed above school priorities in researcher initiated school improvement efforts (Slonski-Fowler, & Truscott, 2004). Teachers also report that consultants disregard practitioner expertise about what strategies are realistic and relevant for their school (Thornberg, 2014). These instances reinforce practitioner belief that the consultation process is not useful, and teachers close themselves to further engagement with outside professionals. For their part outside professionals often don't feel comfortable or confident providing consultation in a school setting when they perceive their role to be undermined by practitioners who seem hostile or disengaged (Spratt, Shucksmith, Philip, & Watson, 2006). Additionally, consultants and teachers encounter misunderstandings about what role the outside professional is expected to undertake in the improvement process (Deppeler, 2006). Recent approaches to school improvement place researchers and consultants in the supporting role rather than a leadership one, leaving it up to the teachers to guide the particulars of reform. Where teachers expect a more active and directive role from the professionals, consultants perceive their job to be restricted to the advisory capacity (Deppeler, 2006). Such misunderstandings result in frustration and practitioner

disengagement from inter-disciplinary collaboration, thus hindering the improvement process.

2.5.3 Teacher Resistance

Teacher resistance is only second to time, as the most referenced barrier to school improvement. The definition of teacher resistance is straightforward, as the name implies, it refers to teacher opposition to reform. Practitioner resistance to school improvement may be made direct and explicit or be subtle and hidden (Terhart, 2013). Some teachers exhibit resistance to reform by vocally refusing to participate in related activities, though more frequently resistance goes unvoiced, enacted simply through low effort on the part of practitioners who oppose the project (Thornberg, 2014). The topic of teacher resistance is a sensitive one, and it is frequently discussed in terms that position researchers against teachers. Texts on teacher resistance are plentiful, however, early literature on the topic rarely expanded on the causes of teacher resistance or gave voice to the practitioner perspective on the matter; instead, authors sought to provide headteachers and consultants with strategies to put an end to practitioner resistance to change (Stinson, 2009). More contemporary articles that touch on teacher resistance provide a better balance in their approach towards the topic (Mendenhall, Iachini, & Anderson-Butcher, 2013). Existing literature indicates a number of reasons behind teacher resistance to school improvement, including: differences in values, imposed improvement, and prior history (Berkovich, 2011).

Stinson (2009) very concisely and accurately states "changing teacher practices is not as simple as providing new strategies" (p. 225). Authentic, lasting change in practice requires teachers to believe that there is a need for change, desire to improve their practice and agree with the ideologies of the reform model (Thornberg, 2014). A mismatch between the values of the teacher and the philosophy of the improvement model is a common cause of teacher resistance to reform. Practitioner resistance to reform may develop when the school culture, as well as the values and assumptions of teachers do not match those of the model being introduced. If teachers do not support either the proposed strategies for change, or the improvement model as a whole, they may resist implementing the approach (Jošić, Džinović, & Ćirović, 2014). Improvement initiatives often necessitate teachers to change their mindset and understandings, and for such fundamental change to occur teachers must buy-in to the values and assumptions of the framework. When teachers do not buy-in to the improvement initiative, they may refuse to reflect on their own skills and behaviours through the lens provided under the reform effort (Thornberg, 2014). In such cases, practitioners may exhibit

resistance by going through the motions for the duration of the project, and returning to their typical routines after the effort has concluded. This approach is a barrier to school reform and at best results in only temporary improvement.

Resistance may also originate from imposition of the reform on teachers, either by the state at the system level, or by the headteacher at the school level (Stinson, 2009). Teachers may feel pressured to take part in reform endeavours and professional development even when they do not buy-in to the effort (Terhart, 2013). There is little recourse available to teachers who do not wish to take part in improvement, as open dissent is likely to be viewed unfavourably by the headteacher and may well have lasting repercussions for the practitioner (Mendenhall, Iachini, & Anderson-Butcher, 2013). Teachers who resist improvement initiatives are often considered by other stakeholders to be acting unreasonably, as improvement is at large perceived to be a positive action. Passive resistance through avoidant behaviour and general disengagement from the reform effort are commonly exhibited by teachers who unwillingly take part in improvement. Such hidden resistance is a commonly reported barrier in school improvement literature (Thornberg, 2014; Mendenhall, Iachini, & Anderson-Butcher, 2013). It is difficult for consultants or researchers working with practitioners to address this type of resistance as its existence may not be readily evident. It is for this reason many models of improvement insist upon teacher consensus prior to project initiation (Creemers, & Kyriakides, 2008).

Finally, teacher resistance to school improvement may stem from a previous negative experience with school reform. Lacklustre and short-lived results of subsequent school improvement initiatives have been found to impact teacher buy-in of new approaches and reforms (Mendenhall, Iachini, & Anderson-Butcher, 2013). Modern schools appear to be in a constant state of flux due to the lack of continuity and semi-constant change in curriculum and policy mandated at the system level. Schools are obliged to respond and change direction and focus time and again. For teacher, this translates to a constant cycle of new initiatives undertaken within a school each year (Knight, 2009). Such diaspora of focus undermines teachers' willingness to engage in subsequent initiatives and fosters a 'this too shall pass' attitude towards school reform (Mendenhall, Iachini, & Anderson-Butcher, 2013). Additionally, teachers who are expected to implement the improvement initiative often do not receive adequate training in the suggested method, and may not have access to adequate resources, and thus struggle to apply the initiative as intended (Spratt, Shucksmith, Philip, & Watson, 2006). Success under such conditions is near impossible, and failure as a result of

rushed, and poorly implemented initiatives leaves a lasting bad impression on practitioners which in turn impacts their willingness to engage in future endeavours.

2.5.4 School Culture

The anthropological definition of culture is cited most frequently in school improvement literature. Culture encompasses the knowledge, mores, attitudes, rituals, values, and beliefs of a group (Hargreaves, 1995). These assumptions are believed to be internalized by members of the school, and influence how these individuals make sense of the world and behave day to day (Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). Every school has a culture, which manifests in countless elements of school life, and influences both academic dimensions and social customs. School culture is evident in how the curriculum is presented to the students, as well as in how staff dress and speak (Hinde, 2004). School culture can be observed in routine practices, and is most readily identifiable in the actions explained by organization members as 'the way things are done around here' (Hargreaves, 1997). Some scholars in the field distinguish between school culture and school climate. Hoy and Feldman (1999), differentiate school climate from school culture by examining the former through a psychological lens, and discussing the concept in terms of shared perceptions. The perceptions of teachers, students, parents, and other stakeholders about the organization and the behaviour of members within it, is emphasised by some as the key element of school climate (Stevens and Sanchez, 1999). For their part, Lunenburg and Ornstein (2004) associate the broad environment of the school with the climate of the organization. Climate is also described as the soul and essence of the school, and the dimension of the school that members see themselves in (Hinde, 2004). However, by and large, the definitions of school culture and school climate overlap to a high degree, with both referencing beliefs, values and behaviours of members. For this reason, for the purposes of this paper, I do not differentiate between school climate and school culture, and in defining school culture I reference all of the elements discussed above.

School culture is socially constructed and maintained by the members of the school (Stevens, & Sanchez, 1999). Headteachers, teachers, students, support staff, custodians, business partners and community members all contribute to the culture found at a school. Culture develops gradually as stakeholders interact, cultivate routines and negotiate patterns of behaviour. In time, school culture becomes a self-reinforcing cycle, wherein organizational culture guides the behaviour of members, and the actions of members maintain the existing culture (Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). In discussing school culture,

it is also necessary to consider how the broader society shapes the cultural practices of the school. Hollins (1996) argues that schools reflect the culture, values, and beliefs of the community and society in which they are located. Political climate, and economic context similarly influence aspects of the school culture (Gordon, & Patterson, 2008). School culture is important to consider in the course of school improvement, because studies continue to indicate that no matter how prescriptive an approach, organizational culture will to some extent influence the process of reform implementation (Gordon, & Patterson, 2008). Numerous studies on school improvement have shown that school culture plays a role in how teachers react when presented with reform (Sarason, 1996; Finnan, 2000; Louis, 2007; Gordon 2002). School culture is considered to affect the degree to which the improvement initiative is accepted by the school, and how staff go about implementation (Hinde, 2004). Teachers interpret incoming reforms through the cultural lens of the school and seek to adapt the effort to fit with the values of the organization (Datnow, Hubbard, & Mehan, 2005). Resultantly, the same improvement approach may be near unrecognizable when implemented at two different schools.

School culture can function as a supportive influence in the course of reform, or it can inhibit the ability of the school to make long lasting changes (Hinde, 2004). One factor which has significant weight over how stakeholders react to incoming reform is the school's prior experience with improvement efforts (Hargreaves, 1995; Stevens, & Sanchez, 1999). Schools with a negative past experience with reform, may develop cultures of resistance, or detached compliance. In some schools, improvement efforts are resisted as a rule because prior initiatives produced few observable results, were cumbersome, confusing, and overwhelmingly time consuming (Sarason, 1996). In such cases, engaging teachers in improvement may be an uphill battle, as the school culture works to reinforce existing practices (Hinde, 2004). While a temporary change in behaviour may be observed for the duration of the improvement effort, if teachers avoid truly engaging with new ideas, change will not take root at the cultural level (Gordon, & Patterson, 2008). However, school culture can also function as a strong supportive factor in reform, facilitating the effort. School cultures which encourage reflective practice, will support teachers in exploring new approaches, and thus promote teacher engagement with improvement initiatives (Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). Headteachers support the development of a positive organizational culture by seeking teacher input before pursuing reform efforts, and taking into account practical concerns of the initiative (Gordon, & Patterson, 2008). Responsive headteachers are willing to provide additional resources for the

reform effort, and to rearrange the schedule to better serve the staff. Reforms are psychologically taxing as well as resource hungry, and a positive, collegial school culture can alleviate some of the burden teachers experience as they try new techniques and re-evaluate their approaches (Datnow, Hubbard, & Mehan, 2005). In a positive school culture, staff members communicate openly, work collaboratively, and demonstrate confidence in their abilities to make changes (Hinde, 2004). When stakeholders are willing to reflect on existing practices and change structures and not just behaviour, the reform is more likely to be long lasting (Stevens, & Sanchez, 1999).

School reform is a group effort and the collective mindset of the stakeholders affects the extent to which the improvement initiative is accepted and implemented. Though school culture may not always be readily visible, it is a powerful force of influence over school staff. Successful long term reform often requires a cultural adjustment to take place, and while school culture is not statistic, it is also not easily altered in a precise direction (Hinde, 2004). For cultural change to come about, the standing processes must be interrupted and new values introduced and embraced by stakeholders before long lasting change in behaviour can be expected (Hargreaves, 1997). The existing culture of the school may support this transition, or conversely work against the improvement process. Whether school culture presents as a facilitator for reform or as a hindrance, the impact of this factor on the success of school improvement should not be underestimated.

2.5.5 Efficacy, Engagement and Buy-In

Efficacy, engagement and buy-in are three separate factors that influence teacher behaviour, however, these factors appear to interact and influence each other, and for this reason will be discussed under the same subheading. There is little research that directly connects efficacy and engagement to school improvement, but these factors have been found to effect teacher conduct in significant ways, and that influence may well transfer to school reform. Teacher buy-in with regards to school improvement has been found to have noteworthy impact on the improvement process, and scholars recognize this factor as one to be addressed prior to project initialization.

Efficacy is an individual's perception of their capacity to carry out an action and produce the desired result (Gibson, & Dembo, 1984). When applied to teachers, efficacy refers to the educator's belief in their ability or capability to perform their job well (Pas, Bradshaw, & Hershfeldt, 2012). Teacher efficacy has been studied at length and in conjunction with other factors. Research indicates that efficacy has an impact on teaching behaviours and how effective a teacher is across a range of areas (Kirkpatrick, & Johnson, 2014). Quality of teaching is higher in teachers who are confident in their work. Teacher efficacy is also considered to positively influence student outcomes and attitude towards school (Tschannen-Moran, & Woolfolk Hoy, 2001). Teachers who demonstrate high efficacy have been found more able to establish a welcoming and positive classroom environment (Pas, Bradshaw, & Hershfeldt, 2012). Children from underprivileged backgrounds benefit in particular from teachers with high efficacy. Teachers who demonstrate high efficacy feel that they are able to influence student achievement and outcomes regardless of student background, and apply themselves to support students from underprivileged families (Gibson, & Dembo, 1984). Efficacy is likely to be relevant to school improvement in that teachers may choose not to engage in reform if they don't think their actions will make a difference. On the other hand, a teacher with high efficacy and subsequent belief in their skills may be more likely to participate in improvement initiatives and trust their ability to succeed in that endeavour.

High efficacy also frequently translates to high engagement, which is a desirable trait in all professions but especially so in education (Kirkpatrick, & Johnson, 2014). Engagement is reflected in both the attitude and behaviour of a person; it is this factor which largely influences where and how much energy and time individuals allocate to particular activities. Productivity and quality of work is higher in people who demonstrate high work engagement whereas low engagement translates to unmotivated staff and lacklustre effort (Halbesleben,

2010). Engagement as it pertains to teachers refers to the vigor and time educators input in their classrooms and schools (Gu, & Day, 2013). Kirkpatrick, and Johnson (2014) describe highly engaged educators as "energetic, interested and enthusiastically involved in their work" (p. 233). Teachers who are engaged are willing to develop new skills, take on leadership roles and go above and beyond in their work. The National Center on Effective Secondary Schools (1992) reports that high engagement in educators can act as a supportive influence for student achievement. Teacher engagement does not remain stable over the course of the educator's career, it varies extensively over the lifespan of their employment (Kirkpatrick, & Johnson, 2014). Many teachers go into education because they want to make a difference, and this becomes a driving force for their work in the early years. However, difficult work conditions can wear on teacher engagement, ultimately causing the engagement levels to drop which in turn negatively influences the quality of teachers' work (Gu, & Day, 2013). Kirkpartick and Johnson (2014) examined teacher engagement in educators with extensive job experience and found that the work environment had a strong influence on how engaged teachers reported to be. Specifically, teachers identified the challenges they faced day to day as well as the presence or absence of encouragement as having an impact on their work engagement. A stressful and negative school environment caused engagement levels to drop, while peer support and recognition by the headteacher helped to facilitate and sustain teacher engagement over time (Kirkpatrick, & Johnson, 2014). While literature drawing direct parallels between levels of teacher engagement and school improvement is limited, given what is currently known on this concept, a relationship is generally perceived to exist. Furthermore, engagement is an important factor to consider for school improvement research because it is intimately entwined with buy-in, a factor proven to impact reform.

Teacher buy-in is a surprisingly difficult concept to define. Broadly, teacher buy-in, in relation to school improvement, refers to teacher acceptance of, support and belief in the model being implemented. Turnbull (2002) identifies additional particulars of the factor, emphasising goodness of fit between the model and the school as perceived by teachers, practitioner motivation to implement the model, and practitioner belief in the applicability of the model to their own classroom. Teacher buy-in is now considered in the field of school improvement to be vital for successful and long term reform (Silin, & Schwartz, 2003). Change is difficult to achieve, and buy-in is believed to support teacher motivation to accept the need for improvement and willingly engage in the process of change. Without teacher commitment, and investment in the reform, improvement outcomes may only be surface level

and transient. For school improvement to succeed, it is necessary for the model to be implemented properly and authentically; it is not enough for teachers to simply go through the motions (Yoon, 2016). Several variables have been found to influence teacher buy-in towards improvement. Thorough training in the model and the techniques to be used, as well as practitioner understanding of the model were found to make a difference in teacher buy-in of the approach (Turnbull, 2002). Additionally, teacher buy-in for reform is influenced by the headteacher both directly through support provided towards the initiative, and indirectly through the development of a school culture open to change (Datnow & Castellano, 2000). Similarly to efficacy and engagement, buy-in, is not a stable factor. Turnbull's (2002) research indicates that teacher buy-in evolves over the course of the improvement process, and factors that influence practitioner buy-in may change from year to year. For this reason it is necessary for the school leadership and outside consultants to seek out and understand practitioner experience with reform over the lifespan of the initiative, so as to address threats to buy-in, not only at the beginning of the improvement effort, but throughout the process. Buy-in has shown to be a powerful facilitator for successful reform, and the acquisition of practitioner support for reform is considered so vital that this concept has been incorporated into the frameworks of such improvement models as IQEA, ASP and DASI (Datnow, & Castellano, 2000; Harris, & Young, 2000; Antoniou, & Kyriakides, 2013).

2.5.6 Leadership

In contrast to the previous factor, leadership has long been recognized to impact school improvement efforts. Most definitions of leadership identify it to be an act of influence of an individual over a group of people. Burns (1978) provides a more detailed definition, suggestions that leaders sway "…followers to act for certain goals that represent the values and motivation – the wants and needs, the aspirations and expectations – of both leaders and followers" (p. 19). This definition touches on the idea that the leader is sensitive and responsive to the needs of the group, a concept that is key in the school setting. Although headteachers do not typically work in the classroom, their actions at the school level have been found to impact student achievement (Barber, Whelan, & Clark, 2010; Martorell, Heaton, Gates, & Hamilton, 2010). What is more, good headteachers can have an observable effect on student outcomes over the course of a single year (Branch, Hanushek, & Rivkin, 2012). In a four year study, Hallinger and Heck (2010) too noted that changes to school leadership were connected to improvement of student outcomes, and increased the capacity for change at the school level. With regards to school improvement, headteachers, in their

role as leaders work to engage their staff in the process of change, attempting to influence both the desire for change and facilitate implementation of actions in that direction. Headteachers are often the drivers of change, and the person teachers look to for guidance, thus, headteacher support for reform is near essential for successful improvement. How the headteacher uses their power and position affects both the implementation, and the outcomes of improvement (Dolph, 2017).

Mendenhall, Iachini and Anderson-Butcher, (2013) found that teachers respond well to improvement projects when the school leadership team is decisive, responsive and provides guidance for the duration of the initiative. Furthermore, trust must be established between the headteacher and the teaching staff prior to the introduction of improvement projects; teachers are more likely to develop buy-in for reform when they feel confident in following the guidance of their headteacher (Mendenhall, Iachini, & Anderson-Butcher, 2013). Similarly, teachers are more likely to associate positive emotions with reform when the headteacher openly backs the project, and engages with the process themselves. Reform efforts are bolstered if the headteacher is enthusiastic about the improvement model and vocal about the need for its implementation (Dolph, 2017). Although headteachers may not personally implement strategies for improvement when those present at the classroom level, these members of staff engage with reform in a host of other ways. Headteachers interact with and organize teachers, students, parents and the wider community as part of their general duties, and this aspect of their work is also essential in guiding a joint effort at improvement. Moreover, headteachers have an important role to play in school improvement because they are responsible for developing a shared vision for reform and a school culture open to change; on a more practical level, headteachers support improvement by providing teachers with time and resources to put towards reform, and maintain staff engagement levels by monitoring progress (Dolph, 2017). This is especially important for struggling schools and schools serving students from underprivileged families, wherein practical support from the headteacher is crucial in motivating the staff to make key changes (Chapman, & Harris, 2004). In their position, headteachers are able to address and alleviate some of the challenges teachers encounter in the course of reform, and in this way bolster the success of the initiative.

Distributed and collaborative leadership has also been found to be advantageous for school improvement (Fullan, 2016). A collective approach to school improvement presents through collaborative decision making, whole school involvement in the process of change and regular and open communication (Reeves, 2009). Under this system, every member of

staff takes responsibility for the project and the work that needs to be done towards improvement. Leading change is not an easy feat, good headteachers must hear the concerns of their staff members, and engage in problem solving to reach a mutually satisfactory resolution in cases of teacher resistance (Herold, & Fedor, 2008). Teacher concerns must be acknowledged and addressed because imposed change is rarely successful. It is up to the headteacher to develop a welcoming environment for school improvement, and to do so, teachers must be involved every step of the way, from decision making, to planning, implementation and evaluation of the effort.

2.5.7 Teacher Collaboration

Teacher collaboration has been well established as a supportive factor for practitioners. Definitions of the concept are numerous and extensive, but in a few words, collaboration in the school setting can simply be defined as teachers willingly working together. Teacher collaboration can vary in form, and may include any combination of observation, peer teaching, dialogue, decision making, strategy implementation and evaluation (Woodland, Lee & Randall, 2013). Similarly, teacher collaboration may be undertaken for any number of purposes, such as professional development, school improvement or long term planning. Effective collaboration is no easy feat to achieve as teachers prefer to maintain status quo rather than address issues that may result in conflict (Achinstein, 2002). High quality teacher collaboration entails trust, openness, honesty and reflection (Woodland, Lee & Randall, 2013).

Research indicates that teacher efficacy improves as the result of collaborative partnerships, and teachers who engage in high levels of collaboration associate more positive feeling towards their work (McLaughlin, 1993; Shachar & Shmuelevitz, 1997). Staff members that have developed strong collegial bonds also demonstrate high engagement, and commitment to the profession. Moreover, Pas, Bradshaw, and Hershfeldt, (2012) found that good relations between staff members in the school supports the establishment of a positive environment, which leads to fewer instances of work induced burnout. Pounder, (1999) found that collaboration supported teacher development; teachers that participated in collaborative work demonstrated more varied skill sets and a broader knowledge base. Teachers are also more willing to try new strategies when working in tandem with a peer. Additionally, the results of a study by Goddard, Goddard, and Tschannen-Moran (2007) demonstrate that teacher collaboration had a positive impact on student achievement. In summary, existing

literature indicates that teacher collaboration is beneficial across a host of variables for both teachers, and students.

There are also indications that teacher collaboration is a facilitator for school improvement (Horn, & Little, 2010). School improvement initiatives have a greater likelihood of success when teachers work well together (Hoy, & Hannum, 1997). Peer support, and a co-operative work environment are vital for supporting morale and maintaining engagement with reform (Mendenhall, Iachini, & Anderson-Butcher, 2013). Comradery among teachers also supports the emotional wellbeing of teachers working in challenging schools, and teacher collaboration also alleviates, to a degree, a dearth of resources (Hakanen, Bakker, & Schaufeli, 2006). Mitchell and Sackney (2000) emphasise the necessity of collaboration for school improvement by noting that teachers feel "confident in their own capacity, in the capacity of their colleagues, and in the capacity of the school to promote professional development" (p. 78). Which is to say that teachers rely heavily on their peers to process change, and the support of colleagues is vital to facilitating practitioner confidence in undertaking improvement. Supportive collegial relations and a collaborative school culture predisposes the school to be more receptive to improvement efforts (Hopkins, 2001). Teacher collaboration also supports school improvement by supporting teachers in establishing ownership over the initiative (Gable, & Manning, 1997). Through collaborative partnerships teachers work together to develop goals, plan and implement the strategies, thereby founding a joint commitment and responsibility to reform. Friend and Cook (1990) establish that teacher collaboration is essential for school reform, and identify six conditions that must exist for effective collaboration to occur. These scholars propose that teachers must be on equal footing and share objectives, workload, accountability, resources, and finally participate in the endeavour voluntarily. The fulfillment of these conditions is vital for collaboration to succeed, and high quality collaboration improves the likelihood of effective reform (Friend, & Cook, 1990). Collaboration is also thought to be supportive of school improvement because it allows teachers to tackle the initiative as a community, rather than in isolation (Egodawatte, McDougall, & Stoilescu, 2011).

2.6 Research Questions

Teachers implement school improvement initiatives first hand, and due to this, experience reform in a singular way. Thus, it is vital to learn what factors can hinder their participation and engagement with reform and what can be done to support teachers from the outset. In the latter half of this chapter I discussed the potential barriers and facilitators that teachers may encounter in the process of implementing school improvement initiatives. While the number of studies that have given voice to this topic is increasing, more research on this topic is necessary so as to understand the factors in greater depth. In the long term, such research has the potential to change the way school improvement initiatives are implemented. In this study I sought to gain insight into the experience and journey of teachers who implemented the dynamic approach to school improvement. This is a topic that has not been studied in great depth in prior research on the dynamic model, and for that reason I framed this study as an exploratory one. I set out to study the process of implementing the DASI approach, looking to learn the teacher perspective on the impact of the improvement effort, as well as the challenges and supports encountered by staff members in the process. These objectives gave rise to the following questions:

1. What changes have been made by the schools in their daily routines and school policy on the basis of the dynamic approach to school improvement?
2. Did teachers perceive their improvement effort under the dynamic model to have been successful?
3. What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?
4. What factors facilitated or otherwise had a supportive influence on the implementation of the dynamic approach to school improvement?

Chapter 3: Methodology

3.1 Overview - Methodology

I begin this chapter by providing an overview of the research design. Following that I separately discuss the philosophical orientation, method of research, sample and participants. I continue by outlining how I implemented the study in each of the schools. Further on I identify the data collection instruments used in the study, and provide a rationale for their selection. In the latter portion of this chapter I lay out the analysis procedures for each type of the data collected over the course of the study. This chapter concludes with a consideration of validity, reliability, and ethical considerations.

3.2 Research Strategy

The study was carried out over the course of a single school year, beginning in September 2015 and concluding in July 2016. Data was collected from four schools, each of which represented a single case. With regards to research methodology, I selected the multiple case study approach because it is a flexible technique, suitable for a yearlong study and a good fit for gaining detailed insight into a topic (Cohen, Manion, & Morrison, 2011). The objectives of the study required the collection of extensive, context-sensitive data, for which qualitative methods are well suited. I was concerned with understanding the perspective of teachers, and felt it was essential to provide practitioners with an opportunity to give voice to their experience. For this purpose I selected semi-structured interviews. To avoid over-reliance on participant self-report, and provide a more balanced narrative, I also employed documentary analysis in the course of the study. Additionally, one quantitative instrument was implemented at the beginning of the study. A questionnaire was used to collect data on the functioning of the school factors, and support schools in selecting an area for improvement. This questionnaire is a staple of the dynamic model, and features in all studies which follow this framework.

3.3 Philosophical Orientation: Pragmatism

The philosophical orientation of a research study influences every aspect of the methodology and analysis utilized in research. The philosophical orientation or worldview of a researcher is formulated on the basis of their stance on ontology and epistemology (Birks, & Mills, 2015). Ontology denotes the nature of reality as the researcher views it, whereas epistemology refers to how knowledge is gained (Creswell, & Plano Clark, 2011). Scholars

select their methodological approach and data collection instruments on the basis of their paradigm worldview, thus ensuring that the method, philosophical orientation and the purpose of the study align (Cohen, Manion, & Morrison, 2011). The selection of the paradigm worldview for this study was particularly thought provoking, as, while largely qualitative in nature, my conception of the project did not strictly conform to the interpretivist, critical or constructivist philosophical assumptions. While this research is not a true mixed-method study, postpositivist assumptions are also nevertheless present in the quantitative instruments implemented at the beginning of the study, and in the attempt to triangulate across data sources. For these reasons I have selected the pragmatist paradigm as the philosophical orientation of my research, because this worldview allows for integration of qualitative and quantitative approaches, in terms of ontology, epistemology and methodology. Pragmatism was suitable for this research study because the paradigm is 'practice-driven' in that it accepts both singular and numerous, objective and subjective perspectives of reality (Cohen, Manion, & Morrison, 2011). This paradigm allows the scholar to engage in a pluralist approach to research and employ both realist-objectivist and relativist-subjectivist philosophies at different stages of their research, relative to the goodness of fit between the philosophy, methodology and analysis (Creswell, & Plano Clark, 2011). Pragmatist paradigm allows for the use of both interviews and a questionnaire in a single research study, so long as the approaches are appropriate, justified, and above all else allow the researcher to achieve resolution of the posed research questions (Kettley, 2010). This study was well suited for the pragmatist paradigm as it is research question focused and concerned with real world practice, which are key elements of the pragmatist worldview (Tashakkori, & Teddlie, 1998). Therefore, in terms of ontology and epistemology, I will utilize multiple philosophical positions, beginning with postpositivism in the first stages of the study and incorporating a more constructivist, relativist-subjectivist perspective throughout the latter stages.

3.4 Positionality

In research that incorporates qualitative approaches, the researcher is intimately involved in the construction of knowledge as a 'measurement devise' (Creswell, 2007). As such, it is essential for the researcher to acknowledge their positionality and be aware of how it may mediate the research process. This is especially pertinent for the study in question because I was both the researcher and to an extent a participant in the improvement process. Sikes (2010) emphasises the need to reveal the nature of the eyes through which research is

interpreted, so as to allow the reader to understand the lens of observation and the makeup of potential biases. My background in teaching has undeniably shaped my understanding of and approach towards schools. The knowledge of the landscape and common language of schools allowed me a pathway through which to develop relationships with the practitioners. The challenge however, was in placing at the forefront my obligations as a researcher and being keenly aware of the subjectivity and biases I brought to the research process. Though it is impossible to erase the situatedness of my background, I was diligent in reflecting on my assumptions in the course of data collection and analysis.

3.5 Case Study Method

As with most research, a number of different approaches could have readily been used to address my questions. It was important for me to select an approach that would not only resolve the topic of study, but also ensure that the answers gained are valid and reliable (Silverman, 1993). I initially considered following the quasi-experimental method, because I felt that an approach rooted in science and precise quantitative measures would best serve in determining the impact of the DASI framework. However, given the challenges I encountered in the process of school recruitment, I realized that my sample size would be somewhat smaller than ideal for a quantitative study, and furthermore, as evident in my questions, I felt it important to extend my research beyond that of an impact study and explore the what, why and how of school improvement from the perspective of the school staff. On the basis of these considerations, I was drawn to the case study method in that it allowed for the exploration of process and context (Cohen, Manion, & Morrison, 2011). Verma and Malik (1999) site this as a key strength of case studies, noting that "…the main characteristic of case study is its concentration on a particular instance in order to reveal the ways in which events or situations come together to create particular types of outcomes" (p.114). The case study method is also well suited for studies that take place over a period of time, enabling the researcher to develop a chronological narrative and detailed insight into the phenomenon being studied (Cohen, Manion, & Morrison, 2011). This was a key concern for me, as the study took place over the course of the year, and I needed an approach that would allow me to track the evolution of the intervention as well as be flexible in case of unexpected events or variables. Furthermore, case studies are unique in that they take place in the real world and the outcomes are often directly applicable to the case at hand (Cohen, Manion, & Morrison, 2011). Coming from a teaching background, I wanted to ensure that this study would have real world application for the schools that took part. I judged the case study method to be the

best fit for my research, given that this method would allow me to explore the research questions, and be directly relevant and useful to the participating schools.

Case study research does not always begin with a hypothesis, because often the case in question does not have enough available information to formulate one (Verma, & Malik, 1999). It is for this reason this study does not establish a hypothesis; I chose to investigate staff perspective of the dynamic model because prior research on the framework had not delved deeply into the topic. Therefore, my research followed the exploratory, rather than explanatory route, in that this study offers beginning insights into the subject. For the purposes of this study I defined a case as a single school undertaking the DASI improvement project over the course of the year. I chose to pursue the multiple case design, ultimately working in partnership with four unrelated schools located in the East of England, Yorkshire and the Humber, and East Midlands regions of England. The use of multiple cases was essential in allowing me to explore the variance in the experience of teachers implementing the dynamic model in different schools and diverse contexts (Cohen, Manion, & Morrison, 2011). In setting up multiple case study research, investigators often select cases that represent either confirmatory or contrasting examples of the situation to be studied, and strive to include a variation in size, context and geography, among other factors (Green, Camilli, & Elmore, 2006). I was cognisant of these factors when recruiting schools, and made contact with schools that ranged in location, Ofsted standing, size and local socio-economic context. I was, however, dependant on convenience sampling in that I could only access schools that volunteered to participate. As such, while the participating schools show some diversity in the aforementioned factors, I acknowledge that a greater range would have been preferable. I did not, at the outset of my research, allocate schools to represent confirmatory or contrasting cases on the basis of their contextual and geographic similarities. As this is an exploratory study, I left myself open to all possible outcomes with regards to expression of cases.

I functioned as a participant-observer in each site; while the teachers were aware I was in the school as an outside researcher, I was treated as a member of the team during the staff meetings I attended. I chose to pursue the participant-observer role because I wished to develop a partnership with staff members over the course of the year and also to establish trust leading up to interviews which touched on potentially sensitive topics. I was however conscious of the need to maintain the validity and reliability of the data despite the growing familiarity, given that "…the therapist is both the participant and observer, and in that role, may overstate or understate the case" (Cohen, Manion & Morrison, 2011, p. 292). This is a common concern in case study research, and indeed, one of the biggest weaknesses of this

method is the danger of the distortion of evidence, however unintentionally, by the unacknowledged biases of the researcher (Verma, & Malik, 1994). Given that case studies cannot be truly replicated, the onus is on the researcher to provide ample evidence to support their analysis and conclusion. I discuss these concerns and the steps I took to secure the trustworthiness of the data in greater detail at a later point in this chapter.

3.6 Case Study Schools

The execution of this study hinged on my ability to recruit schools. The crucial elements I considered in relation to sample selection were the sample strategy, sample size and access to the sample (Cohen, Manion, & Morrison, 2011). My sample strategy was a mix of convenience and purposive sampling; while I had little control over which schools would respond to my query for participants, I deliberately approached schools that ranged in geographic location, size, Ofsted standing, and student SES status. While the weakness of convenience and purposive sampling is that the findings are not representative of the wider population, it is not a critical factor in studies like this one, that do not intend to generalize the findings outside the sample. (Cohen, Manion, & Morrison, 2011).

I began the process of school recruitment in January 2015 by searching county websites and making contact with schools through email and by phone (see Appendix D). To compensate for the expected low response rate, I reached out to several hundred schools across 15 counties in Yorkshire and the Humber, East Midlands, East England, London, and South East regions of England. I limited myself to these areas for practical reasons; this project required regular trips to the schools so I selected counties which allowed for a return day trip from Cambridge. Despite vigorous recruitment I only heard back from about a dozen schools over the course of seven months. Maintaining steady communication with the schools that replied to my query was often a challenge; it was not unusual for contact to dwindle completely and then resume months later. As such I strived to set up in-person meetings with schools that responded, so as to develop a better idea of the school's interest level and receive a firm reply regarding participation. Between January 2015 and July 2015 I traveled to meet with the leadership teams of 11 schools to discuss the particulars of the project. By the end of July 2015, I had confirmation that four schools would go ahead with the project. In late August 2015, headteachers of two more schools reached out to me independently of each other, and also agreed to undertake the project. Thus, I acquired an initial sample of six schools, which agreed to work in partnership with me and undertake the DASI improvement program over the course of the 2015-2016 school year. I did experience sample attrition in

the autumn term, with one school choosing to drop out of the project completely. Additionally, midway through the school year, another school elected not to engage in staff interviews though they did continue to implement the project and receive me for staff meetings. Therefore, I concluded the study with a total sample of four schools, to which I have given the pseudonyms of Hawthorn Primary, Mulberry Primary, Primrose Primary and Foxglove Primary. Table 1, below, provides a summary of school characteristics. A detailed description of each school is provided in the findings chapter.

Table 1. Characteristics of schools that took part in the study

School	Location	Settlement type	Number of students	School type	Percentage of pupils eligible for free school meals	Percentage of pupils who require SEN support	Percentage of pupils whose first language is not English	Ofsted rating at the start of the school year
Hawthorn Primary	Yorkshire and the Humber	Town	232	Community school controlled by the local education authority	20%	7.9%	1.4%	Good
Mulberry Primary	East of England	Village	135	Community school controlled by the local education authority	10.5%	4.5%	18%	Good
Primrose Primary	East Midlands	Village	83	Community school controlled by the local education authority	6.3%	4.2%	1.4%	Outstanding
Foxglove Primary	East of England	Town	310	Community school controlled by the local education authority	8.8%	7.4%	3.7%	Requires Improvement

3.6.1 Participants

Across the four schools, I acquired a sample of 34 participants, accounting for 3 teaching assistants, 24 teachers, 3 deputy headteachers, and 4 headteachers. Of these participants, 94 percent were female, and 86 percent Caucasian. At each school, every member of the teaching and leadership team took part in the improvement effort, thus, with regards to program implementation I achieved a complete sample at each site. Additionally, at Hawthorn Primary and Primrose Primary teaching assistants also took part in the improvement effort. Table 2, below, demonstrates the breakdown of staff members by school. All 34 participants, as demonstrated in the figure below, completed the teacher questionnaire. With regards to the interviews, I was able to recruit a large majority of staff from each site. I conducted one on one interviews with 28 members of staff across all sites. Table 3, overleaf, accounts for the makeup of the participants that took part in the end of year interviews. I strived to recruit as many participants as possible for each stage of the project, because I felt it was vital to hear from all members of staff about their experience with the dynamic model. The data I collected from the different members of the school staff provided a variety of perspectives on the same topics and gave a more complete picture of each school's journey. I do not provide an exact breakdown of age, and length of service for each participant because this information may allow for schools to be more easily identifiable, thus violating confidentiality. While I touch on some of these points in latter chapters, I do so in broad generalizations that do not allow for recognition of particular individuals.

Table 2. Breakdown of staff members that completed the questionnaire at each school

School	Teachers	Deputy Headteacher	Headteacher	Teaching Assistants	Total number of practitioners to complete the questionnaire
Hawthorn Primary	6	1	1	1	9
Mulberry Primary	5	N/A	1	N/A	6
Primrose Primary	4	N/A	1	2	7
Foxglove Primary	9	2	1	N/A	12

Table 3. Breakdown of staff members that were interviewed at each school

School	Teachers	Deputy headteachers	Headteachers	Teaching Assistants	Total number of practitioners that were interviewed
Hawthorn Primary	6	1	1	1	9
Mulberry Primary	3	N/A	1	N/A	4
Primrose Primary	4	N/A	1	N/A	5
Foxglove Primary	7	2	1	N/A	10

3.7 Implementing the Dynamic Approach to School Improvement

In this section I will discuss the procedures I followed with each school to support them in designing and implementing an improvement project based on the dynamic model. While all four schools carried out their projects between September 2015 and July 2016, I worked with every site individually, and each school had a separate timeline for when respective phases were completed. The particular journey of each case is detailed in the findings section, separately for each school. This section is meant to familiarise the reader with the general structure and steps of the dynamic model, and provide an overview of what was done. I guided the schools in their journey by adhering to the method developed and detailed by Creemers and Kyriakides (2012) in the third chapter of their book, *Improving Quality in Education: Dynamic Approaches to School Improvement*.

Leadership teams at each school allocated a number of staff meetings each term to work on the DASI project. Teachers at all schools continued to engage with the improvement effort outside of these set meetings, however the staff meetings allowed the whole school to periodically come together and discuss topics pertaining to the dynamic model. Staff meetings were devoted variously to planning, organization, strategy development, feedback and evaluation of the reform being undertaken. Over the course of the year I joined teachers in these dedicated staff meetings between one and three times every term to provide resources and support. On average I attended five to seven staff meetings over the course of the entire school year at each site; this number does not account for the visits I made to conduct teacher interviews near the end of the year.

The first staff meetings on the DASI project took place in September 2015 for all four schools. In the first meeting I presented the framework to the entire school staff, explained the particulars of the project and addressed any concerns that arouse. At the end

of this meeting I distributed the staff questionnaires and asked all staff members present to complete the questionnaires, thereafter collecting them. The questionnaire was developed by Creemers, and Kyriakides (2012) to aid researchers in the collection of data on existing school policy, teaching and the school learning environment from the perspective of teachers and the leadership team. The particulars of the staff questionnaire are discussed in detail later in this chapter.

At the end of first meeting teachers were given the option to opt out of further participation by their headteachers, and had no obligation to attend consecutive staff meetings reserved for work on the DASI project. Creemers and Kyriakides (2012) state that while they advocate for the "involvement of the whole-school community, it is not feasible to expect that all individual members of the school community will participate in the improvement project" (p. 54). As such, the scholars suggest acquiring a necessary number of teachers for the project to proceed, and ensure that they are willing to participate fully. Furthermore, as was noted in the literature review, teacher buy-in and engagement is necessary for any intervention to succeed (Kirkpatrick, & Johnson, 2014). Given the choice of a larger but unwilling set of participants, versus a smaller but committed group, I wanted to pursue the latter. Across all four schools, none of the teachers chose to drop out. Although this was a positive circumstance, it is impossible for me to discern whether teacher participation was indeed voluntary or influenced in part by internal school pressure and politics; this topic is expanded on in the findings section.

I left the first staff meeting with the completed staff questionnaires; I had a very high return rate for this instrument - every staff member filled out the questionnaire at each school. The data I obtained from this questionnaire was specific to each school, thus I analyzed the questionnaires separately for each site. I used the data from the staff questionnaires to identify what strengths and weaknesses the school stakeholders perceived to exist within their school (Creemers, Kyriakides, & Antoniou, 2013b). Following the implementation of the questionnaire and analysis of the gathered data, the next step of the DASI framework involves the presentation of the findings, specific to each site, to the stakeholders and participants at their respective schools.

The second staff meeting for each of the schools took place in the latter half of September 2015 or first weeks of October 2015. In this staff meeting, I presented the results of the questionnaire and identified improvement priorities for each site. Then, the school staff engaged in an active discussion on the presented information, and worked together to decide which improvement priority they would focus on. The DASI

framework emphasises that it is the school stakeholders rather than the researcher that select the improvement priority from the data presented, as the teachers will be the ones to implement the project and understand best what is feasible in their particular context (Creemers, & Kyriakides, 2012). By the end of the second staff meeting, all sites selected one to two areas of improvement.

The subsequent third staff meeting on the DASI framework took place in October 2015 for all schools. This meeting focused on the development of action plans for the improvement areas selected in the previous meeting. The format of this meeting was similar to the second in that I opened the discussion but teachers took the lead as the meeting progressed. I began by presenting practical resources and relevant literature from the DASI handbook, specific to the improvement objectives chosen by each school. The DASI handbook was developed by Kyriakides and Creemers (2012) and all schools undertaking improvement based on the dynamic model may access it as a supporting resource. To create the handbook, Kyriakides and Creemers (2012) conducted a thorough review of research on specific actionable factors (e. g., formal and informal assessment, student behaviour) that make up key areas of the school functioning (e.g., quality of teaching, the classroom learning environment). In the handbook, scholars combined evidence based practice with the dynamic model to develop strategies and actions that support the improvement of each particular factor and the broader area it falls under (Kyriakides, et. al., 2014). However, the DASI framework recognizes that schools do not begin from the same level, and that a single strategy for improvement could not be globally effective across all schools (Kyriakides, et. al., 2014). Therefore, the strategies provided in the DASI handbook are optional recommendations rather than directives. To aid schools that require improvement approaches beyond those offered, the DASI handbook also dually functions as a guiding example in that it identifies key areas of focus and underscores the importance of developing research informed and evidenced based actions for improvement. In this way the handbook supports schools in developing their own strategies for improvement that are evidence based, located in the areas of the school functioning that have been shown to influence student achievement and are relevant to their own school context. With regards to this study, in the third staff meeting dedicated to the dynamic model, teachers at all sites selected resources from the handbook, and in some cases elected to develop their own additional strategies for improvement. By the end of the third meeting each school had begun to develop a draft action plan and divide tasks among staff members. In the following weeks schools

finalized their project schemes, and decided on a timeline for the completion of each stage of the project. As before, I provided support in this phase of the project, but the school staff members were the ones to reach final decisions based on the needs of their schools. All four schools settled their action plans by the end of October 2015 and most sites began to implement the first stages of the project in November 2015. Once implementation was under way, I reduced my visits to once or twice a term, depending on the needs of individual schools.

The next step of the DASI framework was for the schools to establish formative evaluation measures to informally assess the headway made in the initiative (Creemers, & Kyriakides, 2012). The evaluation allows teachers to reflect on the changes taking place and make note of any strategies that do not appear to be effective. The objective of schools' self-evaluation measures is to allow schools to improve their action plans as they go along, thus assuring that any issues or inconsistencies that are discovered, are addressed in a timely manner (Demetriou, & Kyriakides, 2012). As with the development of the initial action plans, my role in the process was to assist the schools with planning and provide any resources they might require. Although I supported the development of the school self-evaluation measure, I did not collect or interpret the data generated by this evaluation for the purposes of my study, as this measure is designed strictly with formative evaluation in mind. Formative evaluation measures were discussed between January and February 2016, during the fourth staff meeting. In every school it was the leadership team that took responsibility for the development and implementation of the formative measure instrument. Schools conducted formative evaluation of the DASI improvement project through dedicated staff meetings. Although it was intended to be a cyclical process, headteachers reported that they conducted the formal formative evaluation only once, between February and March 2016. The original action plans remained largely unchanged with no new objectives or tasks added, but each school did eliminate one or two procedures that were deemed ineffective.

As the schools proceeded with their improvement projects, I entered the next phase of qualitative data collection. In April 2016, I began the process of setting up interviews with the school staff members that participated in the project. Between May 2016 and July 2016, I conducted one-on-one interviews with 28 staff members across the four schools. Staff interviews were a particularly important aspect of my research in that the data I collected through dialogue with educators allowed me insight into the process of implementing the DASI framework. Although my interest was largely on teacher

perceptions, in addition to the teachers I interviewed the school leadership team at every school, and in one case a senior teaching assistant, to develop a more rounded understanding of each case. The interviews also served as the summative evaluation that measured the impact of the dynamic model from the perspective of the school staff (Creemers, & Kyriakides, 2012). I discuss the interview protocol and procedure in greater detail at a later point in this chapter. As spring came to an end, the research study entered its final stages. By June 2016, all schools started to wrap up their improvement projects. To conclude the in-field portion of the project, I attended a summative staff meeting at each of the four sites between June and July 2016. In this meeting we reflected on the year and discussed the project as a whole, from conception to implementation.

3.8 Data Collection Instruments

Quantitative and qualitative methods of data collection were relied on to gather data. A questionnaire was used to acquire information regarding the functioning of the school factors at each of the sites. This instrument was applied at the beginning of the school year, and completed by teachers, headteachers, deputy headteachers and in some cases by teaching assistants as well. In addition to guiding the direction of the reform effort, data from this instrument also tangentially contributed to the resolution of the first and second research questions. Qualitative data was collected through the medium of staff interviews and action plans. Interviews were conducted one-on-one and took place close to the end of the school year, as the project neared conclusion. I acquired a large sample of participants at each site, and sought input from staff in both teaching and leadership positions. Data collected through this medium was expansive, and well suited to addressing the objectives of the study.

3.8.1 Questionnaire

To implement the DASI framework I needed to gather data on the school factors requiring improvement. For this purpose I implemented a questionnaire (see Appendix E) developed by Creemers and Kyriakides (2010). The questionnaire was given to all members of staff that chose to participate in the DASI initiative; for most schools this included the teachers and headteacher, although some schools also engaged a number of the teaching assistants. The questionnaire is descriptive in that it seeks to acquire the perspectives of school staff regarding factors within the schools, without attempting to establish causal relationships or test a hypothesis (Cohen, Manion, & Morrison, 2011).

This questionnaire is a staple of the DASI framework and has been developed by Creemers and Kyriakides (2012) specifically for the purpose of implementing the DASI approach in primary schools. Versions of this questionnaire have previously been used in a number of international studies (Kyriakides, & Creemers, 2008; Janosz, Archambault, & Kyriakides, 2011; Demetriou, & Kyriakides 2012; Kyriakides et. al., 2014). As such, the validity and reliability of this instrument has been established. This questionnaire was administered to staff members at the very beginning of the study because the results were used to inform each school of possible areas for improvement. This instrument provided an initial evaluation of the school's functioning from the perspective of the staff members. Schools examined the data obtained from the questionnaire during a staff meeting, guided in this process by me, fulfilling the role of the research and advisory member of the team. Through this process schools selected their areas for improvement, around which they would follow on to devise their DASI project. With regards to the practicalities of implementation, teachers and the leadership team were asked to complete the paper-and-pencil questionnaire during a staff meeting, anonymously and without consulting with each other.

The structure of a questionnaire is a critical consideration for scholars utilising this research instrument as studies have indicated that the sequence of questions and the format of the rating scale may influence the results (Peterson, 2000). The questionnaire maintains a Likert-type scale for all the sections and questions (Cohen, Manion, & Morrison, 2011). Each section contains a number of statements positioned across from a fixed choice rating scale, out of which the participants must choose one category to indicate their level of agreement or disagreement with the statement. The ideal number of categories for a rating scale is a hotly debated topic, with the only consensus being that "there is no single, optimal number of rating scale categories for all scaling situations" (Peterson, 2000, p. 62). As such, it is up to the scholar to determine the appropriate number and type of categories on the basis of the needs and objectives of the research study (Creswell, 2003). The rating scale utilized in the School Factors Questionnaire is comprised of four anchored, balanced categories with the following intensity stimuli: Strongly Disagree, Disagree, Agree, and Strongly Agree. Along with the verbal stimuli, each category is also anchored with a number from one to four, which does not hold numerical value but serves a practical purpose with regards to the formatting of the questionnaire and the coding of the results. Unlike a typical Likert scale, the School

Factors Questionnaire does not possess a fifth neutral option, thus forcing the participants to choose either a positive or a negative response.

The questionnaire concludes with a section containing demographic questions. The demographic questions are located at the end of the survey because these questions are quick to answer and a lack of a response to this section due, perhaps, to question fatigue is not tragic with regards to analysis (Peterson, 2000). In this section participants are asked to provide information on their gender, age, education, and job in the school. I sought out this information so as to develop a general overview of the participant sample and possibly examine any trends or outliers across subgroups within the broader sample (Peterson, 2000). Analysis of this data was not statistically significant and did not indicate any patterns, but has nevertheless aided me in developing a better understanding of my participant sample.

Although questionnaires possess notable strengths in generating quantitative data, this research instrument is not without its weaknesses. School improvement can be a sensitive topic to many teachers, and due to the evaluative nature of the questionnaire, I was concerned about biased responses. I was largely worried that school staff would provide overly optimistic responses to the questionnaire so as to paint their school in a positive light, thus making it challenging to isolate an area for improvement. To address this potential challenge, prior to implementing the questionnaire I emphasised that there were no benefits to false positive results and, conversely, such an approach would only be detrimental to the school as it would hinder the improvement efforts. Ultimately, the data from the questionnaires showed a healthy range of variance for every school.

3.8.2 Interviews

I selected interviews as a qualitative method of data collection because this instrument is well suited for researchers seeking to acquire in-depth information (Kvale, & Brinkmann, 2009). Through the use of interviews I gathered information about the lived experience of teachers with regards to the challenges and supports they encountered in the process of implementing the dynamic approach (Seidman, 2008). Data gathered through this instrument contributed to the resolution of all the research questions guiding this study. Unlike the quantitative instrument, I developed the interview questions myself (see Appendices F and G). Therefore I needed to establish suitability and validity of this instrument before utilizing it in my study. I chose to do so through piloting the questions. For this purpose I recruited two primary school teachers who had in the course of their

work participated in an intervention or improvement type project. By piloting the interview questions I was able to receive feedback and improve the instrument in terms of coherence and suitability (Creswell, 2012). I chose to pursue the semi-structured format of interview because this approach set a specific theme and direction but allowed me the freedom to customize the instrument to the participant and follow up on relevant but overlooked topics (Tashakkori, & Teddlie, 1998). The interview questions vary in format. I have chosen to incorporate both general and specific questions, as well as descriptive, experience and perspective types of questions (Cohen, Manion, & Morrison, 2011). I selected these formats because they are well suited for the objectives of the study; the general and specific questions complement each other, targeting the topic both directly and indirectly, while descriptive, experience and perspective questions provide the necessary data regarding the participants' lived experience (Creswell, & Plano Clark, 2011).

With regards to the practicalities of implementing this instrument, I invited all staff members who engaged with the DASI initiative at the four schools to participate in a one-on-one interview. I did not restrict the sample through purposive selection because each participant was a 'knowledgeable person' with a unique experience and perception of implementing the DASI initiative (Cohen, Manion, & Morrison, 2011). Furthermore, a large sample allowed me to develop a more holistic understanding of the project at each site. Out of the total sample of 34 members of staff that engaged in the dynamic model, I recruited 28 participants for the interviews. Percentage wise, I was able to interview between sixty six and one hundred percent of staff members at each school. Every staff member was interviewed one-on-one for a period of twenty to forty minutes in an empty classroom or office at the school. The participants preferred to be interviewed at their schools for convenience, and I found it to be the best setting for my purposes as well because the familiar setting of the school provided the participants with a sense of comfort and helped channel their thinking with regards to the questions (Brinkmann, & Kvale, 2009). I followed the traditional interview procedure, beginning by briefing the participants and establishing rapport before venturing to the interview questions. All interviews were concluded with a debriefing, allowing participants a chance to clarify any queries. I audio-recorded the interviews with permission from the participants and transcribed them verbatim in preparation for analysis. Data collection and analysis were intertwined, in that transcription and preliminary analysis of each interview took place in the same time period. I analysed the data I had already obtained as I continued to conduct

more interviews. This oscillation enabled me to identify topics to explore in greater depth in subsequent interviews.

3.8.3 Documents

To support data collected from participant interviews, I amassed a number of documents pertaining to the improvement effort. Depending on the area of study, documentary data may present in a variety of guises, from policy documents to photographs (ten Have, 2004). For the purposes of this study, the documentary data set for each case study site is composed of school action plans, Ofsted reports and select pages of the school websites. To develop a greater understanding of the improvement projects being implemented at the participating schools, I collected and analyzed the action plans that were developed at each site at the beginning of the year. Reports of this sort can be a source of multi-dimensional data, because in addition to their content, they may transmit information about the context in which they were manufactured and give insight into the individuals responsible for their creation (Prior, 2003). The action plans were developed by teachers and members of the leadership team at each site, following the template provided (see Appendix H). The drafting process began at the third staff meeting for every school, which I attended in the supportive capacity. These action plans were finalized by the schools independent of me, and the completed versions of the improvement plans were emailed to me by the headteachers at a later date. The action plan for each school can be found in Appendices I, J, K, L, and M, unedited from the originals sent to me, with the exception of having all identifying information removed so as to protect participant confidentiality. There are two action plans for Hawthorn Primary, who chose to fill out separate documents for the two areas in which the school pursued improvement (see Appendices I and J). Documents that take the form of reports may be developed for a wide or narrow audience, and be the outcome of activity or serve to guide further action (McCulloch, 2004). Teachers and members of the leadership team at each school were both the manufacturers and the intended main users of the action plans. These documents were also developed to serve a specific purpose, in that they laid out the objectives, strategies and desired outcomes of the improvement effort. These action plans made an appearance at consecutive staff meetings dedicated to the improvement project, and were used by teachers to assess their progress and discuss the next steps. With regards to this study, the action plans further served as a means of triangulation, by allowing a point of reference to the narrative provided by the participants (McCulloch,

2004). Documentary analysis of the action plans supported the resolution of the second research question guiding this study.

Additionally, in order to acquire an impression of the school context outside of what I was told by the participants, I consulted the most recent Ofsted report for each location, and explored the school websites. These documents delivered information on the school characteristics, such as the percentage of students eligible for free meals, and staff structure. I relied on these sources of data to develop an overview of the case study sites as seen on Table 1 (p. 54), and in the course of writing the introductory section of the school profiles located in the findings section. Data from these documents was collected and incorporated because it gave insight into the background of the school. Documents allow a keyhole into a reality external to them, providing information about people, events or features of organizations (ten Have, 2004). In terms of analysis, I consulted these sets of documents strictly for the content provided in them. Further detailed analysis in the form of word enumeration or discourse analysis, was not undertaken for these sources of data because it did not serve the objectives of the study (Prior, 2003). Although these documents were freely available in the public domain on the internet, I did request permission from each school before accessing this information. All files were saved in electronic format at the start of the study, however these documents are not included in the appendix as that would prove to be a threat to confidentiality.

3.9 Data Analysis

Data analysis was conducted at different periods throughout the duration of the study. Interviews and questionnaires were analyzed separately from each other, and these types of data were processed at different stages of the project. Quantitative data from the questionnaire was analysed separately for each school. Data from the staff questionnaire was evaluated through the use of SPSS in the early stages of the project; this information was used to inform the improvement initiative. Analysis of qualitative data begun near the conclusion of the project and was evaluated in stages, both separately for each of the cases, and later jointly. Data from interviews was analysed with the use of NVivo software.

3.9.1 Questionnaire

To analyze data from the staff questionnaire, I followed the guidelines provided by Creemers and Kyriakides (2012). Data was input, processed and analyzed separately

for each school. Once the completed questionnaires were collected from a school, data was coded straightaway according to the coding recommendations suggested by the scholars, and entered into an excel spreadsheet. I then transferred the data into SPSS, and ran descriptive statistics for all of the items in the questionnaire, thereby learning the mean, and standard deviation for each item. Descriptive statistics are a very common procedure in quantitative analysis, because this method provides researchers with summative information about the characteristics of the data (Cohen, Manion, & Morrison, 2011). Information obtained through the use of descriptive statistics only describes what the data shows, further analysis is necessary to draw connections between data. The goal of the questionnaire was to get insight into the teacher perspective regarding which of the school level factors required additional attention. Thus, the next step was to separate the items from the questionnaire into eight groups according to the factor categories they represent (e. g. quantity of teaching, student behaviour outside the classroom, collaboration and interaction between teachers, etc.). To separate items into factor categories I once again followed the specification table provided by Creemers and Kyriakides (2012). The following step of the analysis process was to calculate a factor score for every one of the eight school level factors measured by the questionnaire. This was done simply by computing the mean of the group of items representing each factor. Once these factor scores were obtained, the next phase of analysis was to identify which factors were a priority for improvement for each of the schools. For this purpose I relied on Kendall's W non-parametric test to analyze the factor scores. Kendall's W provides a measure of consensus among participants (Field, 2013). The results of Kendall's W ranked the factors based on their effectiveness as perceived by the school staff. The factors that obtained the lowest mean ranks were suggested as areas of priority for the school.

3.9.2 Interviews

For the purposes of analysis, I transcribed all of the interviews verbatim and relied on NVivo software to simplify the organizational aspect of analysis as it pertained to the transcripts (Cohen, Manion, & Morrison, 2011). The interviews took place over the course of several months, and I chose to engage in an iterative process, wherein I collected data and conducted analysis simultaneously. I did not wait for all interviews to be completed for each school before analysis, rather I transcribed the text and began analysis shortly after each interview. I selected this approach because I felt it was

important to transcribe and analyse the text while the memory of the interview was fresh. To assure cohesiveness of data, which is a concern when interviews are conducted over a period of time, I relied on the constant comparative method of data analysis, diligently scrutinizing existing data against incoming data, seeking patterns and outliers (Creswell, & Plano Clark, 2011). As this was an exploratory study, I relied largely on inductive analysis, in that categories and themes emerged from data rather than from prior research (Evans, 2012a). Thus, coding categories were emergent and data driven rather than predetermined (Kvale, & Brinkmann, 2009). However, deductive coding did influence my process as well, as the key variables of 'challenges' and 'supports' were the overarching themes that I brought to the process of analysis, given that these shaped the objective of the study (Miles, Huberman, & Saldana, 2009).

To begin analysis, I engaged in open coding for each individual interview (Creswell, 2012). Open coding is traditionally the first stage of textual data analysis, wherein many small categories emerge, covering the wide range of topics and themes present in data (Corbin, & Strauss, 2014). This process involves a degree of meaning condensation, wherein the blocks of text are reduced to the central theme, rephrased in brief by the researcher (Kvale, & Brinkmann, 2009). In this stage of data analysis I read through text from a single interview, highlighting passages, and coding statements in NVivo. Interviews with teachers from the same school were conducted over the course of several weeks, and I made the choice to begin analysis before I had all of the interviews from a single school. Therefore, in this period of data analysis I read through interviews from different schools, but I did not at this stage engage in cross case comparison. To separate interview data by school in NVivo, every school was identified as a different source, and text for each school was coded under separate headings, even when similar categories and codes emerged across schools.

Once I had completed all of the interviews, I was able to conduct analysis of all interviews for each individual case. I proceeded to analyze all of the interviews for a single school as one whole, at this stage looking for similarities and differences in the many categories that developed on the basis of each single interview. This process, generally referred to as axial coding, allowed me to establish content categories within a single case (Cohen, Manion, & Morrison, 2011). Axial coding is conducted after open coding has commenced, and through this process the volume of data is reduced through the linking of, eliminating and combining of categories (Tashakkori, & Teddlie, 1998). I completed this procedure for all four schools in the sample. It was important at this stage

to ensure that the context of the coded text was not lost, and I returned to the full interview texts throughout the process to confirm the central theme (Evans, 2012a; Kvale, & Brinkmann, 2009). Thematic coding followed next, once again done separately for each school. Thematic coding, also referred to as selective coding, requires interpretation from the researcher, and involves the development of thematic categories from the already coded data (Corbin, & Strauss, 2014). In this stage of categorization, the data and themes are deliberated in relation to the objectives of the study (Kvale, & Brinkmann, 2009). Through this process the researcher interprets the text, looking beyond the statements to understand the meaning within the existing context. Similarly to axial coding, thematic coding may result in reinterpretation of some categories, as well as merger and the removal of others. Thematic coding was the final step of analysis for each separate school, and gave rise to the major themes present in each case. From there, I continued on to cross case analysis.

With regards to cross case analysis, I tackled this in two ways. First, I examined the content categories that repeated across cases; there were notable points of similarity and difference, which I recorded. Then, I re-examined the data as one whole, engaging in open, axial and selective coding again. To do this, I went back and read through each interview once more, cycling through interviews from all four schools in no particular order. This exercise allowed me to see consistent themes that wove through all studies, and more clearly identify contrasts between cases. Final cross case categories were informed by a combination of these two methods of categorization and analysis.

3.9.3 Documents

Of the documents collected, only the action plans were the focus of extended documentary analysis. Ofsted reports and school websites were consulted at various points in the write up process, but the data was not dissected at length with regards to word use or production context because this data did not directly relate to the improvement effort (Scott, 1990). The action plans were given greater attention because examination of these reports contributed to the resolution of the second research question. Documents can give insight into the authors and the intended users, the context of manufacturing, and the intended function of the contents (Prior, 2003). The contents of the action plans were at the forefront of analysis since I was present for a portion of the document development process, and was familiar with the schools' staff members who were both the authors and primary users of the action plans. Content analysis may involve

a wide range of techniques, from examination of word frequency to discourse analysis (ten Have, 2004). To analyze the action plans, I chose to follow the example of Strunk, Marsh, Bush-Mecenas, and Duque (2016) who developed a rubric to analyze the quality of improvement plans produced by schools taking part in a longitudinal study. I composed a much simpler rubric with four categories: completeness, established timeline, task assignment and implementation (see Table 4).

Table 4. Action plan rubric

Category	Description
Completeness	Has every section of the action plan been filled in?
Established timeline	Does the action plan establish a timeline for the completion of actions?
Task assignment	Does the action plan assign tasks to specific staff members?
Implementation	Was every one of the strategies implemented in practice?

The first category, completeness, considers whether the school had prepared the action plan, and at the bare minimum filled in all of the sections. The following two categories touch on the specificity of the plans, querying whether a timeline was provided for each of the chosen strategies and if the tasks were assigned to individual staff members. I included these categories because Creemers and Kyriakides (2012) state that "…it is important to specify which tasks need to be undertaken, who is going to be responsible for implementing each task, [and] when each task is expected to be implemented" (p. 59). Finally, the last category is implementation, which considers whether everything that was set down in the action plan was put into practice over the course of the year. I do not count the number of strategies implemented for each school because a measurement of quantity is not reflective of strategy quality or suitability. Additionally, instead of a scale based approach, I elected to design the rubric as a series of questions and allocate a binary yes/no rating to each category for each of the action plans. I acknowledge that the rubric is not exhaustive, and could have been expanded to incorporate significantly more categories as Strunk, Marsh, Bush-Mecenas, and Duque (2016) had done. I picked these specific categories because they evaluated the key aspects of the action plans and allowed for triangulation with the data acquired through teacher interviews. Additional categories would not add information relevant to the research objectives. This was an exploratory study only looking to learn what the schools did in the course of the improvement project.

I did not in this study seek to make any conclusions about the quality of school action plans or to draw connections between action plans and success of project outcomes. These four categories expedited action plan analysis and facilitated the development of a summary table in the discussion chapter (see Table 10, p. 138).

3.10 Validity and Reliability

Cohen, Manion, and Morrison, (2011) establish the importance of validity and reliability by stating that "if a piece of research is invalid then it is worthless" (p. 179). Validity carries such a key role in research because it considers the trustworthiness of the research, asking if an instrument actually measures what it sets out to measure and whether the data and interpretation accurately represent or explain that which was studied (Creswell, & Plano Clark, 2011). Reliability is no less important, answering for generalizability, repeatability and internal consistency of research (Creswell, 2003). While threats to validity and reliability exist in all research, studies that implement both qualitative and quantitative instruments pose a unique challenges to researchers (Creswell, & Plano Clark, 2011). A significant consideration is that validity and reliability vary across different research methods and instruments, which raises the question of whether every form of validity and reliability must be established for each instrument or if the scholars should focus more generally on validity and reliability for the project as a whole (Tashakkori, & Teddlie, 1998). Johnson and Onwuegbuzie (2004) suggest scholars focus on establishing validity in the process of data analysis while Teddlie and Tashakkori (2009) emphasise validity in design, analysis and interpretation stages of research. Having considered these and other views on this topic, I have decided to address validity checks separately for each instrument implemented in the study, both in terms of design and data analysis.

The validity and reliability of the questionnaire, a staple of the DASI framework, has been established in numerous prior studies (Kyriakides, & Creemers, 2008; Kyriakides, Bosker, Muijs, Papadatos, & Van Petegem, 2011; Kyriakides, Creemers, Antoniou, & Demetriou, 2010; Creemers, & Kyriakides, 2012). The scholars tested and confirmed construct validity of the questionnaire through confirmatory factor analysis. School level generalizability was also established in prior research through the use of a one way analysis of variance (Kyriakides, & Creemers, 2008). With regards to this study specifically, a threat with regards to validity and reliability of the questionnaire was the concern of statistical validity. The questionnaires were analysed separately for each

school, and due to the small size of some schools, the total sample for each site was often under 10 individuals. While these numbers represented one hundred percent of the teacher and leadership staff at each school, small numbers proved troublesome during data analysis, resulting in a higher than typical standard deviation. As such, I was mindful to interpret the data in the context of the school sample size. To establish reliability of the questionnaire in this study, I relied on the Cronbach's Alpha test (see Table 5). This test provided a measure of internal consistency; the coefficient for every school is high, indicating a high internal consistency. As such, both the validity and reliability of the staff questionnaire are sound.

Table 5. Cronbach's Alpha

Cronbach's Alpha		
Hawthorn Primary	.977	105
Mulberry Primary	.982	105
Primrose Primary	.975	105
Foxglove Primary	.968	105

Next, I scrutinize the validity of the interview data. To assure validity of the teacher interview questions, I took the time to pilot this instrument with two primary school teachers in England. Their feedback enabled me to ascertain that the questions targeted proper areas of inquiry that were valid for the topic at hand. To implement this instrument in my study I followed standard interview protocol at all sites. Once the interviews were transcribed, I needed to establish authenticity in the process of interpretation and analysis. For this purpose I used a number of strategies, picked on the basis of their suitability for this study. By interviewing a large sample of the school staff at each site, and including participants occupying different teaching and leadership roles, I believe I have done enough to triangulate data. In this way I was be able to compare the consistency of themes and develop a greater overview of the case (Teddlie, & Tashakkori, 2003).

Validity is also a concern with regards to analysis of interviews. Proponents of quantitative research argue that interview analysis cannot be considered a sound scientific method because a single interview may be interpreted in a dozen different ways (Kvale, & Brinkmann, 2009). While it is true that qualitative research traditions allow for validity

of multiple meanings, this is in part due to the possibility of applying different questions and contexts to the text. Whatever the selected theoretical perspective of interpretation, the researcher must be rigorous in applying different lenses and considering all possible explanations to establish the validity of their interpretation (Teddlie, & Tashakkori, 2003). This is the path I followed to check the validity of my themes; throughout the course of analysis I sought alternative explanations, and challenged my interpretation again and again. In this process I was supported by the large sample of participants I had acquired at each school; I was able to check if my interpretations on a particular theme held up against the data provided on the topic from multiple sources. Additionally, I asked a peer to go through some of my data and give feedback on my themes. Objectivity is another point that I considered with regards to validity of analysis. Kvale and Brinkmann, (2009) suggest reflexive objectivity "in the sense of being reflexive about one's contribution as a researcher to the production of knowledge" (p. 242). This was particularly pertinent in my case, as I needed to account for the biases that arouse from my own background in teaching, and consider how that coloured my interpretation. Consequently, in the process of analysis, I engaged in reflexivity, being careful to identify the biases I brought to my work. With regards to reliability, these findings are not explicitly generalizable outside the participant sample. However, I believe that analytical generalization is possible, in that findings from this research allow for the data to be reflected on as a potential guide for analogous situations and similar studies. Future research on the matter may be informed by these findings should the researcher feel the context is appropriately relevant (Kvale, & Brinkmann, 2009).

Finally, I discuss validity and reliability with regards to documentary analysis. Authenticity of the document being analyzed must be established first and foremost for the data and analysis to be accepted as legitimate (Prior, 2003). It is necessary to confirm the authorship of the document, as well as the place and date of its manufacture (Scott, 1990). With regards to the action plans, it was essential to determine that these documents were manufactured by school staff members, at the schools, rather than being a copy of a plan found on the internet. Although the action plans were finalized without me, I was present during the drafting process, and took note of the topics that were discussed. When the completed versions of the action plans were forwarded along at a later date, I was able to make an informed assessment of the information included in the action plans, thus verifying that the documents had indeed originated at the schools. The assurance of validity and reliability of the action plans supports the use of this measure as a means of

triangulation. Triangulation refers to the use of two or more approaches to gather data on a given question or phenomenon (Cohen, Manion, & Morrison, 2011). Findings derived from the analysis of data from two sources present a more comprehensive picture of the phenomenon (Teddlie, & Tashakkori, 2003). In this study, data from teacher interviews and school action plans yield information regarding the implementation of the improvement project put in place at each school. Analysis revealed that the data acquired from these sources converged, which supports the validity of the findings (Creswell, & Plano Clark, 2011).

Every research study contains threats to validity and reliability and it is up to the researcher to identify threats specific to their study and take measures to assure the trustworthiness of their research (Tashakkori, & Teddlie, 1998). Validity and reliability in research which relies on numerous instruments presents additional challenges to scholars in that validity and reliability need to be located throughout all stages of research, and in all tools implemented in the study. While I acknowledge that limited resources and time constraints prevented me from fully resolving every threat to validity and reliability for every instrument in my research, I feel I have noted and addressed every issue to the best of my ability, and the factors outside my influence do not greatly diminish the worth of the study.

3.11 Ethical Considerations

Social researchers need to behave in an ethically correct manner to safeguard the rights of the individuals that place trust in them (Israel, & Hay, 2006). With regards to this study I followed the ethical principles established specifically for educational research in the UK by the British Educational Research Association (BERA, 2011). Furthermore, I completed the *Research Ethics Review Checklist* and the *Risk Assessment Form* documents and have submit these for review as per the Faculty of Education guidelines. Ethical considerations incorporate a number of principals and on the basis of the requirements of this study, I chose to focus on voluntary informed consent, and confidentiality.

Voluntary informed consent is a corner stone of ethics in research. As a researcher, I am obliged to secure my participants' voluntary informed consent before commencing (Cohen, Manion, & Morrison, 2011). Participants need to be aware of not only the research they will be involved in, but also of what will happen with the collected data (Israel, & Hay, 2006). To secure voluntary informed consent of participants, I

briefed the school staff prior to the administration of each instrument with the pertinent details of the study. All of the participants also received a separate information and consent form for each instrument they undertook, detailing the relevant information in advance of data collection, to allow the participants to individually and voluntarily make a decision regarding participation. Additionally, in this study I protect the confidentiality of the participants through the use of pseudonyms and removal of identifying information (Israel, & Hay, 2006). Anonymity of schools that participated in the study is also preserved through pseudonyms, as identifying the sites would compromise the confidentiality of the participants (Pring, 2000).

Chapter 4: Findings

4.1 Overview and Structure

Carrying out case study research is taxing for even the most experienced researcher and the challenges do not stop once the data collection process concludes. Amongst the various demands this methodology places on the researcher, composition of the final report is perhaps the most perplexing (Yin, 2013). Unlike quantitative types of research, case study write up does not require the author to follow a standard format. Indeed, Yin (2013), purports that the composition phase of case study research should be viewed as an opportunity to select a style that will do justice to the case. I did not select a format of composition at the outset of the study because I faced a number of uncertainties going into the field. I experienced sample attrition in the early phases of research and I had no way of predicting how many sites would remain with me for the full duration of the research. Moreover, given the exploratory nature of this study, I thought it would be more appropriate to make the choice based on themes emerging from data rather than on factors evident at the start of the study. Therefore, I selected the format of the report only once I had completed data analysis.

Despite experiencing attrition early on in the study, at the end of the year I retained a sample of four case study sites and amassed a wealth of data on each school. This outcome was encouraging, however, the volume of data presented a challenge when I began to compose the report. While I had more than enough data to present each case in an extended narrative form, I was cognizant that this approach would result in a report of unmanageable length. Although I considered focusing the report solely on contrasting cases I worried that this would truncate the findings. The overarching objective of this study was to explore how the dynamic model functions in a variety of contexts from the perspective of the school staff. Therefore, I sought to compose the report in a manner that would allow the inclusion of all sites. On this basis, I selected the question-and-answer format to report the findings of this study. Whereas the often lengthy classic case study narrative seeks to immerse the reader in the case, the question-and-answer format focuses on answering the research questions (Yin, 2013). The question-and-answer format is a good fit for reporting multiple-case studies, because it supports the reader in drawing connections and identifying contrasts between cases (Yin, 2017). Furthermore, this type of format usually produces an organized, comprehensive, and overall reader friendly report. It was important to select a style that would assist with clarity and cohesion, given that I chose to incorporate a relatively large number of cases into one report. I was

particularly concerned that without clear focus and structure, the narratives would blur together in to an unwieldy mass of information. The question-and-answer format helped to transmit the individual accounts of each site without overwhelming the reader with information.

I present each case individually, but follow the same structure for every school. I begin every case with a brief introduction of the school, and the context under which the project began. In addition to data collected through interviews, this section drew on information from the school website and Ofsted reports to provide more detail on the context and setting of each case. In the introduction I also refer to the results of the staff questionnaire and present data from Kendall's W; the decision making process undertaken by each of the schools in selecting their area of improvement is briefly described as well. The introduction is devoid of direct quotes, and the objective of this section is to provide a broad picture of the school. Following the introduction, I address each of the research questions in a separate subheading. The questions guiding this study are as follows,

1. What changes have been made by the schools in their daily routines and school policy on the basis of the dynamic approach to school improvement?
2. Did teachers perceive their improvement effort under the dynamic model to have been successful?
3. What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?
4. What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

The only notable difference is that the first and second research questions are combined under one heading for a more cohesive narrative. Additionally, I do not locate cross-case analysis in this section; it is presented in the following chapter.

4.2 Hawthorn Primary

Introduction

Hawthorn Primary was a community school located in a small, and somewhat remote town in the Yorkshire and the Humber region of England. Having earned the rank of 'Good' on the last Ofsted inspection, Hawthorn maintained national averages across the board. In the 2015-2016 school year, Hawthorn Primary admitted 232 students. Less than ten percent of the students were identified as pupils with or requiring SEN, and twenty percent of students were eligible for free school meals. The school was governed by the headteacher, Charlotte, the deputy headteacher, Edgar and employed six full time teachers: Amelia, Evelyn, Sophia, Mia, Abigail, and Emily. Most of the teachers on staff were lifelong educators whose careers spanned decades. What is more, many of the teachers had worked at Hawthorn Primary for a large portion of their careers; even the newest members on staff had been with the school for over four years.

Charlotte, the headteacher of Hawthorn Primary responded to my call for participants because the school had not, in her time, engaged with an inter-disciplinary improvement project, as few opportunities made their way up to their location. While the school had over the years worked with local education authorities to provide annual teacher training seminars, staff members found much of it to be repetitive. As such, the headteacher of Hawthorn Primary was worried that the school had settled into a routine, and was concerned about complacency both in attitudes and output. The secretary of Hawthorn Primary replied to my email near the end of the 2014-2015 school year and requested more information. I visited Hawthorn Primary in the final weeks of that school year to give an informative briefing to the headteacher and her leadership team, which consisted of a deputy and two senior teachers. Hawthorn Primary agreed to participate in the DASI project soon after. The first staff meeting on the DASI project took place in September of the following school year. Every member of the teaching and leadership staff was in attendance and the headteacher had also invited the senior teaching assistant Isabel to participate in the project, so as to involve as much of the school as possible.

All members of staff and a senior teaching assistant completed the questionnaire at Hawthorn Primary. Data from the staff questionnaire was organized into eight tables which provide descriptive statistics for the eight factors of educational effectiveness (see Appendix N). This data was presented at the following staff meeting along with the results of Kendall's W which identified priority factors for improvement for the school by ranking the eight school level factors by their scores, from lowest to highest (see Table 6).

On the basis of the questionnaire, Hawthorn Primary was advised that the areas of priority for improvement were as follows: provision of educational resources and student behaviour outside the classroom. Low ranking attained by the factor of 'provision of resources' came as a surprise to both teachers and members of the leadership team. A discussion on the topic established that staff members did not feel the need to improve this area of the school functioning. On the other hand, student behaviour outside the classroom was quickly identified an area that required attention. Additionally, the headteacher felt strongly that the area of 'collaboration and interaction between teachers' was a priority for the school and would benefit from a targeted improvement effort. This suggestion was unexpected because the ranking of this factor on Kendall's W gave no cause for concern. However teachers at Hawthorn supported the proposal and voted to undertake improvement in this area. Therefore, the staff at Hawthorn Primary chose to focus their improvement project on two factors: student behaviour outside the classroom and collaboration and interaction between teachers.

Table 6. Ranking of the school factors for Hawthorn Primary

Kendall's W	
Factor	**Mean Rank**
Provision of resources	1.29
Student behavior outside the classroom	2.86
Provision of learning opportunities	4.14
Collaboration and interaction between teachers	4.29
Quantity of teaching	4.71
Partnership policy	5.93
Evaluation	6.14
Quality of teaching	6.64

What changes have been made in the daily routines and school policy and did teachers perceive their efforts at improvement to have been successful?

The staff at Hawthorn Primary selected two areas for improvement: student behaviour outside the classroom, and collaboration and interaction between teachers. This selection was curious given that the staff questionnaire identified the latter as an area of strength for the school. In developing the action plan for student behaviour outside the classroom, teachers at Hawthorn Primary selected strategies from the DASI handbook and developed a number of their own (see section 'd' in Appendix I). With regards to this area, teachers identified lunch times as a point of particular need, choosing to focus their action plan largely on this time of the school day. The action plan for the area of teacher collaboration was developed simultaneously, and similarly featured school developed strategies as well as those adapted from the DASI handbook (see section 'd' in Appendix J). By October 2015, teachers had fully developed action plans for both areas of improvement, and as of November 2015 Hawthorn Primary reported to have began rolling out the changes.

To address the area of teacher collaboration, Hawthorn Primary referred to the DASI handbook in their selection of strategies. Classroom observation and team teaching were selected as actions to be taken for the development and improvement of collaboration between teachers (see section 'd' in Appendix J). Staff at Hawthorn Primary decided that it would be most beneficial to establish inter-year partnerships, so that teachers from consecutive grades would have an opportunity to teach jointly or observe each other teaching. Emily, commented on the enterprise day set up for this purpose,

> "We have done, an enterprise day as well, I don't know if anybody's told you about that. We worked with different classes of children and that was really useful. In the future, it would perhaps be nice to work with a different key stage. I definitely think we'll use the things that we've done this year, definitely."

Similarly, Isabel, the senior teaching assistant, explained how she took part in collaborative work being done as part of the DASI project "Evelyn and I are working together, she's really good at ICT, and I am ok, but she's going to do some ICT things, and I am going to watch what she does". Additionally, the headteacher set up a number of science days, for which teachers worked together to develop targeted lessons on areas of the curriculum that were seen to have not been given due diligence. Abigail described her experience,

> "For the collaboration work, that we're doing, Emily and I have met, together a few times, just at lunch times for 10 or 15 minutes, to work out what we're going to do in our science day. I did some research and found some projects and things that we're going to do, then we came together and decided who was going to buy the resources that we needed."

Teachers took these changes in stride, and made no negative comments with regards to the actions undertaken for this area. Evelyn was pleased with the changes taken place "It's quite good that we've been given opportunities in the curriculum time to do it. I am quite looking forward to that, that's quite exciting, and that was from the questionnaire, and from looking at the collaboration". With regards to the effectiveness of the actions undertaken for improvement of collaboration, teachers felt that they observed tangible changes. Deputy headteacher, Edgar reflected,

> "Since Christmas it does seem like there's a lot more of a team pulling together actually, which has been really nice and it's been mentioned by several staff. We're sharing a lot more, I think we're willing to share a lot in those staff meetings and that's been really positive."

As the comments above indicate, for the area of collaboration, staff at Hawthorn Primary was pleased with both the process and outcome of the improvement project.

In addressing student behaviour outside the classroom, Hawthorn Primary chose to focus specifically on lunch times and play times. Teachers and the leadership team decided to approach the situation from multiple angles. Teachers identified themselves, the lunch time supervisors, and the students as the key actors within the situation and developed strategies for each side (see section 'd' in Appendix I). With regards to the midday supervisors, teachers shared quite a bit of frustration about the way their coworkers managed lunch time play. Mia was concerned about how the children were treated by the midday supervisors "If I am being honest, I can see sometimes the dinner ladies don't deal with children fairly, or the way they speak to children is not how you would like them to be spoken to". In a similar vein Abigail worried that the middays were not providing children with enough positive engagement,

> "Oh, the midday supervisors. You know, one of the biggest things is they stand, and all children hear is 'Don't do that! Don't do this! Don't do that!'. The children never get 'Hi, how are you today?' you know, or 'Oh, what are you playing?'. The middays never try to join in, you know, they tend to be a negative authority."

There was also concern from the teachers regarding the midday's time management. The headteacher, Charlotte, was appointed the task of ensuring the support staff was working out their full time. Charlotte, described her approach to the matter,

> "I had to just talk to them about their contracts and the fact that they are, employed until 10 past 1, and that's so when the whistle goes, at one o'clock it does mean there's still 10 minutes of their time where they can sort out issues rather than saying, 'Oh the whistle's gone, it's one o'clock, it's now the teacher's responsibility'."

However, the same teachers who faced some difficulties with the midday staff, were also quick to recognize that the dinner ladies did not have an easy time of it. Mia reflected "I think it's not an easy job, is it, and sometimes, you feel as though you're the scapegoat for everything". Abigail had similar thoughts

> "The, midday supervisors, I think that would be a great idea to be honest, to include them, because if they are included, they get a sense of importance, and to complement what they are doing. You know, I'll often say to ours, 'That's fantastic what you've done today, thank you' because often all they get is grief"

In fact, almost every member of staff sympathised with the predicament faced by the lunch staff. Sophia admitted "With the midday supervisors, I wouldn't want the job, I think it's a rotten job and they deserve a lot of support from us". Thus, several actions were implemented by the school to support the development of better relations with midday staff. To establish better lines of communication, Isabel, the senior teaching assistant took responsibility to "…set up a communication book with the dinner ladies" (see section 'd' in Appendix I). Additionally, middays were provided training in the areas of positive play and active engagement. Abigail commented "Yeah, we've done quite a bit, we've done anger management training with them and all sorts of things so that has really helped; we're seeing some improvement we're thinking now".

Staff at Hawthorn Primary also addressed the student factor with regards to lunch times, and set out a series of objectives to work towards. Self-regulation and responsibility were selected as key areas of focus for the year. To achieve these goals and simultaneously ease the burden on the middays, the school set up a playground squad composed of Year 6 students whose duties were to help younger students resolve minor conflicts at lunch and break times (see section 'd' in Appendix I). Evelyn felt that the squad was beneficial for her students,

> "The lunch time squad was really empowering for them [year 6 pupils] but it was also really nice for my little ones, coming in happy, because

> the year sixes have paid them some attention. It was really powerful for them to be spotted by the other kids, so it made lunch times better for them."

Teachers were generally keen on this new change, and felt that it had a positive impact on children's lunch time experience. Mia shared her perspective,

> "Actually, the children themselves have been better outside. The year sixes, the playground buddies, that's made a big difference, because they've scooped up a lot of minor little incidents, and the other children have responded well to going to talk to the year 6 students, instead of bothering the dinner ladies with everything. Fortunate for us, we have a lovely school and our children are respectful of the year sixes and feel happy, and I suppose feel a bit of comfort in the fact that they can go to the older students and they'll have them sort things out. We are a very caring school and so that works to our advantage."

To further support the students, a system of grievance sheets was set up wherein children could note down if something troubling happened at lunch time that they did not feel was dealt with adequately at the time (see section 'd' in Appendix I). The benefit of this system lay in that it allowed students to relay information to the teachers and be heard without disrupting or delaying class time immediately after lunch. Abigail found this to be an effective resource for her class,

> "I think, the work that we're doing with the middays and the work that you've done with us, like the little slips, that works a treat. So the children can write their grievance down, and at some point when the teacher's got five minutes to talk, probably at break time, the children will say, "Oh, it's alright now" it's gone, whereas at that time it was paramount in the minds, and they wanted it sorted there and then, but by break time, actually they don't want to discuss that in their own time"

Teachers reported being pleased with the progress being made for the factor of student behaviour outside the classroom. Edgar felt that the improvements being implemented around lunch times were effective in promoting the development of self-regulation and responsibility in students,

> "I've seen improvements in behaviour at lunch time particularly. We're having less incidents, and we're also having maybe a slight maturity of the students where they are learning what is not acceptable behaviour, and what needs dealing with and what doesn't need dealing with by an adult."

In addition to the day to day changes made by the staff in the school, the leadership team reviewed the school policy on student behaviour outside the classroom. The headteacher, Charlotte, discussed the work that was undertaken in this area,

> "We looked at our behaviour policy again, we always look at it in September, but because of the changes we made, on the back of the action plan, we did make some changes to the policy, within the year as well. Next year we will look at our teaching and learning policy because that's on a three year cycle so we'll be able to pull the collaborative part of that into that policy as well"

Every member of staff interviewed at Hawthorn Primary felt that the school saw positive changes over the course of the year, and most perceived that to have come about as the result of taking part in the DASI project. Charlotte described the changes she personally saw at the end of the year,

> "The lunch times, had the biggest impact, we have the middays actually now dealing with things right up until 10 past one, so the staff say, whereas they used to have twenty minutes of children speaking to them, about things that happened at lunch time now, they don't have any, so it's huge, it's made a huge impact. In terms of supporting each other with teaching and going in and observing each other and working on team teaching, and the staff actually now, whenever a project is coming up, they are actually thinking, 'Oh, let's pull that in, so we can do it in that way'. So it's kind of given them that mindset that it's a good way to work now."

The staff at Hawthorn Primary was committed to making long term changes to how the school functioned, and viewed the improvement done throughout the year as the beginning of a journey rather than a project with a concrete start and finish. The school made changes both in practice, and to the policies in the areas change was undertaken. At the end of the year teachers reported that they observed DASI to have produced a tangible difference in both areas of improvement. From the perspective of the school staff, the improvement effort was a success.

What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?

Teachers at Hawthorn Primary did not find the DASI improvement initiative to have been a hardship. When interviewed, all members of staff stated that they experienced few issues with project implementation. In fact, when asked in broad terms most teachers struggled to name a specific challenge they encountered. Charlotte, the headteacher of Hawthorn Primary simply stated "The project, generally, I haven't felt it a challenge or cumbersome or anything like that, no". Emily also found little to relay when asked to talk broadly about this area,

> "Hmm, challenges, I don't think so really. I think we've spent a bit of staff meeting time talking, which has been really nice, I don't think that's been a challenge at all, it's kind of opened us up as a staff really to talk more, about things. I don't find anything has been that much of a challenge."

I was cognizant that some teachers may not have felt comfortable identifying challenges, lest it be seen as criticism, thus I also asked about specific obstacles commonly encountered in improvement initiatives, so as to allow the participants to comment on the presence or absence of these factors in relation to their experience with DASI. In response to these questions, several teachers touched on factors that proved a challenge during the year. One of the more prolific challenges was time as a limited resource. Teachers identified an increase in their workload in the initial stages of implementation, in the period between the action plans being finalized and changes being applied in practice. Mia shared her experience,

> "Maybe initially, and it's the same with anything isn't it, it always requires an extra bit of effort to get things up on the ground and get new systems running, but once that was done, it in fact probably lessened our stress and workload over lunch times. So, you know, alright, at the beginning, it was a bit hard work to get going, but it's been useful in the end, like I say now, it just runs itself, pretty much"

Although the changes proved to be time saving in the long run, at the time of implementation, teachers found that there was an adjustment period during which their workload increased as the result of the changes taking place. The leadership team at Hawthorn noticed the challenges faced by teachers, and Edgar commented that,

> "I think for some teachers it was, as we've spoke about at the staff meeting the other day, some teachers had a bombardment of letters from children because they felt like they had to write something, you know, if something had happened at lunch time they had to write it down, but I think—and as I say, over time that's filtered right down now"

Additionally, teachers were not always able to complete all the tasks required of the project during the school day, which necessitated putting in extra time before and after school. When asked what her day looked like after Hawthorn Primary undertook the DASI project, Mia reflected that

> "It probably did eat into lunch times, and what have you to start with, and a bit of after school. Anything that you do new, to do it properly, it does take up extra time and effort and you've still got everything else you've got to do."

Teachers at Hawthorn are not alone in their experience, and this barrier is not limited to the DASI framework. Time has come up frequently as a barrier to successful interventions and it is perhaps the most common challenge faced by teachers with regards to school improvement (Gu, & Day, 2013). Teacher roles have expanded dramatically in the past few decades and educators often struggle to find time to meaningfully engage with interventions (Knight, 2009). In fact, Rhodes and Houghton-Hill (2000) found that limited time was the number one reason teachers were not willing to participate in school improvement.

The midday supervisors were also mentioned as a challenge by a number of staff, when it came to implementing the improvement project. Teachers felt that the lunch time supervisors were not on board for the changes taking place, and beyond that, were not up to par on their general workload. Evelyn, felt that communication was a challenge, "It's getting the middays on board, and to understand the vision, is the barrier at lunch times, but that's a barrier that's been around a long time". On a similar note Amelia felt that at times teachers and middays found it difficult to see eye to eye on the changes taking place,

> "So it's that mindset the midday supervisors felt at the beginning that, their role was being undermined, so we had some work to do on getting them to understand that 'No, no, this is to help you'. I think that they did come around to that in the end."

Teachers found that it was difficult to maintain the changes that were put down in the action plan when it came to lunch times, as the middays were not supportive or consistent in upholding the changes. Isabel shared her concerns,

> "We've just had a discussion about this at the staff meeting this week, and it was decided that the midday supervisors have gone back a little bit and they are trying to kind of go back to telling us that they have not been able to have time to deal with things. What we've said is just we need to keep reiterating the same thing and making sure that that is being done."

Although teachers experienced challenges in their work with the lunch time supervisors, it is important to reiterate once more that most of the staff was also sympathetic to the challenges that the middays themselves encountered.

Outside of time related struggles and the situation with the middays, teachers at Hawthorn did not find any other factors to be a significant challenge. On the whole, Hawthorn Primary school experienced a fairly trouble-free journey over their year of

implementing the dynamic model of improvement, and the quotes indicate that all staff members considered their experience to be a largely positive one.

What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

Teachers at Hawthorn Primary attributed their positive experience with the improvement project to a number of supportive factors. Staff identified established focus, teacher collaboration, buy-in for and suitability of chosen improvement areas, inter-disciplinary collaboration and user friendly design of DASI as facilitating factors that sustained continued engagement in the reform. Quite a few teachers appreciated that DASI helped to establish an area of improvement as a priority, which supported teachers in giving the topic due diligence over the course of the year. Mia explained it as follows,

> "I think doing this project made it [the area of improvement] a real focus. I mean, you can imagine, over the year we have so many different projects, and we're doing this and we're doing that, and, everybody starts off with the best intention but things get lost because there's always another, ten things that need to be done. But actually, by doing this, it has been a real focus and we've kept coming back to it and adapting it, and 'what can we do about this?'. So really that's what shifted it forward. Perhaps without doing DASI we might have known we got an issue and started to work on it, but I don't think we'd be in the position that we are now"

Abigail identified many similar themes,

> "I think it is the consistency, so therefore, I think because we got the project going on, we're all aware of it, we're discussing it in staff meetings so everybody is, there, you know. We have so much to do and so little time and the problem is, what is your priority, whereas this has been a priority, so therefore, I think everybody has been on it."

Establishing an area of priority for the year also allowed the project to evolve over time. Mia continued her thought from the previous question,

> "You know what's been useful is, we've come back, and discussed it together, at staff meetings, 'How's it going? What do we need to do? Is there anything that's not working?'. So we've kept, talking about it, reviewing it, tweaking things as we've gone along, and so that's all had an effect on, on how it's working now."

Edgar, a member of the leadership team discussed analogous ideas on the topic,

> "Having it in the forefront of our minds has been really important. The fact that it's not just something that's written at the beginning of the year, in September, and then we review it at the end of the year, it's

> been an ongoing process and we keep coming back to it now and again. You keep popping in, and we keep talking about it in assemblies, in morning staff meetings on Monday. Those sorts of things have kept it really fresh, so it's been, it's been nice in that sense."

This feedback is noteworthy because continuous project maintenance is a vital part of the DASI model of improvement. The dynamic framework requires schools to monitor the project through various types of formative evaluation (Creemers, & Kyriakides, 2015). Internal evaluation procedures provide the school with information about the effectiveness and fit of the changes being implemented. This information is necessary to obtain because it allows the school to adjust their action plans accordingly throughout the year (Creemers, & Kyriakides, 2012). This aspect of the DASI framework was not only realized in practice at Hawthorn Primary but also embraced as a supportive influence.

Furthermore, it is readily evident that all four quotes cited above present very cohesively, demonstrating that members of staff at Hawthorn shared similar experiences and reflections on what factors they found to be supportive in the process of improvement. From this emerges another factor which was identified by staff as a positive influence – peer collaboration. As evident in the quotes cited above, teachers spoke of working jointly and coming together as a school to undertake the project. Collaboration was identified both directly and indirectly by staff at Hawthorn Primary as another factor that supported their work on the DASI project. Mia described it in the following terms,

> "We worked together more as a team, and not just the senior leadership or the team focused on the dinner ladies, everybody had to get involved really. I think that probably is what shifted it more, it was more about, class teachers, TAs, dinner ladies, dinner staff, everybody coming together to do something. I think it's been, really useful and we have moved forward, so, well done."

The staff at Hawthorn Primary are not alone in their experience, prior research in the area of school improvement has identified peer collaboration as a factor near vital for successful school improvement. Amicable relationships between teachers and a positive work environment may in part protect against work induced burnout (Pas, Bradshaw, & Hershfeldt, 2012). Collaboration also appears to protect against challenges commonly encountered in the period of implementing improvement (Hoy, & Hannum, 1997). Hawthorn Primary seemed to collaborate well as a school prior to any outside involvement, as indicated by teacher feedback on the questionnaire. However, even though collaboration was identified as an area of strength for the school, staff chose

invest time in further developing this area in addition to undertaking improvement in student behaviour outside the classroom. It is plausible that teachers at Hawthorn were able to collaborate well on the improvement project due to existing effective practices, and the value the school culture had already placed on this area. For their part, teachers felt that high staff collaboration on the intervention came about at least in part due to buy-in for the areas of improvement that were undertaken by the school. Abigail, expressed the following thoughts,

> "I think because we picked a topic that's very dear to my heart and I looked forward to doing it. It was also the same with other teachers, where think, we were all in on it, instead of just a few of us"

In fact, every teacher on staff discussed buy-in and the suitability of the chosen areas for improvement. Amelia in particular valued the work the school had done that year towards improving student behaviour outside the classroom.

> "We've mentioned very, very many times at school that lunch times particularly, seem to be a difficult time for some children. Back in September I was really finding them difficult because I was dealing with things every single lunch time, and we just weren't kind of learning from anything, I was really tearing my hair out. So yeah, I was definitely on board for looking at the behaviour at lunch time."

The headteacher, Charlotte similarly mentioned that the area of student behaviour had come up before but in-house efforts at reform did not stick. As such, she was pleased that DASI had indicated this area for improvement,

> "I knew that behaviour at break times and lunch times was impacting on learning in the afternoon because teachers already identified that before, so it was great, really, to have that as a focus because we tried several things but nothing was really having an impact on it."

When asked what she would change or keep if she could re-do the year, Emily commented that "The provision at lunch time and at play times, that was definitely one that I would have done again. I am glad that we did that because it definitely worked." Staff members at Hawthorn Primary presented high levels of buy-in for the project from its conception, and it was one of the factors that facilitated their participation in the endeavor. Prior research on school improvement has noted the importance of teacher buy-in. High rates of buy-in are significant for the success of school improvement initiatives because this sustains a focus on, and engagement with the intervention taking place (Hall, & Hord, 1987). This research can be linked to the experience of teachers at Hawthorn

Primary, whose engagement in the DASI project was facilitated in part by the congruency between the improvement being undertaken and their interests and beliefs.

Teachers also felt that having an outside professional coming into the school to support the improvement project was a factor that aided the implementation of the dynamic model. Amelia felt that it provided the school with innovative ideas and new ways of tackling recurring issues,

> "We were excited about it and thought of it in terms of a fresh pair of eyes. DASI gives us another way, or another perspective, when you're always trying to do it in-house, sometimes you can end up going around the same kind of cycle. Whereas it just seemed like somebody coming in would just be able to see it from a totally different angle, and that's always very exciting, because you can get kind of stuck in your own little world, can't you, and I think as soon as you go out of that, either to visit or bring people in, you do get a completely different perspective on things."

Mia spoke of another beneficial feature of the same factor, noting that collaboration with an outside source of influence helped to gently urge the project forward.

> "It's been good that you have kept coming back because I think that keeps it current, and I think if you said, 'I'm coming at the beginning and once in the middle maybe' then actually, with the best will in the world, you can have a tendency to let things slip and say, 'Oh, alright, well we don't need to think about that, because you're not coming'. In a way you're keeping it moving along, by keeping coming to see us, it has kept it moving along, which is a good thing, I think you need to keep doing that, because that keeps it current."

Thornberg (2014), and Moskowitz (2005) both note that interdisciplinary collaboration can be a challenge for schools, however teachers at Hawthorn Primary located strength in this factor. This may in part be due to a successful meeting of the minds, wherein the approach presented by the intervention specialist matched the ideology of the staff involved (Slonski-Fowler, & Truscott, 2004). In addition to welcoming outside expertise, staff at Hawthorn Primary identified access to external resources as a positive factor. Emily discussed her experience,

> "The resources, particularly ones around lunch times, those have had such a huge impact within the school. Staff are now saying that they don't waste any time, and that it's very rare that children come in with any kind of issues. So the resources in terms of the pictures that you brought us, that worked really well and having the action plans with some information and examples already on, so that you are not starting with a blank sheet was supportive"

Teachers also appreciated being able to select the resources from those introduced in the DASI handbook, as opposed to having to implement everything offered. Charlotte, the headteacher, commented on this aspect of dynamic model as follows,

> "You've recommended things, but it's been up to us what we take on board, and it's been lovely because you've given us a few different ideas, so then we could pick and choose which one we know would work with our children. So the things you've provided have been a real support."

The dynamic model is not highly prescriptive and does not enforce implementation of set resources for improvement (Creemers, & Kyriakides, 2012). The DASI method provides schools with a framework that could be used with almost any number of resources, thus enabling schools to select those that match their particular circumstances. The ability to select how the improvement initiative is implemented in practice is an important part of establishing ownership of the project (Bernauer, 2002). At Hawthorn Primary teachers felt that they were able to benefit from the offered resources while still maintaining ownership and control over the way DASI was implemented in their school.

In addition to the specific supportive factors identified by staff at Hawthorn, teachers found the DASI approach as a whole to be user friendly, which facilitated continued engagement in its implementation. Edgar discussed this topic,

> "No, I just think it has been a really easy process really, it has not been difficult. All the resources' have been there, it's been quite straightforward to fill out [the questionnaire], they've gone back, it's been analyzed for us, it came back. It has been really smooth, and transitions have not felt awkward or anything like that, it has felt quite straightforward which is positive because if you have something that's put into a school that's difficult and it takes a long time, then I can assure you, it gets put on the back burner quite quickly. There's lots of other stuff to do, so something that's like this that we've been able to implement quite easily, and with support, it just makes the whole job seem smooth."

At Hawthorn Primary the number of supportive factors outweighed the challenges teachers encountered. Of the factors identified as supportive by the staff, several were directly related to the ideology and structure of the DASI framework.

4.3 Mulberry Primary

Introduction

Mulberry Primary was located at the centre of a large village in the heart of East of England. It was a small but growing community school, with 135 pupils on the roll. Although still a largely rural school, Mulberry Primary was well prepared for expansion, occupying a large, recently renovated building, and retaining a generous property that was used for pupil's break times. The school was academically competitive, having held the Ofsted standing of "Good" for over ten years and through multiple inspections. School progress scores were equally robust, with pupils achieving at or above the national averages in reading, writing and mathematics. Despite these strong results, Mulberry experienced unusually high staff turnover, having welcomed a third new headteacher in the span of six years, and bid farewell to half a dozen teachers in the same time frame. In the 2015-2016 school year Mulberry hired two NQTs, Emma and Grace, who took part in the improvement effort alongside Olivia, a long time teacher at Mulberry Primary, and the headteacher, James.

Size notwithstanding, Mulberry Primary was involved in a great many partnerships with universities, local businesses, school alliances and specialist teachers. The school took part in several projects every year, ranging in focus from bullying prevention, to dedicated music education, to specialized teacher professional development. The headteacher admitted that even though it was challenging to keep up with numerous projects, it was necessity due to the presence of well ranked grammar and independent schools in the nearby towns. Parents put pressure on Mulberry to produce pupils capable of competing for limited spots in these secondary schools. This context was discussed in depth at the introductory briefing between myself and the headteacher of Mulberry Primary. The headteacher acknowledged that staff at Mulberry would split attention between several projects, which would have an impact on the amount of time they had available to engage with DASI. However, teachers that had worked at Mulberry Primary for several years were well versed in implementing numerous projects simultaneously. This was a significant strength as it meant that the school would be able to get the ball rolling quickly and efficiently when it came to the DASI project. Furthermore, parents and other stakeholders were favourably predisposed towards school participation in a research-based improvement project, which was an important consideration for Mulberry Primary and placed the DASI project on the forefront of their workload. After the individual briefing with the headteacher, I came in to Mulberry once

more to present the project to the entire teaching team. After some discussion, teachers agreed to take part in the improvement initiative, and the project went ahead with all six members of the teaching and leadership staff taking part.

All members of staff completed the questionnaire at Mulberry Primary. Data from the staff questionnaire was organized into eight tables which provide descriptive statistics for the eight factors of educational effectiveness (see Appendix N). This data was presented at the following staff meeting along with the results of Kendall's W which identified priority factors for improvement for the school by ranking the eight school level factors by their scores, from lowest to highest (see Table 7). On the basis of the questionnaire, Mulberry Primary was advised that the areas of priority for improvement were as follows: student behaviour outside the classroom and provision of learning opportunities. At the beginning of the staff meeting, particular attention was given to items on the questionnaire that had exhibited high standard deviation, and the headteacher took time to address discrepancies in perspective. Then the conversation turned to the two factors ranked lowest by Kendall's W. The leadership team at Mulberry Primary clarified policies around provision of learning opportunities and discussion on the topic concluded at that. On the other hand, student behaviour outside the classroom was discussed in great depth at the meeting and both teachers and members of the leadership team saw cause for the low ranking of this factor. As such, student behaviour outside the classroom was selected as the sole area for improvement.

Table 7. Ranking of the school factors for Mulberry Primary

Kendall's W	
Factor	**Mean Rank**
Student behavior outside the classroom	1.70
Provision of learning opportunities	3.70
Quantity of teaching	4.60
Quality of teaching	4.90
Evaluation	5.33
Provision of resources	5.60
Partnership policy	5.80
Collaboration and interaction between teachers	5.80

What changes have been made in the daily routines and school policy and did teachers perceive their efforts at improvement to have been successful?

Mulberry Primary selected student behaviour outside the classroom as the sole focus for improvement. This choice was motivated by both the teacher questionnaire, which gave this factor the lowest rating, and general consensus of staff that this was an area of need for the school. The headteacher of Mulberry Primary reported that the school had moved quickly to develop the action plan and would begin project implementation before the winter break. I received the finalized action plan for Mulberry Primary in the last week of October 2015. In developing the action plan, teachers at Mulberry Primary picked strategies from the DASI handbook and developed a number of their own (see section 'd' in Appendix K). Within the sphere of student behaviour outside the classroom, the strategies on the action plan locate teacher efforts almost exclusively on improving lunch times (see section 'd' in Appendix K). Teachers felt that the existing lunch time system was disorganized, having been cobbled together over the years from remnants of old policies and practices. Lunch times, and the outdoor playtimes that followed, were described as unsettled and staff lost teaching time to resolving playground tiffs.

Mulberry Primary introduced targeted changes designed specifically to address areas of weakness within the lunch time routine. Staff felt that lunch times lacked order, which contributed to confusion, anxiety and wasted time on the part of the students. One of the goals of the improvement effort was to engage students in learning more effectively after lunch (see section 'c' in Appendix K). Olivia, a teacher, and a member of the senior leadership team at Mulberry, described the state of affairs at the start of the school year,

> "The lunch system seemed a bit scrappy, a bit messy and disorganized, and I think improvement was around tightening all those expectations up really. Children's unstructured time around lunch times worried us in particular. We felt that sometimes the lunch times didn't have enough structure, especially for children who found lunch times difficult, and found friendships difficult."

To add more structure, and streamline the process, a new system for taking lunch was put into place. James, the headteacher, touched on the modifications,

> "The lunch hall has a new system around children taking dinner, and entering the hall; there is now a seating provision and signage on tables. So everything's been, uplifted and upgraded to support the children having more ownership and comfort."

Staff felt that cramped conditions in the dining hall contributed to some of the commotion that accompanied lunch times. To address this area, a decision was made to step away from a single lunch period and introduce staggered lunch, wherein year groups took turns eating and utilizing outdoor space for play (see section 'd' in Appendix K). Olivia described the changes to the lunch period in greater detail,

> "So we have the younger children in first for lunch because they take the longest to eat, and then the key stage two comes in on a rota, so that they each get a turn coming in to eat and play at a different time. This lets everyone have a more peaceful lunch experience and access more things on the playground."

Outdoor playtime was reformed as well. In addition to changing outdoor routines, the school employed a play specialist to support the midday staff. James, the headteacher, explained "So now we've got more structure outside, we've hired additional staff and now we have a sports coach that's out there every day". The headteacher clarified that teachers were not able to engage with all of the daily lunch time routines in person due to the lack of time, and the middays' contracts did not extend to the demands of the reform. An extra staff member was hired to work the lunch period, and support implementation of the improvement objectives as they pertained to student behaviour during outdoor play. Additionally, the school introduced a student mentorship scheme, wherein students from year six provided support to younger students during lunch (see section 'd' in Appendix K). The goal of this enterprise was to engage students in developing leadership skills, promote school spirit and encourage pupils to problem solve. Grace described the scheme and some of the other changes implemented for the improvement of outside play,

> "There was a lot of focus on structured play outside, and I think that, that has certainly helped some of my more alienated children. They now have somewhere to go and something to do; they can do it together and that opens up opportunities for talk, and for them to integrate a bit more with their peers. The year six buddies system was part of that as well I think, and that was quite helpful. I know it gave the year sixes a good sense of leadership and responsibility."

Furthermore, staff noticed that the period just before the bell rang was quite turbulent, and to address this recurring issue Mulberry introduced Tai Chi in the last five minutes of outdoor play (see section 'd' in Appendix K). The headteacher, James explained,

> "The Tai Chi element, is about getting the children into a better mental state, prior to the afternoon session, we feel that it will get children calmer going into the afternoon lessons."

The goal of Tai Chi was to help children calm down, both physically and mentally, from the high activity of outdoor play. Tai Chi was also supportive from the logistic perspective in that it facilitated organized and orderly entry back into the school building. Emma felt that the introduction of Tai Chi provided quite immediate improvement in children's behaviour after lunch. She reflected,

> "I think one of the big things we've done is introduced Tai Chi at the end of our lunch time sessions. The idea is that they do five minutes of Tai Chi before they come in and it calms them down. We had so many problems at lunch time; the children come in and I have a big que at my desk of children saying 'This happened when the whistle blew to come in'. It seemed that everything was happening at the end of lunch time when the whistle blew. I think Tai Chi is working really well because they come down from the playground and they do five minutes of relaxation, and when they're coming in they are calm. I have definitely noticed a difference there, which is nice because it means I can get on with my teaching as opposed to sorting out who pinched who, or who kicked who on the way into school."

Lastly, the headteacher, James reviewed and modernized the behaviour policy on the basis of the changes made during the year (see section 'd' in Appendix K). The alterations to the policy were made so as to support the longevity of the improvement initiative and embed the changes into the school ethos. James explained,

> "The behaviour policy has been updated, it has to be for change to stick, and we'll look at it again next year and we'll review it again. We've done significant change to it at the moment, and this project will impact policies on teaching and learning later on."

Teachers at Mulberry were aware that the behavioral policy was updated, and supported the changes made to the school procedures. Grace in particular appreciated improvement undertaken in this area,

> "I think what I found beneficial was more clarity on the processes and structures that we have in place. At the start of the year, I used the behaviour policy, but it wasn't massively clear. I speak from a sort of a foot soldier kind of position where I need to know what, rewards are kind of school policy, and what sanctions are school policy. I followed what's in the policy, but it was a bit wishy-washy. As a result of this project we got some clearer direction, and that's definitely a good thing!"

In modifying the behaviour policy, the leadership team not only addressed the changes relevant to the DASI project but also responded to the feedback received from teachers.

Emma explained how the change in policy affected her practice,

> "We sort of changed our routines and policies a little bit, and it's just given me more of a perspective of the issues in our school so I'm a bit more aware when I am going around the school now, and looking out for what's going on."

Teachers also felt that improvement was evident in other areas of the school. Grace noted that as the result of improved behaviour she had more time for afternoon lessons. Quantity of teaching is no less important than quality of teaching, as research shows that more teaching time translates to better outcomes (Creemers, & Kyriakides, 2012). Grace explained in greater detail how the reform affected her day to day practice,

> "Once you improve student behaviour outside the classroom, you improve the quantity of teaching. I mean sometimes, you can waste quite a lot of time on things that have happened outside, it's five, ten minutes being eaten into a lesson and that wastes learning time. The Tai Chi that was put in place helps because they are much calmer coming into the classroom, and that saves a lot of time for me."

The headteacher, James also felt that DASI had made a discernible difference in student behaviour over the course of the year.

> "I think behaviour has improved, across the school. One of the things that we really wanted to do was to embed the school values into the system, and I think we've done that this year."

On the whole, the leadership team at Mulberry Primary was pleased with their journey and the outcomes they observed. Olivia reflected,

> "I think for us it was the right time to do this project, and I think we've gained a lot from it. I will say that we perhaps haven't celebrated it as widely as we should, it's just happened and has become part of our school culture now. Back in September or October it was really carefully planned but now it just seems that's how it's always been."

In tackling student behaviour outside the classroom, staff at Mulberry Primary implemented changes to both practice and policy. The school made several specific changes to their lunch time routine, targeting known areas of weakness in the school. When asked to describe their work on the improvement initiative throughout the year, during the interviews, teachers at Mulberry Primary named everything that was included in the action plan. The leadership team was largely content with the level of improvement they observed, and new routines were expected to continue in the following school year. From the perspective of the leadership team, Mulberry Primary experienced successful reform. However, Mulberry's involvement with reform was not without challenges. What

Olivia may have very lightly and roundabout touched on above was the incongruent engagement with DASI experienced by senior staff members and the newly qualified teachers that joined the school that very year. The challenges experienced by staff were related largely to this very issue.

What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?

Teachers at Mulberry Primary identified just two challenges when it came to their DASI journey, but both of the factors mentioned had implications for the improvement initiative. In addition to undertaking DASI, staff at Mulberry Primary was concurrently engaged in a number of other projects; the workload was considerate, and staff struggled to devote each initiative due diligence. Furthermore, every member of staff interviewed, acknowledged that communication and collaboration was a challenge that affected staff engagement in the reform. During his interview, the headteacher of Mulberry Primary, James discussed some of the projects that the school took part in alongside DASI,

> "We're in the middle of a dyslexia project, which I think is a three year project, and we're doing a project around mastery and maths now, and we've done a project on science last year. Also we're considering a project looking at how we can develop the science curriculum and link business with what we do in classrooms. I think it's important to get involved with research as much as we possibly can."

This level of engagement did not solely originate out of James's personal philosophy; Mulberry experienced substantial pressure from parents to maintain near constant participation in diverse enterprises. While the school staff was proud of their involvement and accomplishments in multiple endeavours, teachers found it challenging to keep up with the demands presented by each unique project on top of their regular duties. Emma, an NQT, explained that she struggled to maintain steady engagement with the DASI initiative for this very reason,

> "I think we have so much going on at this school, that we pick and choose things that we engage with daily depending on what's on fire. If we could just really focus on this one thing, as opposed to, this, this, this and this, all these different courses and stuff that we go on to, then I think, that perhaps would be a little bit better."

Grace, another NQT at Mulberry Primary, shared a similar perspective and felt that DASI was not prioritized by the school leadership team,

> "I feel like if this project was given more emphasis by the management, that this is something we're really investing our time and focus in, it would have been more school owned, we'd have done more, I think."

The headteacher and teachers on the senior management team did not share the viewpoint expressed by the two NQTs. As evidenced in the quotes presented in the previous section, senior members of staff reported high levels of engagement with the project, and took the bulk of the workload when it came to the DASI initiative.

Communication and collaboration between staff, and more specifically between the newly qualified teachers, the teachers on the senior management team and the headteacher, was an area of weakness for the school and a challenge for the implementation of the DASI project. Grace, an NQT, shared her experience,

> "There are five teachers, and three of them are on the senior management and two of us aren't so, what initiatives might have been put into place, as a result of this project, by the time those initiatives trickled down to me, they are just directives. I am aware that things have been put into place as the result of DASI, but I am not aware of exactly what was related to that and what was related to something else."

If a decision was made at the top to spare incoming teachers the additional burden of the improvement project, it was not communicated well to the teachers in question. Both of the newly qualified teachers reported feeling lost in the project, and separated from the community formed by the senior staff members. When discussing challenges, Emma, the other NQT, spoke without hesitation about collaboration,

> "Collaboration and interaction between teachers, and I think between management as well, is a challenge, because I don't think at this school, the communication is particularly good. I think, a lot of frustration comes from that, but that's quite a delicate subject to bring up."

With regards to the DASI project specifically, Emma added, "I don't feel like I've had a chance to be so involved with it, apart from the meetings that we had. I feel like it's been something that's kind of been in my periphery." For the two newly qualified teachers, communication and staff collaboration were a barrier to engagement with the DASI initiative. The headteacher and the senior staff members were aware that communication between staff could be better. James, the headteacher, commented,

> "I mean one of the things that I am sure will come out in the interview, one of the problems that I think all small schools have is about communication. We haven't got enough time as it is in education and in a small school like this we've got even less time because we've got less capacity. We don't set up meetings for 'Oh, today we're talking about

> the DASI project' you know, we'll be talking about, improving behaviour at lunch time, or improving the systems around play, but you can't really separate that from other things happening in the school."

Teachers on the senior management team identified similar issues, but placed the onus on the NQTs in locating actions and outcomes relating to the DASI initiative. Olivia stated,

> "I suppose the steering for DASI has really come from the leadership team, and I think, maybe for classroom teachers, sometimes they might have to stop and think what the human impact has been, because the changes have just been assimilated. I'm not sure that all of the changes would have been so visible for them."

It appears that though both Olivia and James recognized potential fault lines in communication on the DASI project, they did not seem to consider the leadership team to be responsible for the resolution of this state of affairs. When asked how communication and collaboration issues were addressed, James, the headteacher, explained that "We tried to have meetings with the whole staff, but that proved difficult for us to facilitate just because of competing demands". To my knowledge, no further action was taken by the school leadership to resolve challenges in communication with regards to the DASI initiative. While the leadership team at Mulberry Primary did not express concern over the communication barriers as they pertained to the DASI project, the NQTs reported that this factor had an impact on their engagement with the reform, and it likely influenced how the NQTs perceived the outcome of the initiative.

What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

At Mulberry Primary, the DASI initiative was largely fronted by the headteacher and the leadership team. Consequently, it was these members of staff that were able to confidently identify the facilitators that bolstered their improvement efforts over the course of the year. Outside of the headteacher, the senior management team was comprised of three teachers. Of these staff members I was able to interview the headteacher and one teacher on the leadership board; the other teachers on the leadership team at Mulberry Primary chose not to participate in the interview citing time constraints. Resultantly, this section in particular references principally two staff members – James, the headteacher, and Olivia, a teacher on the senior leadership team. Personal interest, and the structure of the DASI framework were cited as facilitators during the implementation process.

Buy-in and personal interest played a big role in igniting and maintaining interest and engagement in the reform. The headteacher, James, explained, "I think the fact that it was something that we needed to do and were interested in doing, was what drove us; the focus was right for us". Olivia's participation was motivated by personal interest as well. The senior staff member appreciated the framework behind DASI and was eager to put it to practice. Olivia explained,

> "For myself I was really quite interested in all the, background research and some of the things that you'd found from previous projects, because some of those things, when you've been teaching for a while, rang true."

Interest is important when it comes to improvement because it stimulates engagement, which is vital to keeping reform alive (Jošić, Džinović, & Ćirović, 2014). Buy-in is a very powerful motivator for change, and in the case of the leadership team at Mulberry Primary, it was one of the factors which kept the project relevant and active over the course of the year.

Olivia also felt that DASI was developed in such a way that it allowed schools to make improvement efforts their own,

> "I would say that this project was very much school owned, because we were allowed to develop the project to suit our school, and we didn't have to fit in with a preconceived way of doing it. If we'd have had to use certain resources or had to follow a very strict pattern, we'd have found it really difficult. Sometimes we had a bigger chunk of time to devote to the project and then, maybe not so much time for a little bit and for us that flexibility in DASI worked really well."

The concept of ownership is being discussed more and more in recent literature on school improvement. Ownership empowers teachers to take charge of the reform and engage more meaningfully with the process of change (Mendenhall, Iachini, & Anderson-Butcher, 2013). Although not all members of staff engaged with DASI, those that did, felt that they took ownership of the project and made it their own.

The organizational structure of DASI also proved to be a supportive feature for other staff members at Mulberry Primary. James, the headteacher in particular appreciated the steps and sequence of the DASI project,

> "Having a structured project was the driving force to get things done, and to follow it through logically was really valuable to us. We might have done something in this area ourselves, but we would have done it more piecemeal if we ever even got around to it at all."

Similarly, the headteacher identified regular meetings to be a supportive, motivating feature that drove progress in the improvement effort.

> "I think the meetings were valuable to keep you on track, it's almost like touching base with your homework. They are a good measure check and I think they are very useful, because it then almost allows you to reflect and celebrate, or actually think 'Oooh, I haven't done that' and make you do that. If we were left on our own completely, as other things took over, we might have found it really difficult to follow through."

Long term projects are particularly susceptible to stagnation, which is why factors that support continued progress are vital. The leadership team at Mulberry Primary found the design of the dynamic framework facilitated their continued participation in the improvement project. Those members of staff that engaged with the DASI project meaningfully at Mulberry Primary identified a number of factors which supported their progress. Of the two elements that promoted sustained commitment to the reform, one was connected to the structure of the DASI project.

4.4 Primrose Primary

Introduction

Located in the heart of East Midlands, Primrose Primary was a quintessential village school. The pretty one storey red brick building looked out on a sheep pasture, and stood just down the road from an equally small church. A community school, Primrose was governed by the local council and catered to the local population; all 83 pupils enrolled in the school lived in the village or the surrounding hamlets. Although rural schools are not typically known for high achievement, Primrose Primary stood out as an exception. A very positive Ofsted review ranked Primrose as 'Outstanding' and the school progress scores for previous years indicated that the school was on par with the national averages. Likewise, Primrose Primary bucked other trends stereotypically associated with rural schools. Few children qualified for the pupil premium, student absence was infrequent, and the number of students on the SEN plan was below average even accounting for the school size.

As a small school, Primrose Primary employed a proportionately small number of staff. The headteacher, Audrey, worked alongside four teachers: Lily, Anna, Eleanor, and Claire. All of the staff members had respectably long teaching careers; each member of the school staff had worked in the sphere of education for twenty years or more. Only the school headteacher, and one teacher worked full time. The rest of the teachers were in a part time job shares, teaching the same pupils on different days of the week. Prior to project initiation I met with the headteacher individually for a briefing late in the preceding school year. The headteacher perceived Primrose Primary to be a strong school, and sought to pursue an improvement project only so as to tweak existing practices rather than to overhaul any areas of the school functioning. The DASI project was approved by the headteacher a week after the briefing, and the initiative went ahead with the participation of the headteacher and all teachers.

All members of staff and two teaching assistants completed the questionnaire at Primrose Primary. Data from the staff questionnaire was organized into eight tables which provide descriptive statistics for the eight factors of educational effectiveness (see Appendix N). This data was presented at the following staff meeting along with the results of Kendall's W which identified priority factors for improvement for the school by ranking the eight school level factors by their scores, from lowest to highest (see Table 8, overleaf). On the basis of the questionnaire, Primrose Primary was advised that the areas of priority for improvement were as follows: student behaviour outside the classroom,

and provision of resources. Once presented with results, staff members looked through each of the eight descriptive tables one by one (see Appendix N). Staff members briefly discussed the results and ranking of each factor, and the headteacher clarified policies around the factors that demonstrated a high discrepancy in teacher rankings. The focus then transferred to Kendall's W, and the two factors with the lowest scores. The headteacher at Primrose stated that 'provision of resources' was not an area that she felt required improvement, and the teachers agreed. Discussion on student behaviour dominated the conversation from that point onwards due to its low ranking on the questionnaire. The decision to undertake improvement in student behaviour was made during that same staff meeting.

Table 8. Ranking of the school factors for Primrose Primary

Kendall's W	
Factor	**Mean Rank**
Student behaviour outside the classroom	1.57
Provision of resources	3.14
Evaluation	3.50
Quantity of teaching	3.86
Provision of learning opportunities	4.36
Collaboration and interaction between teachers	4.57
Partnership policy	5.00
Quality of teaching	5.50

What changes have been made in the daily routines and school policy and did teachers perceive their efforts at improvement to have been successful?

Primrose Primary chose to focus on a single area of improvement, student behaviour outside the classroom. Teachers at Primrose identified the results of the questionnaire to be the sole driving force behind their decision. The action plan was developed on the basis of the strategies offered in the DASI handbook (see section 'd' in Appendix L). In addressing student behaviour, the school located their efforts in supporting the development of student empathy and self-regulation (see section 'c' in Appendix L). Although it was expected that all participating schools would begin implementation after the autumn half term, the headteacher of Primrose Primary chose to

establish new routines after the turn of the year (see section 'd' in Appendix L). In the action plan, teachers noted that students were generally well behaved when observed by adults, but less so when out of sight (see section 'b' in Appendix L). Staff felt that observed misbehaviour in students presented on two fronts: students did not consistently obey rules without direct supervision, and children were not considerate of each other during play. To address these factors teachers at Primrose decided that it was necessary to establish new practices which would support the development of self-regulation and empathy in all year groups. Anna recalled,

> "We chose our focus at the staff meeting, areas that we particularly felt would affect behaviour at playtimes and around school. Although the children behaved well for staff, they didn't behave well when they were on their own and we decided to call that 'self-regulation'. We also talked about empathy and that children weren't always kind to each other, so we chose these two behaviours to focus on."

To promote pupil understanding of self-regulation and empathy, teachers decided to develop a set of school wide rules and values for behaviour, which is a strategy suggested in the DASI handbook. Values relevant to the school context were selected by staff members and shared with students through a series of themed assemblies (see section 'd' in Appendix L). These assemblies were designed by teachers, with the purpose of introducing children to the concepts and vocabulary that described desired behaviour. Over the course of one term students would learn about a character development trait at the Friday assembly and in the following week they were encouraged both to demonstrate the behaviour and identify it in others. In the successive Friday assembly, students who were seen to be exhibiting the trait of the week would be rewarded, and a new character trait would be introduced (see section 'd' in Appendix L). Lily explained,

> "We've done themed assemblies on empathy and self-regulation for a block of weeks. We purchased stickers that said 'Ask me why I've got the sticker' and at every Friday assembly they chose children who have done something that typifies those behaviours in the school. It's been quite challenging for some of the younger children to understand some of the concepts, but they are improving. We have used the language in the classrooms as well, around self-regulation and making the right choices and now our children, even at four years old are using that terminology, and making better decisions."

In addition to the assemblies, Primrose Primary decided to reward desired behaviour in children, as per another DASI handbook suggestion. Teachers selected stickers and public acknowledgement as a means of reinforcing positive behaviour in children. Pupils elected

on the student council were tasked with selecting a child who demonstrated the behaviour trait of the week to receive the sticker (see section 'd' in Appendix L). Children who received the sticker were honored at the assembly and had their picture taken and displayed in the hall. In this way staff sought to support students' desire to engage in positive behaviour. Anna described some of the practices she helped to implement as part of the DASI project,

> "We produced stickers for children and had a display in each classroom, and a display in the hall. The children who were elected on the school council chose a child each week to receive a sticker for that particular attribute. We also had assemblies for that week, that were all based around that theme, so we did a couple of weeks of assemblies about self-regulation and what exactly that meant, and then children started getting stickers - just one per week, per member of the school council, and they had to explain, in the assembly, why they've chosen that particular child."

Themed assemblies ran for a full term and were then discontinued. Stickers continued to be awarded weekly for the duration of the school year, being bestowed by the student council as recognition for a wide range of positive behaviour and no longer restricted to the singular behaviour trait of the week. Lily explained the reasoning behind this decision,

> "We've not continued doing the assemblies along those themes anymore, we did it for a block. But then I don't think you would continue something like that indefinitely. It's like anything really, in the school, you have to keep it fresh don't you so we'll do it in a different way next year. Something will come along and we'll do it in a slightly different way but looking at the same themes."

When discussing outcomes and perceptions towards the DASI project, every member of staff identified possessing mixed feelings. On the one hand, teachers appreciated the resultant widespread understanding and use of a shared vocabulary by the students. Lily commented, "It's nice that you can talk about those kind of behaviours with children and they know what you're talking about". She further continued to say,

> "For me, I think it's a privilege on a Friday, to have the school councillors out and to hear what they've got to say about children in school, and their reasons for choosing different children and praising their behaviour. It's nice."

Eleanor likewise felt that the themed assemblies were a good tool for developing and supporting positive student behaviour, "We did a lot of assemblies about empathy and working together and things like that, and I think they [the students] got a lot from that".

On the other hand, teachers questioned the impact and effectiveness of DASI as it applied to student behaviour outside the classroom. In fact, all staff members at Primrose Primary felt that there was little, if any, true change in student behaviour as the result of the project. Anna discussed the topic,

> "The children talk about self-regulation, and empathy more and they are aware of what it is, and what it means. So it's given us a common language, and that's been useful; I'm not sure, if I'm honest, if it's made that much difference, to how well they self-regulate, but at least they know what that means, and that is what they should be doing, and that they need to be making their own decisions not just relying on an adult, to tell them what to do."

Lily shared similar thoughts on the matter, "I don't think it's had a really big impact on anything, it's not really changed anything. It's been fine, it's been enjoyable, it's been doable, but I don't know that it's had any significant impact on anything". The goal of the reform was to improve student behaviour by educating pupils about self-regulation and empathy, and while students were able to articulate these concepts at the end of the project, teachers at Primrose Primary felt that behaviour did not noticeably improve on the whole. Eleanor shared her take on the outcomes of the project,

> "They were using the language more, and they were much more aware of other pupil's behaviour, and their own behaviour. We did still have the same level of disruption, children stealing balls, because they wanted them but they were a bit more understanding when you had the discussion, with them afterwards."

Claire, also noticed that the language had become normalized in the school and among the students, however, had comparable misgivings about the observable impact of the reform, "The language has become a part of the school, but I don't think the impact went much further than that". To summarize, while there were aspects of the DASI program that teachers enjoyed and appreciated, staff widely felt that the impact of their improvement effort was underwhelming.

When asked whether any aspect of the project would continue into the following school year, Audrey, the headteacher, pragmatically explained her perspective on the matter,

> "I don't know that I would, I don't think it's made a huge enough change. Achievement for All, that that we did a while back, that did made a big change, but it was too much paperwork, and I didn't continue with that even though it made a significant change. I have to weigh the benefits of how much work it is going to take, out of what we need to do as a particular school if we carry on doing, something. So

> even though, Achievement for All made a much bigger change, we decided not to continue on any further because we thought we learned enough skills and actually it was only about tweaking skills, so we thought, right, well, we've got too much else to do, to tweak skills, we'll use the skills we've got and we'll change along the way if we need to. So, no I probably wouldn't continue with DASI just because I don't think it's changed enough at our school."

The headteacher of Primrose Primary had high standards and expectations for improvement projects undertaken by the school, and rarely continued initiatives for longer than a span of a single school year, choosing instead to pursue new opportunities. Therefore, very little, if any aspects of the DASI project were to continue into the following year.

During the interviews, teachers were also asked to discuss their feelings towards the project as a whole. While not negative, teacher outlooks towards the project were rather tepid. Anna summed it up in a word,

> "Whatever. If it had been a lot of work, and then not much impact then we would have felt negatively about it. If it had a massive impact, we would have felt positively about it, as it is, I think it was neither one, or the other really."

This feeling was pervasive at Primrose Primary. Eleanor thought that there was no need for the school to undertake a project of this nature, and as the result the reform felt burdensome to her. Eleanor explained,

> "I think they've all [teachers at Primrose] got a pretty similar attitude to me, as the fact that we didn't really understand why we're doing it, it was just something else to think about and we couldn't see the results at the beginning, you know, we couldn't see where we were going."

Audrey, the headteacher, was aware that her staff did not feel that DASI had been necessary for the school and herself shared similar thoughts on the matter. Additionally, Audrey suspected that another element contributed to the manifestation of these feelings,

> "I think because it wasn't going to deliver that huge change, I think they saw it as a bit of a bolt on, and I am sure the teachers will answer you, very honestly. I do think there are positive elements to it, but I do think the teachers saw it as a bit of a bolt on thing that we had to do because I said we were joining the project."

During the interviews it came out that the decision to join the project was made solely by the headteacher, a factor not disclosed over the course of the project. As the quotes above

indicate, teachers struggled to find themselves in the project they did not choose, and moreover did not feel was relevant or valuable for their school.

Improvement efforts at Primrose were slow to start and restricted in actualization. Full project implementation was limited to one term though some aspects of the reform persisted for the duration of the school year. Primrose Primary did not change their school policy on the basis of DASI, and did not plan to incorporate any of the implemented approaches into permanent practice or the school ethos. As the school year drew to a close, teachers at Primrose Primary bid goodbye to DASI, and instead anticipated undertaking a different type of initiative, as yet to be determined, in the following year. While teachers were able to identify positive moments in their journey with DASI, in the greater scheme of things, staff at Primrose did not feel that the project they had undertaken had been necessary for the school. Although staff members were not outright displeased with DASI, teachers expected and desired much greater impact than what they had observed, and thus were not enthused about the reform either. From the perspective of teachers and leadership at Primrose Primary, the improvement initiative was not successful.

What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?

Teachers at Primrose identified a range of factors that hampered their improvement efforts, all of which proved to share common roots. Broadly, there were three main barriers: teachers felt that the area of improvement was ill suited for Primrose Primary and did not acquire buy-in for the project, staff communication was self-identified as a point of weakness for the school, and the realized project was limited in scope and implementation. These three barriers were interwoven and for that reason this section is not presented in a wholly linear manner. Below, I begin the section by starting with the first challenge named above, however, within a few paragraphs I integrate both of the other barriers into the narrative. Altogether these challenges hampered improvement efforts, and led to the unsatisfactory outcome identified by teachers at Primrose Primary at the conclusion of the project.

It became evident early into the interviews with staff at Primrose Primary that student behaviour outside the classroom was the wrong area of focus for the school. Teachers did not feel that student behaviour was an issue at their school, and saw little

reason to devote time to this topic. Lily felt that DASI produced minimal outcomes because pupil behaviour was already good prior to the beginning of the project and there was very little to improve on,

> "I don't know that it's had a huge impact on behaviour because we don't have a lot of issues around behaviour here anyway so I don't know that we saw a huge difference. The behaviour is very good, and personal and social care in the school is very good; the children are excellent so we didn't really have that far to go, if you see what I mean."

Eleanor too saw no cause to engage in reform dedicated to student behaviour, stating that due to the topic of focus, she did not buy-in to the improvement effort,

> "It was a bit like, 'My kids are fine, you know like…uhh'. I think if it had been in a school where my children were disruptive and constantly misbehaving, that would have been something that I would have wanted to go into a little bit better, but because the behaviour wasn't too bad, wasn't bad at all, just some disruptive children now and again it wasn't really something that I was as interested in, sorry."

Claire echoed the sentiments shared by her coworkers,

> "Well, our children are quite well behaved, the issue we have with some of the children is the fact that they aren't very good at understanding other children's needs, which is, as I understand, why we went down the route of behaviour. In comparison with other schools, I don't think we have negative behaviour in school. I do understand why we went down the route of behaviour because it could be tweaked, but I wouldn't say that we had negative behaviour to start with."

At the time of the interviews, every teacher on staff at Primrose Primary stated that student behaviour outside the classroom was the wrong area of focus for the school to have pursued. I asked teachers if they could locate the moment that led to the selection of an area that staff members did not feel was relevant to the school context. Teachers identified staff communication as one of the factors that led to Primrose Primary pursuing improvement in a topic that none of the teachers felt was an area of weakness for the school. Claire recalled the staff meeting during which results from the questionnaire were discussed,

> "I think it was at that initial meeting, when we were talking about the problems with behaviour, I can remember thinking at the time 'Should there be something else that we ought to be discussing or focusing on?', it kind of just went down that path very quickly. I don't particularly feel personally that enough time was spent on the discussion of whether that was the right topic for the project. It just quickly went down the behaviour route."

I was present during that staff meeting, and remember the circumstances as Claire described them. Staff members looked through the results from the questionnaire, and conversation quickly turned to student behaviour outside the classroom – the area ranked lowest by the survey. Other areas of the school functioning were not discussed in great depth in the course of that meeting; by the end of the staff meeting concrete changes for improvement in student behaviour were being deliberated and set down in the action plan. Anna felt that teachers were restricted from exploring all avenues for improvement by the questionnaire,

> "I felt like the questionnaire only really asked questions about a limited area of things and that's just an issue with questionnaires isn't it? I think if there almost wasn't a questionnaire, just a discussion on 'What do you feel like…?'. If the questionnaire had just asked about what we feel like the school needs to work on, or what we think is holding children back, then I think we would have probably got a different area to work on."

Lily similarly focused on the questionnaire,

> "I think it's because you asked a lot of things about play time, and it was like: staff playing with the children, playing games, does staff go and do this. Well, I don't think we do, do a lot of that, but only because we don't need to, the children play well together, they are busy, they've got opportunities to do different things, and they go and do that themselves. So when you asked that, we've probably put, 'no we don't do that', you know, sort of circling disagree. We don't play with the children at play times, but we don't need to, because they play well and they are well managed, they self-manage very well so those scores probably have influenced that area in a negative way, whereas it's not actually a negative."

Although two of the teachers quoted above focus on the questionnaire, the other common theme evident in these accounts is a breakdown in staff communication. This is a topic I return to and explore in greater detail further down in this section. Lily's comment in particular is thought provoking in another way. To summarize, the area of student behaviour outside the classroom incurred a low rating because teachers at Primrose self admittedly did not in their typical day implement the activities presented in the questionnaire. However, the low ranking of student behaviour on the basis of the questionnaire was deemed inaccurate by staff members, as stated in multiple quotes above, since student behaviour was judged informally to be good, leading teachers to feel quite strongly that Primrose Primary did not suffer from the absence of these practices.

Therefore, Lily did not feel that the school required the integration of activities mentioned in the questionnaire.

In designing the school action plan staff members at Primrose Primary selected two of the suggested strategies for the improvement of student behaviour from the DASI handbook – development of school wide behaviour values, and reward of good behaviour. Staff members felt that they did not need to implement any of the other advised practices for the improvement of school behaviour because they saw Primrose Primary to be functioning at a higher level, having already advanced beyond the scope of the suggested actions. Audrey, the headteacher explained,

> "I think the assumption here, from you was that where everybody in the project was starting from quite a low base. Actually we weren't at a very low base, so, we were looking for tweaks, rather than dramatic shifts in pedagogy or what we do around children, not because we think we're arrogant and we think we don't need to change anything, we knew we needed to tweak some things, but again, it probably assumed we were at a lower point to start with, than we were."

As discussed previously, the DASI framework does account for variance in the base effectiveness of schools, and thus encourages schools to develop their own strategies for improvement (Creemers, & Kyriakides, 2012). Staff at Primrose Primary chose not to develop additional strategies for action. The improvement project went ahead with two strategies, one of which, the themed assemblies, was discontinued after a single term (see section 'd' in Appendix L). From this stems the next significant factor that likely had a substantial impact on the success of the dynamic model - the amount of time and effort allocated to the reform. In the duration of the interviews, the headteacher and every teacher on staff expressed the opinion that more could have been done by the school towards the improvement initiative. Claire reflected, "It kind of seemed to work itself. I really didn't do an awful lot, so that's what I mean, we maybe could have done a little bit more". In a similar vein, Lily wondered whether Primrose would have benefited from a more expansive attempt at reform,

> "I did kind of think 'What else should I be doing? Is there something more that we could be doing with the time and with the effort, and the resources that have gone into it?'. I did feel like we could have done a little bit more with it."

Teachers contemplated their own role in the actualization of the project and though the interviews were conducted individually, staff perspective was unanimous in that the

reform venture was small. However, Anna noted that there were benefits to undertaking a simpler project,

> "No, not really, it felt like it was quite a small project. I think it was ok because we didn't spend a great deal of time on it. I think if we had been asked to spend a lot of time on it, in our own time, outside of staff meeting times, and it hadn't felt significant, then that would have been more of an issue. I don't think people minded DASI too much because there wasn't really that much of a workload."

Anna's comment might also indicate that the level of effort exhibited by staff members with regards to the DASI project may have been a coping strategy, whether intentional or not. Between existing communication problems and having to undertake a project they deemed unnecessary, staff at Primrose Primary had little motivation to embrace the improvement effort. By limiting the scope of the project, staff may have sought to ease the burden from some of the challenges they were facing. Eleanor, noted that if the DASI project had been focused on a different topic, much more time would have been invested in the reform by the teaching staff,

> "I guess if it was a bigger project, say, if we were looking at communication or standardizing things throughout the school, then you would need to revisit that quite frequently. You'd identify the problem and have groups working on different bits. A lot more work would go into it really."

From this quote it appears that Eleanor was aware of how to go about implementing a large scale reform, suggesting that the DASI project may have been downsized intentionally and not due to a lack of ability or understanding in staff members. A comment by the headteacher of Primrose Primary, Audrey, appeared to confirm this notion,

> "I don't think we committed quite as much time as the original expectation was to be fair. But to commit as much time as was expected, initially, by the DASI project, for the outcome we got, we just couldn't do it. The time element from your expectation, was too large considering what we were trying to change."

Audrey acknowledged that staff did not invest as much time or effort in the project as was advised in the DASI guidelines, because they did not feel the area of reform warranted an extensive time investment. It is also relevant to note that quotes from both the headteacher, above, and Anna, on the previous page, appeared to indicate the belief that Primrose would have achieved the same outcome regardless of how much time and effort went into the improvement initiative. What is more, although teachers discussed the small

size of the project, none of the staff members verbalized a connection between the unsatisfactory outcome of the reform and their own effort on the initiative. Teachers appeared to have a preconceived notion regarding the viability of the improvement project, and saw no agency or ability in themselves to alter its course. Staff members did not see a need to improve student behaviour so devoted little time to the initiative, whereas the headteacher believed that the outcome would be the same no matter how much effort was devoted to the project, thus she too invested little in the reform. This mindset, in combination with the effect of other challenges, likely produced a self-fulfilling prophesy.

As stated at the beginning of this section, the challenges identified by staff members at Primrose Primary interacted between each other. The selection of the wrong topic for improvement influenced the amount of effort and engagement devoted to the project by staff members. Likewise, the topic selection was itself influenced by another factor – communication between school staff members. When asked if there was an area better suited for improvement during the interview, multiple teachers immediately identified communication between staff. Anna felt that while students did not require intervention, the teachers would have benefitted from a targeted self-improvement effort,

> "I don't know that we've made the best of the project, and it could have maybe gone in a different direction and given us something completely different. I think we'd have been better doing something about the staff and the team, rather than the children."

Eleanor also felt that the reform should have focused on staff, and specifically isolated communication and cooperation as key areas for improvement,

> "I would probably focus less on the children, and more on communication within the staff. A better way to communicate as a team of staff, which would then benefit the children. So that's probably more of what I would like to look at, is how to work together as a team, more efficiently."

As these comments indicate, the final significant challenge faced by staff at Primrose Primary in the course of the DASI project was staff communication and collaboration. This was a self-identified area of weakness for the school and an issue that was present before DASI was introduced at Primrose Primary. Claire felt that communication and collaboration issues affected the daily grind of the school,

> "I don't know if I am speaking out of turn here, my opinion is that we need to get things more standardized across the school with regards to the progression through school skills, ladders, what they should be

> doing down in key stage one, right up to the end of key stage two, so that we all know kind of where we fit in and that everybody is doing the same thing, at the same time. I've been here two years now, but I still don't particularly feel like I've got a grasp on what is expected of me as a teacher, not in terms of teaching in the classroom, but in terms of where I fit in the school, if you know what I mean."

The existing communication difficulties between members of the school staff had several repercussions for the DASI project. As discussed above, lack of communication unfavourably influenced the selection of an area for improvement. However, weak lines of communication had already influenced teacher perception of the DASI initiative before the project even began. First, and foremost, teachers at Primrose Primary were not provided with an opportunity to assess the incoming project and express their approval or disapproval. This is a concern because the dynamic model of improvement emphasises the necessity of engaging willing participation and reaching school wide agreement on the need for, and aims of, the reform (Creemers, & Kyriakides, 2012). At Primrose Primary staff members were informed by the headteacher about the inbound project but neither briefed on the details, nor asked to voice their opinion regarding participation in the initiative. Lily explained,

> "It was presented by the headteacher as a positive opportunity, so we just went along with it really. We didn't really know a lot about it, to be honest."

Consensus on engagement in the dynamic model of improvement was not established at the outset. Eleanor confirmed that the decision to undertake the DASI project was made by the headteacher alone,

> "The decision was made by the headteacher, I mean, I think we had a staff meeting before you came but it was pretty much a 'This is what we're doing'. It wasn't a sort of discussion."

Audrey, the headteacher, acknowledged that the decision to participate in the dynamic model was solely hers,

> "It was just really me, yeah, I am not usually undemocratic, but again, because we weren't completely sure of what the project looked like, it had to be a management decision. We didn't know enough about what we were getting into and I couldn't really have a huge dialogue with people, if they did or they didn't [want to participate] because, they'd want to know the nitty gritty, and well I didn't know the nitty gritty enough to answer. That isn't the way I operate all of the time, but on this one, it was."

Audrey explained that it was not her typical approach when contemplating decisions that had school wide implications. Although this choice was made with good intentions, it was made clear during the interviews that staff members did not appreciate being thrust into a project without consultation. From the perspective of the teaching staff at Primrose Primary the reform had started off on the wrong foot.

The second repercussion of existing communication challenges at Primrose Primary, was that prevailing issues transferred over to the implementation of the DASI project. Lily expressed that teachers did not communicate well about the ongoing reform and did not work together as a cohesive unit to implement planned changes,

> "We had our staff meetings, but after that, people went and did their own, sort of planned their own actions and there wasn't a lot of communication around that. We talked about it at lunch times, informally, but no, we've not done anything planned, where we got together and done anything about it [the DASI project]."

Claire too noted a near absence of communication at Primrose Primary, and reflected on how that affected the reform,

> "There isn't that sharing of that experience throughout school really with staff. Other members of staff probably don't even know what's been said at Friday assemblies and whose names are on the wall, because they are not there for the assemblies, they've not got time to take much notice of it."

Anna also felt that it was difficult to judge the outcome of the dynamic model, because Primrose Primary did not conduct any type of in-school assessment or review of the project at the end of the school year. Anna explained,

> "I don't think we've properly evaluated it, as a group, which would perhaps have been worth doing. So no, we haven't had anything, else, that's sort of looked at what we did and thought about the future and the impact or anything."

Although no evaluation of the DASI project was carried out by Primrose Primary, in the course of the interviews all staff members shared the opinion that the improvement effort produced no observable changes.

In this section I explored how challenges experienced by teachers at Primrose Primary not only hindered staff in their work on the project but also shaped their experience from beginning to end. Communication was a pre-existing area of weakness at Primrose, and was the catalyst for the other challenges that affected the reform. Due to communication challenges, staff members at Primrose Primary never established clarity

and consensus regarding their aims in the DASI project and perhaps even more prominently, consensus concerning participation in the improvement initiative was never reached. Creemers and Kyriakides (2012) emphasise that prior to the commencement of any improvement effort it is essential for the school to acquire support from a sufficient number of teachers for the intended project. Commitment to the objectives and willingness to engage with the project are vital cornerstones that lay the groundwork for successful reform (Creemers, & Kyriakides, 2015). Communication difficulties and weak commitment on the part of the teachers proceeded to colour the entirety of the project at Primrose Primary. The area of improvement staff members elected to pursue was not the area of immediate need for the school and this mismatch resulted in a lack of buy-in which was another barrier to fruitful engagement with the project. Every one of the aforementioned factors influenced staff perception of the project and decreased their willingness to engage with the improvement initiative. Engagement levels were low, and the actualized project was acknowledged by the teachers to have been small. Ultimately, Primrose Primary saw few outcomes in student behaviour outside the classroom, on the basis of the improvement project. The improvement effort at Primrose Primary was overwhelmed with challenges, and though teachers were able to identify factors that supported their labour on the project, these elements did not provide enough of a counter balance to the experienced barriers.

What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

Teachers at Primrose Primary encountered significant challenges over the course of their improvement project which hampered their efforts at reform. However, the school chose not to leave the DASI initiative, and carried on with the project for the duration of the year. Although facilitators for Primrose Primary were rather scant, teachers were able to name several factors that eased their journey. Despite the challenges, every teacher on staff reported enjoying the process of reform and was able to share positive anecdotes of their experience. Additionally, staff members did not find the improvement effort to be time consuming, which mitigated some of the other stressors they encountered over the course of the project.

While the DASI project did not produce the degree of change anticipated by staff, there were a number of aspects to the reform that teachers appreciated. Eleanor was

pleased that the project provided opportunities for students to recognize each other's good deeds,

> "I did like the idea of the children rewarding other children for their behaviour, I liked that idea, and I liked that they got stickers that said 'Ask me what I've done today' because it made them proud when they knew what they got the sticker for. I liked those ideas, I did think they were good ideas."

Eleanor liked that the stickers allowed for positive reinforcement of good behaviour and felt it did encourage students to be kinder to each other, something that Primrose Primary strived to develop in pupils. For her part, Lily valued the development of a joint vocabulary at Primrose Primary,

> "So I think what is nice, is that we've all talked about it and we've used the language, around it, and you can sort of just drop it in, here and there, and they [the pupils] know what you're talking about."

Consistent use of a common language supported the development of school wide values, and helped Lily to communicate her concerns easier when addressing undesirable behaviour with her pupils. Claire touched on similar themes,

> "I think that the children did get something from it, in a sense that they, talked more about behaviour, and when we had the discussion about why they should do something they understood it a bit more, it just made the discussion about their behaviour easier. I liked the fact that we had themes in assemblies that linked to empathy and, things like that, I liked that we had a focus."

The headteacher, Audrey, was also able to identify elements of the project that boosted staff morale. Audrey felt that themed assemblies served children well, and that children themselves enjoyed that aspect of the reform. Furthermore, the headteacher recalled receiving a card from a parent praising the school's efforts at improving behaviour,

> "The children were very proud of their participation in the assemblies and they really liked doing that, and I say, even right down to three and four year olds, they were talking about self-regulation, so that was good to see. I even got a thank you card from one of the children's parents saying, 'Oh, he is talking about self-regulation at home, thank you for introducing that as a concept'."

Thus, challenges notwithstanding, teachers at Primrose Primary found positive points in the process of implementing DASI. Moreover, the DASI project also did not serve as a stressor with regards to the factor of time for staff at Primrose Primary. Anna reflected,

> "It was quite a small project, and once it got going it was just what you would do anyway within the classroom. So no, it wasn't much more work, not much more stress."

Lily too did not find the reform to be insurmountable. She explained,

> "I don't think we lacked any resources. I think we were all capable of doing what we decided we were going to do, and able to move forward. It was a manageable piece of work so it was fine."

Teachers did not struggle to fulfill their duties for DASI, and for the period of implementation, the project integrated well into the daily practice.

The challenges experienced by teachers at Primrose Primary overshadowed the supports identified by staff members. However, even within a difficult project teachers experienced factors that supported continued engagement with the improvement effort. In the case of Primrose Primary, the supports did not outweigh or meaningfully alleviate the challenges encountered by staff along the way, but they eased the journey to a degree.

4.5 Foxglove Primary

Introduction

Foxglove Primary was located in a quiet, medium sized town in the East of England. A community school of average size, Foxglove admitted 310 students in the 2015-2016 school year. The school experienced a number of tumultuous years, exchanging an 'Outstanding' rating from about a decade ago to a 'Satisfactory' and a 'Requires Improvement', on two consecutive Ofsted inspections in recent years. On both of the latter reports, leadership and quality of teaching were identified as areas that needed attention. In a similar vein, student progress in reading, writing and maths was somewhat below the national average. This situation was of great concern to teachers at Foxglove, and gave rise to several years of self-led, school wide reform effort. The school was due for another Ofsted inspection in the coming school year.

Foxglove Primary was one of the first schools to respond to my query for participants, but the vetting process took several months. Outside of emails and phone conversations, I made two school visits, first to brief the leadership team and second to present to the full teaching staff. Along with nine full time teachers, Foxglove employed two deputy heads, Cecilia and Daisy and one headteacher, Molly. Of the nine full time teachers, seven took part in the end of year interviews: Elizabeth, Margaret, Mary, Victoria, Catherine, Hazel and Genevieve. In terms of experience, the staff was evenly divided between teachers whose careers spanned several decades, and those who were fairly new to teaching. Staff turnover at Foxglove Primary was somewhat high in recent history; seven of the teachers, as well as one deputy head, had all joined the school within the last three years. In the 2015-2016 school year, the staff welcomed on board one NQT and two teachers with more than a decade of experience each. Excepting these new additions, I had a chance to brief every member of the teaching and leadership staff on the DASI project, prior to the school reaching a decision regarding participation. The headteacher explained that the decision to undertake the project was much debated in the school due to the upcoming Ofsted inspection. While the staff was enthusiastic about engaging in guided reform, time commitment was a concern. Ultimately, the school chose to go ahead with the project because it was unlike anything else they had done in previous years. All members of the teaching and leadership team chose to take part in the improvement effort.

All members of staff completed the questionnaire at Foxglove Primary. Data from the staff questionnaire was organized into eight tables which provide descriptive statistics

for the eight factors of educational effectiveness (see Appendix N). This data was presented at the following staff meeting along with the results of Kendall's W which identified priority factors for improvement for the school by ranking the eight school level factors by their scores, from lowest to highest (see Table 9). On the basis of the questionnaire, Foxglove Primary was advised that the areas of priority for improvement were as follows: provision of resources, and student behaviour outside the classroom. Provision of learning resources was briefly discussed as a possibility because of the low ranking this factor acquired in comparison with others, but teachers were firm in stating that they did not feel the need to pursue improvement in this area. The factor of evaluation was also touched on during the meeting, however, teachers and the leadership team favoured the existing division of labour with regards to evaluation policies and did not wish to make changes in this area of the school functioning. The topic of student behaviour outside the classroom was returned to time and again during the staff meeting, and ultimately staff members at Foxglove Primary chose to focus their improvement project on this factor.

Table 9. Ranking of the school factors for Foxglove Primary

Kendall's W	
Factor	**Mean Rank**
Provision of resources	2.67
Student behaviour outside the classroom	3.33
Evaluation	3.35
Provision of learning opportunities	4.33
Partnership policy	5.06
Quality of teaching	5.22
Quantity of teaching	5.72
Collaboration and interaction between teachers	6.33

What changes have been made in the daily routines and school policy and did teachers perceive their efforts at improvement to have been successful?

Foxglove Primary chose to focus their improvement project on a single area of improvement, student behaviour outside the classroom. The staff based their decision on the results of the questionnaire which gave this area the second lowest rating. In developing the action plan, teachers at Foxglove Primary picked strategies from the DASI handbook and developed a number of their own (see section 'd' in Appendix M). Playtimes and lunch times were the main focus of improvement at Foxglove because teachers were found to spend a significant amount of class time resolving conflicts after students returned from break (see section 'a' in Appendix M). Additionally, teachers felt that students did not experience satisfactory break times, and that there was a distinct need for the school to develop a better outdoor space so as to provide an enriching environment. Although Foxglove Primary finalized their action plans in October 2015, the school did not rollout the changes simultaneously, resulting in a somewhat piecemeal implementation. Portions of the envisioned action plan were put in place in November 2015, but the program was only implemented in full capacity in the new year.

To address student behaviour outside the classroom, Foxglove Primary decided to wholly overhaul outdoor playtimes. To begin with, teachers decided that pupils would benefit from the development of new play zones (see section 'd' in Appendix M). Molly, the headteacher, explained that it was a significant change from how the lunch playtimes used to run,

> "We restructured the playground so we got different zones. We used to have, one year group playing here and a different year group playing here and now we've restructured the playground into different zones with free movement of pupils in different years."

The idea to restructure the playground was supported not only by the staff but also by the students at Foxglove. Genevieve emphasised that students were consulted in the process of developing new zones,

> "I was on the team that was in charge or sorting out the zoning for the playground, there were three of us I think. I spoke to the children, in my class and a variety of other year groups as well, about which zones they would want and what they would like to do at play time. Then from that we narrowed it down in my team, selecting which zone to make in the playground and then we handed that to the team of people who were doing the collection of resources."

The staff thought it was essential to involve students as much as possible in the process of change, and sought their input at every step. In addition to engaging students in the development of new zones, every class had a chance to participate in the creation of new rules for playtime, a strategy suggested in the DASI handbook (see section 'd' in Appendix M). Margaret discussed how the teachers went about it,

> "The children were involved in making the rules for play time, right from reception, up to year six, they had their say about what they thought should happen, and how playtime should look, and we're trying to take bits of that into everything we've done, so everyone's been consulted."

Elizabeth explained that it was imperative for staff to work jointly with students in the improvement initiative and incorporate pupil input where possible, because "I think they [the pupils] realized that play time is not always the best it can be, so, for them to feel like they have had a voice in it, it's really important". Therefore, in order to improve student behaviour outside the classroom, teachers at Foxglove Primary decided to begin by improving the out of class experience and environment for students.

Once the layout and rules were established, the next order of business for Foxglove Primary was to resource the new zones. The school chose to involve the wider community in this process and requested donations of toys and other materials from parents and nearby businesses. Mary recounted her role in the project,

> "My group's responsibility was about gathering resources, so we had split the playgrounds and the play areas into zones, and then we needed to resource those areas. My little subsection was about sending out a letter to parents and asking for any contributions to the areas that we were going to create in the playground and then resourcing them."

Foxglove Primary was successful in their resourcing efforts, and quite a large number of items was given for the cause. However, at this point, progress on the DASI project slowed substantially. Genevieve explained the situation,

> "Lots and lots of donations came in for the zones and they were just sort of hanging around and nothing was really being done with them. So I said 'Right, I'm going to sort it out', and one day in my release time I went to buy boxes, and sorted the materials into the zones. Then I did an assembly about it in the hall. Again, not because I was in charge of it, but because it was one of those things that was sticking around and it wasn't getting done, and I just said 'I'll do it'."

The assembly was the spark that helped to re-engage the rest of the staff, and prompted the project to gain momentum once more. Genevieve described how the staff worked together to support her,

> "I took all the boxes into a whole school assembly and lots of members of staff came out, and held one and talked about what was in their box, and showed the children so that they knew, when they saw that box what they could find in it."

Hazel related that the children, much like the teachers, were particularly enthusiastic about this stage of the project,

> "We have house circle time, we have four houses, and in each circle time we discussed it, so I think they felt involved because it didn't just happen overnight, it was something that we built towards, and they were involved with. When it finally came to fruition, they were really excited. During the assembly there was excitement in the room, that it was happening, and they'd been involved in it. Even down to the rules, we talked to them about what rules we should have so I think they were really excited."

After the assembly it was Genevieve who kept the ball rolling once more. It was decided that it would be beneficial for Year 4 students to take on a number of responsibilities at lunch time, thereby supporting the development of leadership skills and not inconsequentially easing the load on the midday supervisors. Genevieve shared her role in this aspect of the project,

> "In the days after the assembly I took the Year 4 students from one class and showed them where they were to go at lunch to get the boxes, and basically sort of trained them up, to sort it out and put it away again. Then I passed that responsibility on to the year 4 teachers, so I kind of did that bit, got it going, got it running. I've done quite a lot with it to be honest."

In addition to restructuring the physical environment at playtimes, the leadership team at Foxglove Primary sought to change the climate of lunch times. With this goal in mind, the teaching staff was asked to spend a portion of their planning, preparation and assessment (PPA) time overseeing pupil lunchtimes (see section 'd' in Appendix M). Mary explained

> "Molly [the headteacher] asked if on our PPA day we could go out for part of lunch time and support midday supervisors, and just have our faces out there. Then continuing on from this, more teachers began having their lunch in the hall on their PPA days, so they are having lunch with the children which is really sociable and lovely."

The leadership team felt that this approach helped to support the execution of the changes being made on the basis of DASI and was the first step to developing better relations between teachers and the middays. Furthermore, similar to Mary's perspective, several teachers felt that this new approach to lunchtimes was beneficial for the students. Catherine commented that,

> "Actually I think it's quite valuable, the children like it, and to see so much more of the school in a different environment to the classroom environment, I think it does make a difference, staff being out there."

However, not everyone was fond of this new change. Teachers admitted that they were concerned about the loss of their PPA time and their own lunch times. While the leadership team at Foxglove requested that teachers spend about 15 minutes supervising lunch and the outdoor play that followed immediately after, teachers reported that they routinely devoted up to thirty minutes of their time to this duty. Elizabeth was one of the teachers who disclosed that this element of the project did not have her full support.

> "Well I'd rather not do that, but the head sort of said we need to just keep an eye on student behaviour outside the classroom, because the behaviour in the winter times wasn't so good."

The leadership team at Foxglove Primary also decided to seek outside resources to further support improvement of student behaviour outside the classroom. Several teachers and members of the leadership team attended professional development seminars. Cecilia, a member of the leadership team took the lead in this area of the project,

> "We have used other courses outside school, so other professional development to support our journey on this. Myself and a number of teacher went on a course about outside behaviour, and the course was very good, very supportive, and we're trying to slowly implement some things from that."

The DASI framework encourages schools to seek outside support and resources in their improvement journey, and this philosophy was a factor that the leadership team at Foxglove Primary identified to be a motivator for engaging with DASI. The leadership team appreciated having the freedom to incorporate varied approaches and resources to improvement, rather than implementing pre-set material. When asked whether the school behaviour policy has been, or would be changed on the basis of the project, teachers recounted that no such change took place. Victoria explained,

> "There haven't been any policy changes to far, but actually the children really like the behaviour policy at the school and it works really well. I

> don't think that needed to change, it was the practical - how things are run that needed to be changed."

However, a member of the leadership team, Cecilia, did consider the project's possible ramifications on policy and commented on the topic as follows,

> "Yes, I think that we are going to look at the behaviour policy as a whole, and I think that has come as a direct result of this program. I think we will be having more meetings with members of staff, and different groups of staff, so that every person that works in the school has the same approach to behaviour outside the classroom"

Therefore, even though no change was made at the moment, school policy at Foxglove may potentially be altered on the basis of DASI and the improvement work done that year. This was not the only area of the project that would trail into the following year. Teachers were enthusiastic about continuing the improvement efforts in student behaviour outside the classroom. "Yeah, I would like to see it carry on next year and develop even further if we can get it to do that" commented Catherine. Furthermore, Hazel noted that the children took well to changes which also boded well for the future of the improvement project. When asked if the improvement should or would continue from her perspective, Hazel commented "Yeah, I think so, the things that we've put in place have been very popular with the children". Quite a number of teachers relayed that they saw the project seamlessly progressing into the following year, and even being developed further. Mary supported the extension of the project,

> "I think, we need to continue working on outside behaviour, I think we need to carry it on, I think there are still things that we need to do but I think that's a work in progress. We've paced it nicely as well, I think it hasn't become overwhelming, so we've been able to maintain it."

Therefore although the DASI initiative was planned to last one year, the headteacher and staff of Foxglove felt it was worthwhile to continue. Cecilia explained that,

> "It's something that we'll continue to work on and continue to develop even though this perhaps comes to an end with you, we'll continue to develop it as a school. I don't think there has been as much change as there will be, I think we would like to include midday supervisors more, I think we'd like to include the caretaker more, so it becomes a whole school ethos. I don't think we're there yet, but I think that's the intention."

The desire to pursue further work under the DASI framework came about as a result of their self-reported positive experience with the project. Teachers were pleased with the

changes they witnessed in student behaviour both outside and inside the classroom. Hazel felt that her class benefitted from the changes,

> "I was just really pleasantly surprised at how that small kind of thing would make much calmer times and I know that the year five and six class that I teach is quieter. Interesting, wild class, and they are much, much calmer, and I don't, you know, I don't know whether that's just a natural kind of progression that would have happened anyway, but they are much calmer and they do come in much calmer, and kind of ready to learn."

Furthermore, Margaret particularly appreciated that the implemented changes helped to support children who were more vulnerable, by providing opportunities to integrate with their peers,

> "I have one child who, struggles socially, shall I say, but, she's loved going out and being able to go and play with the lego. She struggles with socializing with other children, so it gives her something to do, and if they come to play with her, she will play with them, but she wouldn't know how to initiate without a prop. So just watching her, I can see like the benefit of the changes we made."

Reflecting on the project as a whole Catherine commented the following,

> "I mean the outcome's been pretty positive, I think the feeling around the school was - some people were maybe unsure to begin with but, actually we've all kind of come out with a positive attitude, and it's become a positive thing within the school"

Other teachers in the school shared similar thoughts on the matter. At the outset of the project, staff admitted to some hesitancy as they felt they were venturing into an unknown territory, however, as the project carried on, these initial concerns faded. Elizabeth discussed her experience,

> "I think now that we've come through it, there is more of the realization that, yes that did need to be changed because, when you get to a place and you look back, you can think, 'Actually this is how it used to be, this is how it is now, what an improvement!' You know, it's been really positive, people have been quite open to trying things, and that's been good."

Outside of a brief period of inaction, staff at Foxglove Primary reported working consistently to develop and implement changes over the course of the year. Despite early hesitancy on the part of the teachers, the project received a positive assessment at the end of the year, and was spoken of fondly by all members of staff. Teachers were pleased with the work that they had done and with the resultant changes they observed. At the end of the school year, much of the staff felt that the project needed to proceed further, and

that more could and should be done to further improve student behaviour outside the classroom. The leadership team at Foxglove planned to continue implementing changes in the year that followed, both with regards to practice and policy. From the perspective of staff members at Foxglove Primary, the improvement effort was beginning to show signs of success; greater improvement was expected with continued implementation of the initiative.

What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?

In implementing the DASI framework, Foxglove Primary faced challenges on three fronts; teachers found it difficult to engage midday supervisors in the project, the lack of time was a barrier in a multitude of ways, and the school context was also a point of struggle. Both teachers and members of the leadership team identified the midday supervisors to have posed a challenge to their efforts of improving student behaviour outside the classroom. Teachers felt that the midday supervisors were not willing to embrace the changes being made on the basis of the improvement project. However, teachers were also sympathetic to the struggles and difficulties the midday staff faced in their work. Cecilia acknowledged that students did not allow lunch time supervisors the same esteem as the rest of the school staff,

> "I think that they are a group of people that require support around behaviour because they are not respected as much as other members of staff because they are there for an hour. I think maybe we need to get midday supervisors more involved, more quickly, but that's a slow process because I don't think they are as ready to change, as teachers are."

Teachers were also cognizant that due to the midday's short work hours it was not always possible to keep them in the loop, which may have given lunch supervisors the impression that changes were being implemented around them without their input. Elizabeth noted that the school could have done more to engage with the middays in the process of improvement,

> "I talked very casually to them but I don't know whether there was enough involvement from them. So again it was us saying 'We think this would be a good idea and we've set it all up', but, obviously it's very difficult because you can't really have them coming in after school to staff meetings to hear the reasoning behind it, you know, it's their own time, you'd have to pay them for coming and doing that."

Molly, the headteacher heard and shared all of these concerns, and was similarly worried about how well the middays integrated into the school culture and ethos as a whole.

> "No, I guess, one of the biggest challenges is communicating a change in policy, in an effective way with midday supervisors who are only here for an hour a day and who don't necessarily buy into other school practices. I think that's something for us as an SLT to work on and although we've done lots of training with our midday supervisors in the past it's just the weakest area of school staff, if you like, in terms of imbedding the school policies and practices, because they are here for such a short period of time. They come in and go and that's been the biggest challenge I think to change mindsets with people who are less open to new ideas shall we say and to change."

Thus, in conjunction with the sympathy staff expressed for the midday supervisors, there was also the feeling, evident in the carefully worded quotes above, that the lunch time staff was not always pulling their weight. Catherine gave a less subtle example of this as she herself experienced it "Especially after lunch, mine [pupils] used to come in and say 'This happened' and you would say 'Well you did you speak to the dinner lady?' and they'd say 'They just ignored it'.". These situations bred resentment in the teaching staff who felt they were routinely sacrificing class time to mop up problems carried over from lunch; problems that the teachers viewed as the rightful responsibility of the midday supervisors, as evident in the quote above. This gap in relations between teachers and lunch time supervisors likely did not bridge with the headteacher's request for the teaching staff to spend a portion of their PPA time supervising students during the lunch break. Although this move was taken as a way to engage with the middays and support the implementation of the changes made to outdoor playtimes, it may well have given cause for further resentment between all involved, as comments from teachers quoted in the previous subsection indicate that not everyone approved of this strategy.

Every teacher at Foxglove identified time as a barrier to the implementation of DASI. Time was a challenging factor in number of ways. Teachers struggled to find time to implement their roles and responsibilities as they pertained to the DASI project as no additional time was cleared for this purpose. Stemming directly from that, teaches also found it difficult to find a mutually convenient time to meet and organize themselves, which delayed the completion of various portions of the project. As such, teachers reported that the project stagnated at points, and Foxglove Primary overshot their proposed timeline for full implementation.

When asked if they were able to complete the requisite work for the DASI project within the school day, the answer was decisively negative. Once the staff had finalized their plan of action, each team of teachers was allocated a set number of tasks to complete towards the DASI project. Teachers reported that they completed their tasks outside of the work day, frequently coming in before school, or staying after school to fulfill their parts. Margaret described her days in that initial period of project implementation,

> "It was post school more for me, I don't have time in the school day. Literally I don't have any time at lunch time, I do stuff in my room and if I eat lunch it's a benefit and then I go back. I worked on this project in the after school time."

Quite a number of teachers referred to the press of immediacy, wherein minute to minute, and hour to hour tasks occupied their school day, and took precedence over the improvement project (Knight, 2009). Catherine too worked on DASI in her personal time, having not been able to allocate time to the project during the school day,

> "Most of it was in our own time, you know sort of during the school day you tend to be more worried about setting up lessons and dealing with issues that might arise during the day, so it's always been within our own time."

The headteacher, Molly did recognize that the DASI project was an extra burden on the teachers, but relayed that this is the case with any new initiative undertaken by the school.

> "Nothing has been taken way from underneath so there are all these things being put on top but nothing has been taken out, so you just end up with huge amounts more, and I think that's really hard. I think that for us as senior leaders it's important to sort of filter and make sure that we don't put everything on our class teachers and our TA's and choose the things that are right, and I think this project has been right."

Molly felt that the DASI project was manageable for the staff, and the results worth the extra work. The teaching staff did not disagree with this sentiment, however, a few members of staff felt that the leadership team could have done more to provide support. Hazel explained

> "You know, maybe what would have been nice was to have some dedicated time with somebody, rather than to have to find five minutes here, five minutes there to catch up on the project"

Outside of dedicated staff meetings on the DASI project, the leadership team did not provide teachers with allocated time to work on the improvement initiative. Supportive leadership is vital to school improvement as it has been found to facilitate teacher involvement and engagement with school reform (Gu, & Day, 2013). The opposite is also

true, in that the absence of support can have a negative influence on teacher willingness to participate in reform. At Foxglove Primary, time became a barrier to the teaching staff and had an impact on how DASI was implemented. In addition to struggling to find the time to fulfill their own portions of the project, teachers also found it challenging to meet together for the purpose of working on the project jointly. Genevieve recalled her experience,

> "We haven't been so successful at meeting together but it isn't because people don't want to, it's just because they have so much to do and they are so busy. Not because people aren't willing, but because we all have different lunch times, busy after school, or with clubs, or what have you. Trying to get everyone together was quite tricky, but it isn't because people weren't willing to do it, it was just finding those times."

These organizational challenges led to a lull in the middle of the project. As described earlier, Foxglove Primary was making good headway but progress stalled and implementation had to be pushed back by several weeks. Margaret explained,

> "I guess it was getting it finished, like rolling it all out that was the hardest bit. It didn't get done quite as on time as we would have wanted it to be. I think it is inevitable in a way in the school because you have the best intentions, but there's also so many other sort of time pressures on you that you can't juggle so many balls in the air at one time. It really wasn't at all that complicated to maintain, it was just more us actually just getting ourselves organized."

Teachers at Foxglove referred to the challenges of a school setting to explain the delay, Victoria reflected,

> "We then aimed to have everything started after Christmas, and then kind of Christmas happened and there was parts that weren't ready, and parts that were. There was time that we wasted where something wasn't ready, and it probably should have been ready weeks before we actually started it, and therefore we would have had longer to try it."

The delay shortened the implementation period, which in turn limited the potential for change. Molly, the headteacher explained that she considered the project to still be in the early stages of implementation, "We've seen small incremental changes, but it was still only, it's quite embryonic and we're just in the early days of that really". The silver lining however, was the school's independent commitment to continue with project implementation into the following year.

The school context in the 2015-2016 school year proved to be yet another challenge for Foxglove Primary. The school was facing a long anticipated Ofsted inspection as Molly explained,

> "So the story is, the school has been 'Requires Improvement', and we've been doing lots of different kinds of, our own mini kind of improvement projects before discovering this one. We just Ofsted-ed, just three weeks ago and we're now 'Good', which is brilliant, and that just demonstrates how hard we've worked since the last one".

While the outcome of the inspection was positive, members of the school staff admitted that the impending assessment made for a challenging year. The leadership of Foxglove Primary knew in advance that it may be challenging to juggle preparations for the school wide evaluation alongside an improvement project, but after a thorough deliberation the decision was made to go ahead with the DASI project. However, reflecting on the situation near the end of the school year, staff members wondered if the project would have been better suited for another year. Elizabeth discussed the topic,

> "We had such a stressful year with Ofsted, if you were coming in now and we were doing this project now, I think it would be completely different because we wouldn't be thinking around every corner, 'Are they going to call this week?'. We would have got a completely different feeling about the project, it was just kind of a coincidence and in a bad way."

Margaret shared similar thoughts on the matter,

> "I think at times this project has felt like another job to do but having said that we have a great staff and we are all very willing, and we wanted the school to improve, so we've still persevered with it, and we appreciate the value of it, but at times, I have wondered if it was perhaps just the wrong year for it."

Additionally, the headteacher of the school, Molly, wondered whether the DASI project got lost in the shuffle occasionally,

> "There were so many different plates that we've been spinning in terms of improving the quality of teaching and improving our outcomes for children, because our last inspection was requires improvement there's been an awful lot of pressure to get that to go up. I worry that perhaps this project hasn't had the same emphasis it might have had if we didn't have so many other things spinning equally at the same time."

The staff at Foxglove recognized that they had taken on too much in a single year and accepted that this had, had ramifications on their improvement effort. It is necessary to distinguish that the school did not regret undertaking DASI as a project, indeed the response to the improvement was wholly positive, rather the timing of the initiative was questioned. Teachers theorized that if Foxglove Primary had undertaken the project a year earlier or later, the barriers discussed in this section would not have been as pronounced.

Foxglove Primary faced three distinct challenges in implementing the dynamic model. Notably, the challenges identified at Foxglove did appear to impact the extent of improvement observed by the teachers. Nevertheless, the leadership team at Foxglove Primary felt that DASI was a worthwhile endeavour and spoke of continuing the project into the following year, anticipating greater success once the project received undivided attention.

What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

Foxglove Primary took on the DASI project during a rather hectic period for the school, yet teachers did not step back from the project and persevered with implementation for the full academic year despite having to juggle their many duties at the outset. Teachers at Foxglove identified a number of factors which encouraged them to stay engaged in the project in spite of the difficulties they faced. Visible improvement in the area of reform, buy-in for the topic of reform and the structure of the dynamic model were recognized by the staff as factors that supported their continued participation in the improvement initiative.

One source of motivation for teachers at Foxglove Primary was the change they observed on the basis of their efforts. Victoria explained how perceived change encouraged her to maintain engagement with the initiative,

> "I think at the beginning, we were all a bit, 'Is this going to involve more work for us, because we don't really want more work'. But as the project kind of happened, I certainly saw the benefit of what we were doing, and therefore, if you know that there is a benefit, if you can see what that benefit is, it kind of makes it worth it. Yeah, ok, it might have been more work, or more meetings, or whatever than normal but we could see that it was going to benefit and that something needed to change, and because you can see why you're doing it, I was happy to do it."

Observed changes and signs of success in the improvement reinforced staff desire to continue active participation in reform. Mary relayed a similar experience,

> "Actually seeing the children on the playground, I think it's really rewarding, seeing them occupied with the different things. I think at first it feels a bit stressful because you think, you wonder how big it's going to be or how much is going to be involved, is it going to work, are we going to be able to put it together, but then you see the fruits of your labour and it's all worth it."

Mary relayed early concerns about her ability to fulfill the demands of the project. However as the project went on, her success secured her continued participation in the reform. This can be connected to the bolstering factor of efficacy, which has been shown to impact teacher effectiveness (Kirkpatrick, & Johnson, 2014). As the DASI project progressed, teachers at Foxglove gained confidence in their abilities which in turn supported further participation in the project.

The area of improvement was another significant source of motivation for teachers at Foxglove Primary. Just about every member of staff referenced the suitability of the topic and discussed how this supported their interest and engagement in the improvement initiative. Margaret was among the teachers keenly interested in the DASI project; when asked to discuss what kept her going despite the challenges presented by the year she replied,

> "I think probably my own interest in the project. I am the inclusion leader at school and behaviour is one of my babies, so for me this project has been really important. I do, genuinely, passionately, believe that what happens at play times and lunch times, has a huge knock on effect in the afternoon, so if children have a bad play time or lunch time they bring that in to the class. If football has gone wrong, it takes 25 minutes to sort it out, sometimes longer, and that's 25 minutes of learning the children have lost, so I think if we can look for ways to make sure that it is working well, then I think it will have an impact on learning."

Teachers valued the improvement project because the changes they were implementing addressed areas of need in the school. Victoria explained that in her perspective, topic selection was key to the success of the improvement initiative,

> "I think if, it had been any of those other areas that you talked about, I think we would have done it but it might not have had the same support. We might have just kind of been like 'Yeah ok, we've got to do this but we don't really think this needs improving'. Whereas because it was the playground, there was definitely more enthusiasm."

Teacher support of school improvement, also frequently referred to as teacher buy-in, is a factor that has begun to crop up more frequently in educational effectiveness and school improvement research. Studies have indicated that teacher buy-in is near essential to the success of school improvement initiatives (Yoon, 2016). At Foxglove, teacher buy-in for the topic of improvement was high, which facilitated continued participation in the project as a whole.

The area of improvement was a good fit for Foxglove Primary partially because it was one that had not been previously explored by the school. Successive 'Requires Improvement' Ofsted ratings plunged Foxglove into a period of self-guided reform. The school made significant changes within the classroom over the previous years, choosing to focus on improving quality of teaching. The headteacher, Molly felt that a change of direction offered by the DASI project was beneficial for the school,

> "It was quite refreshing to have something that wasn't necessarily around teaching as such because our focus was on outside playtime. Obviously play time has a huge impact on teaching, because it impacts the classroom but it was a different kind of emphasis from everything else that we were trying to improve."

Teachers shared similar feelings, and honestly disclosed that they were pleased the DASI project did not focus on teaching specifically. Daisy, a deputy headteacher, explained,

> "The teachers were quite excited about doing the project, because it was a wholly positive thing to be doing, and there was no judgement on your teaching. The other thing teachers don't like is judgement, and there was nothing like that, nobody was filming you to see that you were asking the questions properly and you were asking open questions and such."

It may be that the looming Ofsted inspection produced this outlook towards improvement. In contrast, DASI offered a welcome reprieve wherein it was an initiative that parceled no judgement on the teachers, and was guided jointly by the teachers and the leadership team. Victoria reflected, "You weren't coming in having decided that we were rubbish, and telling us how we could improve, you were coming at it from, you know, wanting our perspective". Thus, the ability to establish ownership and select the area of improvement was a supportive factor for the staff at Foxglove Primary.

It was also the structure of DASI as a framework that encouraged teachers to retain engagement in the initiative over the year. DASI was a good fit for Foxglove Primary and this in itself functioned as a supporting factor for the staff. At the outset, Foxglove Primary became interested in the DASI project due to how the framework was developed. Specifically, the leadership team appreciated the fact that DASI was informed by both theory and evidence based research. Molly explained,

> "I guess the difference for us is, we've tried to do our own research, our own kind of improvement projects before, but the difference that grabbed my attention about this one is that it was evidence based about previous research."

The headteacher felt secure in proceeding with reform on the basis of a framework that had a strong academic background. The staff also appreciated another tenet of the DASI framework, that being the ability to direct the particulars of their reform. The dynamic approach recognizes both, that schools differ greatly, and that improvement can occur through any number of ways. As such, outside of the teacher questionnaire there are no set requirements for the way improvement occurs under DASI, and no mandatory materials or resources to implement (Creemers, & Kyriakides, 2012). Rather, the school takes full ownership of their improvement by selecting from optional material in the handbook and incorporating their own resources, in this way developing an action plan that is relevant to the school context. Daisy explained the advantages of this approach for Foxglove,

> "I think one of the reasons it has worked and is working is because, we've manipulated it [the project], to make it work for us, the changes haven't been imposed. We were never told by you 'This is what you must do, you have to do this, you have to do that, you have to do the next thing'. We've talked about it as a school, we discussed it, we've canvassed opinion from the teaching staff, from the dinner ladies, from everybody in the school, and the children, and that's what makes it work. I think because everybody is, I know stakeholders is an old-fashioned word, but everybody has a stake in it working, everybody feels part of it."

DASI supports the school in retaining control over the reform and facilitates the implementation of resources that inspire staff confidence. Perceptions of ownership and efficacy are intimately entwined with levels of engagement and likely serve as motivators in improvement initiatives as well (Razzak, 2016). Foxglove Primary found the structure of the DASI framework to facilitate ownership of the project which supported staff engagement in the reform over the course of the year.

Additionally, both the teachers and the leadership team at Foxglove Primary identified the presence of regular outside support as a facilitating factor in the improvement initiative. Mary reflected,

> "I think the most important thing for me was the discussion, because if you had come and left all of this, it would have been really overwhelming, and it would have been onerous, but because we've unpicked it and built up the plan together it was alright. If we had been sat in a staff meeting, trying to pull it together, we would have gone off on tangents but having you come in and structure it and pull it together around a framework, I think made us more effective."

Having undertaken in-school improvement in prior years, teachers at Foxglove were aware of some of the pitfalls associated with self-led initiatives, and appreciated the organizational features offered by an outside presence. Although interdisciplinary collaboration often does not come easy to schools, staff at Foxglove was willing and eager to take part in professional collaboration. Daisy, a deputy headteacher, stated,

> "Primary schools are very closed communities, they are part of the community but we close the doors, bolt them, and then you just get on with it. Often it can be a case of not seeing the wood for the trees, and you coming in with the project allowed us to change. Anything that we tried before hadn't really worked, and so, nobody took it very seriously, but I think the fact that you came in, and suggested the project as a way that you could help, I don't think we would have come to that outcome this year without your support. In fact I am pretty sure we wouldn't have."

Additionally, regular visits served as a motivating force for staff members. The headteacher, Molly explained that scheduled visits helped keep the school on track,

> "I mean I think, you've kind of held us to account on it. Do you know what I mean? You've kind of - we know you're coming in, so we need to kind of ask ourselves 'Oh, where are we with that?'. I think that's a good thing actually."

Cecilia, a member of the leadership team shared similar thoughts on the matter,

> "My personal view is that having someone from the university behind us, has made us stay focused, and sometimes it's very easy to get side tracked when you haven't got somebody like you coming in and meeting with us and talking with us, and I think it's been a really positive experience."

Such feedback demonstrates that not only was staff at Foxglove receptive to outside influence and professional collaboration with regards to school improvement, teachers identified this as a supportive feature. On the whole, the dynamic framework proved to be a good fit for Foxglove Primary, who found the structure of the approach to be beneficial to the improvement effort itself.

Chapter 5: Discussion

5.1 Overview

In this chapter I discuss major themes, engage in cross case comparison within the sphere of the research questions guiding this study and draw parallels to existing literature. In the first three sections I engage in cross case comparison with a focus on the school action plans, the perceived success of the improvement initiative, and the barriers and supports identified at each school. In the second half of this chapter I discuss the influence of school culture in this study and explore why the factor of 'student behaviour outside the classroom' featured prominently in the study.

5.2 Cross Case Comparison of Action Plans

The improvement projects that were implemented at each of the schools were described in depth in the previous chapter. In this section I examine the action plans developed by the schools via a rubric and consider whether they reflect the actualized improvement effort at each school. Action plans have become a staple of school improvement initiatives (Strunk, Marsh, Bush-Mecenas, & Duque, 2016). The planning process is considered by many to be a key step in school improvement because it allows staff to come to an agreement regarding the needs of the school, select the objectives of the effort, and develop strategies to fulfill these goals (Reynolds, Hopkins, & Stoll, 1993). However, early research into the quality of school improvement plans suggests that they are frequently unworkable, setting unrealistic goals and lacking actionable implementation strategies (Broadhead, Cuckle, Hodgson, & Dunford, 1996; Bell, 2002). The dynamic model incorporates the development of an action plan into the improvement process. Under this framework, school staff members produce the action plans themselves, but not without support. Schools are provided a template to follow, a handbook of suggested strategies, and a member of the advisory and research team is present to offer advice and guidance throughout the planning process (Creemers, & Kyriakides, 2012). With regards to this study, each of the four schools that took part in the study developed an action plan at the beginning of the year (see Appendices, I, J, K, L, and M). On the whole, there are few major differences between the action plans developed by different sites; the action plans share many commonalities in both formatting and some of the content. This is not entirely surprising as every school followed the same template, relied on examples from the handbook and heard the same explanation for how the document was to be filled out during the dedicated staff meeting.

To analyse the action plans I developed a simple, question based rubric that assessed the aspects of the action plan that I considered most relevant to the study (see Table 4, p. 71). The rubric evaluates each plan for completeness, presence of a timeline, task assignment and implementation; I did not count the number of, or assess the effectiveness of the strategies in the school action plans because this exploratory study does not seek to establish links between the quality of written action plans and project outcomes. For each school, I evaluated the categories on a yes/no basis, looking only for evidence that the categories are present rather than evaluating the quality of the execution (see Table 10).

Table 10. Action Plan Summary Table

Category	**Hawthorn Primary**	**Mulberry Primary**	**Primrose Primary**	**Foxglove Primary**
Completeness	Yes	Yes	Yes	Yes
Established timeline	Yes	No	Yes	No
Task assignment	Yes	No	No	No
Implementation	Yes	Yes	Yes	Yes

In terms of completeness, all schools filled in the action plans fully, with the exception of the last section that was meant to be completed a month or two after implementation was in progress. As had been discussed in the interviews, very few, if any changes were made to the original action plans, and this section was not formally updated by any of the schools. Nevertheless, each school did complete the original plan as intended, and therefore received a confirmatory rating. The next category, which asked schools to specify a timeline for implementation, fared worse than the previous. In fact, Primrose Primary alone set out specific dates for strategy initiation, while Hawthorn Primary only put down the month by which the strategy was to be completed or implemented. Mulberry Primary put down the year the project was run and the plan developed by Foxglove Primary only noted that implementation was expected to begin October. This is a concerning finding because it indicates that in this area, schools did not implement the dynamic framework as intended. The following category, task assignment, proved to be another area of weakness across most of the action plans. Only Hawthorn Primary assigned tasks to specific staff members, but even in that action plan it is obvious that less than half of the teachers that took part in the effort are mentioned by name. The action plan developed by Mulberry Primary lists all of the staff but does not associate them with particular tasks. Foxglove Primary and Primrose Primary made no reference to task assignment at all. I should note however, that staff members at Foxglove Primary

referenced formal task division and creation of teams (Genevieve, p. 121), so it is possible that tasks were officially assigned, but this information was either recorded in another document or only relayed verbally. As I can only draw conclusions from the data I have in the action plan, the category received a dissenting rating. Lastly, all schools appeared to fulfill the category of implementation. In the interviews, teachers across all of the sites recounted in detail the strategies that were put in practice, and there were no apparent discrepancies between the action plans and the implemented projects. This may be connected to the straightforward nature of the developed action plans. All of the schools produced fairly short action plans, and elected to use bullet points rather than paragraphs to give a focused overview of the improvement strategies to be implemented. While the produced action plans were not extensive, they were all realistic, and contained actionable strategies that were possible for teachers to implement in the course of the year.

In the field of school improvement, action plans are generally considered to be beneficial to the school improvement process because it is expected that a high quality document will support follow through (Hummel-Rossi & Ashdown, 2002). However, Dunaway, Kim, and Szad, (2012), as well as Strunk, Marsh, Bush-Mecenas, and Duque, (2016) note that relatively few recent studies have examined whether the quality of a school improvement plan has a perceptible impact on the success of a reform effort. Mintrop and MacLellan (2002) found that the quantity and type of activities included in the action plans had no impact on student outcomes. Whereas Strunk, Marsh, Bush-Mecenas, and Duque, (2016) themselves reported mixed results from a longitudinal study that sought to learn whether action plan quality had a perceptible impact on school improvement outcomes. Other scholars have also suggested that the ability to draft a high quality action plan is not necessarily related to the skills required to implement improvement strategies effectively (Fernandez, 2011). In this study I did not seek to draw conclusions between the quality of the action plans and the success of the improvement initiatives. The action plans themselves also did not differ significantly enough between cases to draw any real conclusions about the possible impact of these documents on the process of implementation. As such, I rely on the action plans only to learn how schools went about implementing the dynamic model. However, this is an area that could be explored further in future studies on the dynamic model.

5.3 Cross Case Comparison of Improvement Outcomes

In this study, I was keen to explore the practitioner experience with DASI implementation, and to develop insight into whether they judged the improvement initiative to have been successful. At the time interviews were taking place, I chose not to operationalize, or give a strict definition to the concept of 'successful improvement project'. I sought to allow teachers the freedom to explain what successful improvement looked like to them, and whether they felt this had been achieved at their school. I approached the concept in this manner because I expected to encounter a variety of viewpoints both within and between schools on what it was that made reform successful. However, it was a moot point as there was no variance in this regard at all. When asked whether they perceived the improvement effort to have been successful, every practitioner spoke of success in terms of the degree of change observed in the area their school had worked to improve. Positive bias was another unfounded expectation on my part with regards to practitioner feedback on the outcomes of the project. Teacher perceptions on the success of their improvement project differed in each of the four cases. However, a common theme that seemed to weave through all accounts was the influence of the challenges and facilitators on both the process and perceived outcome. The degree of success observed by the staff members appeared to relate at least partially to the severity of experienced barriers, and the number of supports available to practitioners in their journey.

At Hawthorn Primary I was able to interview every member of staff that had participated in the improvement initiative. In total, I spoke with nine practitioners, which accounted for six teachers, one senior teaching assistant, one deputy headteacher, and one headteacher. The feedback on the project was unanimous not only within the sample of teachers, but across all members of the school staff. Practitioners at Hawthorn Primary were in consensus that the reform effort was successful because they had observed outcomes in both areas of improvement undertaken by the school. In answering the question of whether the reform was successful, all teachers mentioned areas in which they observed improvement and explained how it affected them. Mia (p. 82) and Abigail (p. 82) both noted that lunch times were much improved with regards to student behaviour and Emily answered "Yeah, definitely, because in the afternoons, it's a lot less time spent on fussing about something that's happened…I've had less time talking to children about behaviour so that's a big progress, big improvement.". For her part, Charlotte, the headteacher of Hawthorn Primary observed growth in teacher collaboration, both for the

purpose of the reform and outside of it (p. 83). Edgar, similarly saw improvement in this area of the school functioning and explained how things had changed,

> "Everyone is now more willing to ask other people – 'Will you come and do this with me?' or 'Will you help with this?' or 'Can I just ask your opinion of..', those sorts of questions. I think because it's in the forefront of the people's minds now. They feel comfortable doing that now."

On the whole, teacher feedback on the success of the improvement initiative was unambiguously positive. This may be attributed in part to the relatively trouble free journey experienced by practitioners at this school. Teachers at Hawthorn Primary identified a lot of facilitators that supported their improvement effort, and what few challenges they did experience, did not hinder them in implementing the project as intended.

Six members of staff participated in the improvement effort at Mulberry Primary, of which I was able to interview four - three teachers and the headteacher. Of the three teachers interviewed, two were NQTs, while the third was a member of the leadership team. Unlike the school wide consensus evident at Hawthorn Primary, opinions regarding success of the improvement initiative at Mulberry Primary were divided. Members of the leadership team, James and Olivia, who took on the brunt of project implementation judged the improvement project to have been a success and were pleased with the outcomes they observed at the conclusion of the project (p. 96). On the other hand, the two newly qualified teachers, Grace and Emma expressed more ambivalence. In the course of their interviews, both Grace (p. 96) and Emma (p. 96) did touch on some of the changes they observed as the result of the reform effort. However, when asked about the success of the project directly, Grace said "So there are things that have definitely improved, but I think that generally, there's been no massive shift in behaviour as a whole, so no, I wouldn't say that it was a massive success". The key differences in experience between the NQTs and members of the leadership team, were the barriers and supports identified by these practitioners. During her interview, Olivia, a senior teacher at Mulberry Primary, referred more frequently to facilitators, such as buy-in, and cited few barriers in her journey with DASI. Conversely, the NQTs located hardly any facilitators in the process of reform and spoke extensively about how lack of time and insufficient teacher collaboration and communication hindered their involvement with the improvement effort.

All five members of staff at Primrose Primary took part in the improvement effort and also participated in the interview process. Every one of the four teachers, and the headteacher were in consensus regarding the success, or rather lack thereof, of the improvement project. Staff members at Primrose did not believe that the reform had been successful in improving student behaviour outside the classroom. The entire teaching staff expressed that little had changed as the result of the improvement effort (Anna, Clair, Eleanor, p. 106). Lily's comment in particular represented the general feeling at Primrose, "I don't think it's had a really big impact on anything, it's not really changed anything. It's been fine, it's been enjoyable, it's been doable, but I don't know that it's had any significant impact on anything". The headteacher had similar views and for this reason did not see the project extending on into the following year (p. 106-107). The experience of teachers at Primrose Primary was influenced profoundly by the challenges they faced in the course of implementing reform. The lack of buy-in and struggling communication and collaboration practices hindered the initiative from the first day (Eleanor, p. 107). Additionally, the school did not apply the dynamic model as intended, reducing both the length of implementation, and scale of the project (Audrey, p. 112). Staff members were overwhelmed with barriers in the process of improvement, and when asked about supports, found little to say.

Of the twelve staff members that engaged with the improvement initiative at Foxglove Primary, I was able to interview ten – seven teachers, two deputy headteachers, and the headteacher. Practitioner perspective was unanimous, but assessment of success did not fall decisively on one side or the other as it had at Hawthorn or Primrose. Both teachers and members of the leadership team at Foxglove Primary believed themselves to be seeing signs of success, but they were also pragmatic in saying that the project had not yet reached its full potential. One of the teachers, Mary called it a "..work in progress" (p. 125), and the headteacher of Foxglove, Molly, explained that the project was still "…quite embryonic and we're just in the early days of that really" (p. 130). However, the project received unarguably positive reviews, and numerous teachers spoke of the improvement they observed in the course of the year (Hazel, p. 126; Margaret, p. 126; Catherine, p. 126; Elizabeth, p. 126). It was the barrier of time, developed as the result of the school context, which restricted the success of the initiative from the perspective of the school staff. Teachers and members of the leadership team discussed this barrier in depth (p. 129), and considered it to have limited the actualization of the project. Practitioners were not disheartened by this conclusion, and it was understood that the

project would continue on into the following year and greater success was expected, following a lengthier period of implementation.

The effectiveness of the dynamic model has been extensively studied through quantitative means. Numerous large scale studies have been conducted to evaluate the validity of the framework and gauge the outcomes achieved through the implementation of this model (Demetriou, & Kyriakides, 2012; Kyriakides, *et. al*., 2014; Panayiotou, Kyriakides, & Creemers, 2015). The data acquired through the use of quasi-experimental techniques, and pre- and post-tests at both the student and practitioner levels, has allowed the scholars to establish an objective measure of success for the effectiveness of the DASI model. I sought to contribute new knowledge towards the framework by exploring practitioner subjective perceptions regarding the success of the DASI initiative. While the data acquired as a result of this pursuit is not generalizable beyond the sample, it provides beginning insight into the practitioner experience with this model. It is necessary to develop this understanding because teachers are the ones who work to realize the implementation of improvement projects. Their lived experience and judgement of the outcomes may provide avenues towards explaining some of the variation observed in the success of the DASI model between schools. I believe the findings detailed in this section open the door to several new lines of inquiry for the DASI model.

5.4 Cross Case Comparison of Challenges and Supports

In this section I provide a brief overview of the challenges and supports identified by practitioners in the four schools that took part in this study. Teachers in different schools experienced a number of overlapping themes pertaining to the challenges and facilitators they encountered in the course of reform. In this chapter I will only discuss themes that presented in two or more cases; minor themes that were relevant to a single school will not be covered here because they have already been addressed in the subsection dedicated to that school. Table 11, overleaf, depicts major cross case themes. Time, lunch time supervisors, buy-in and teacher communication and collaboration were the main challenges identified across the board. With regards to facilitators, teachers found features of the DASI framework to serve in the supportive capacity. Specifically, practitioners identified the presence of a research and advisory team, and the provision of optional resources as factors that facilitated their efforts at reform. Additionally, buy-in, and teacher communication and collaboration appear once more on the side of the

facilitators, indicating that these factors were also found to be supportive elements in the improvement effort by some of the schools in the sample.

It is evident that buy-in, and teacher communication and collaboration appear both as a challenge and as a facilitator. For Primrose Primary, lack of buy-in and teacher communication was a barrier to improvement implementation, whereas the presence of these factors at Hawthorn and Foxglove Primary was perceived by teachers to be supportive of their efforts. Furthermore, for Mulberry Primary, the factor of buy-in is checked off on both sides, as it was identified simultaneously as a barrier and a supportive factor by different staff members at the school. The experience of teachers at Mulberry Primary was quite divided, and buy-in was a barrier to some teachers, but a facilitator to the others. Additionally, it is evident that Primrose Primary does not have any checkmarks in the 'Facilitators' column. Although teachers at Primrose were able to identify some facilitators, the factors discussed by practitioners were particular to the school and not identified at, or relevant to any of the other cases. Supports specific to Primrose Primary have already been discussed in the previous chapter, and for this reason will not be expanded on again in this section.

Table 11. Cross case comparison of challenges and facilitators

School	**Challenges**				**Facilitators**			
	Time	Lunch Time Supervisors	Buy-In	Teacher Communication and Collaboration	Advisory and Research Team	Optional Resources Provided by DASI	Buy-In	Teacher Communication and Collaboration
Hawthorn Primary	✓	✓			✓	✓	✓	✓
Mulberry Primary	✓		✓	✓	✓	✓	✓	
Primrose Primary			✓	✓				
Foxglove Primary	✓	✓			✓	✓	✓	✓

In the subsections that follow, I discuss each of the barriers and supports that appear on the table above, individually. In some subsections, I will discuss the theme as it relates to every single one of the cases it appears in, whereas for others I will rely on just two cases because they provide a direct contrast and so as to avoid needless repetition. As a further method of reducing volume, in the sections below I will not always duplicate direct quotes that have already made an appearance in the previous chapter. Instead, I provide

the name of the teacher, as well as the page number referencing the location where the original statement appears.

5.5 Challenges and Barriers

Even under the best circumstances, school improvement efforts are accompanied by challenges. There were four main themes pertaining to the challenges experienced across cases. Time, lunch time supervisors, teacher collaboration and communication, and buy-in were identified by teachers to present a barrier. The factors of time, teacher collaboration and buy-in have been previously discussed in literature in relation to other models of improvement, and are known to impact implementation of school improvement initiatives. A key finding of this study with regards to challenges was the identification of lunch time supervisors as a source of influence over the process of improvement. This factor has not been identified in prior school improvement research and provides considerations for further study into the topic not only for DASI but for school improvement research as a whole. In this section I will separately attend to the themes of time, and lunch time supervisors. The factors of teacher collaboration and communication, and buy-in will be discussed in a different subsection, one dedicated to the impact of school culture on the improvement efforts of participating schools.

5.5.1 Time

Time surfaced as a challenge in one way or another for every member of staff interviewed at Hawthorn Primary, Foxglove Primary and Mulberry Primary. This was not an unexpected finding, as time is frequently identified as a barrier in studies on school improvement and teacher professional development (Mendenhall, Iachini, & Anderson-Butcher, 2013). What is more, multiple studies have found time to be a predominant challenge experienced by teachers in almost every type of change based initiative. I too found time based barriers featured extensively across three of the cases. Ceaseless flow of regular duties left little free time to engage with DASI, which was further exacerbated by the fact that none of the schools allocated dedicated time for teachers to work on the initiative. Moreover, Mulberry and Foxglove experienced time related challenges due to school context at the time of project implementation

Teachers at Hawthorn, Foxglove and Mulberry all reported working on tasks for the improvement initiative in their own time, whether before school, after school or during their lunch break. Practitioners explained that their prep time did not stretch to

cover the additional work required by the project. This was an especially acute challenge in the early planning stages of the project, and during the first weeks of project implementation. Mia, a teacher at Hawthorn (pg. 84) worked on DASI over her lunch breaks, whereas a teacher from Foxglove, Margaret (pg. 129) reported staying after school to complete her part of the project. These findings echo those of Muijs and Harris (2006) who noted that the unending stream of daily responsibilities restricted the amount of time available to teachers to meaningfully engage with change. Teachers across Hawthorn, Foxglove and Mulberry also admitted that that extra duties generated by the reform were occasionally put off for later, sometimes more than once, because other responsibilities took precedence. Emma, a teacher at Mulberry (p. 97) felt that there was simply too much going on in the school for her to provide the DASI initiative with the desired level of attention. Whereas in another case, at Foxglove Primary, Genevieve (p. 122) felt it necessary to undertake additional responsibilities related to reform because things were not getting done in a timely manner. These reflections are similar to conclusions from Johnson's (2003) study which found that uneven work distribution in school improvement projects was commonplace.

A noteworthy commonality present across these cases, was a lack of time provision for work on the improvement project. Over the course of the year, every school dedicated a number of their staff meetings to the project; in these staff meetings teachers worked together to develop action plans, review their progress and discuss subsequent steps. However, teachers implemented the improvement initiative outside of these meetings, which required a not insignificant time investment. Hazel, a teacher at Foxglove (p. 129) expressed the desire for dedicated time to be provided by the leadership team for work on the improvement initiative, as lack thereof was a barrier to meaningful engagement with the reform. Lack of time provision has been observed to be a recurring challenge in school improvement and teacher professional development efforts. In her study of teacher collaboration within school improvement, Deppler (2016) found that none of the schools in her sample allocated extra time for collaborative teacher work, which limited practitioner engagement in teacher observation, team teaching and project implementation. Similarly, teachers at Hawthorn, Foxglove and Mulberry reported great difficulty in finding time to meet and work on the reform as a team during the school day due to conflicting schedules; many teachers resorted to working on the DASI project in their own time. Kennedy's (2011) study on teacher professional development identified analogous challenges in that rigid school timetables curbed educator's ability to

meet together and devote adequate time to the initiative. The absence of practical support from the leadership team in these matters has far reaching consequences for the amount of work that teachers are able and willing to invest in the improvement initiative. Time has been shown to be a significant barrier to school improvement, and it is one that could and should be addressed by the school leadership prior to pursuit of reform.

Time related challenges also originated as the result of the school context at the time of project implementation for some of the cases in this study. In the 2015-2016 school year Foxglove Primary was awaiting an Ofsted review. This was a crucial review for the school, after a series of prior assessments had ranked the school as "Requires Improvement". Over the course of the year teachers at Foxglove divided their attention between the DASI initiative and preparations for the incoming evaluation. As a result, some members of staff felt that the improvement initiative was not exploited to its full potential. The headteacher at Foxglove, Molly (p. 130) observed that the project was still in its infancy. Prior research in school improvement identified comparable trends. Rhodes and Houghton-Hill (2000) similarly reported that school improvement initiatives were routinely set aside as schools responded to more urgent matters as they came up. Just as in the case of this study, Rhodes and Houghton-Hill (2000) reported that in their sample, preparations for Ofsted took priority at the cost of time initially allocated to professional development. Moreover, in a study on mental health focused school improvement, Mendenhall, Iachini, and Anderson-Butcher, (2013) similarly found that all participants indicated time to be a barrier, and one that specifically prevented them from embedding the program in full as intended. At Foxglove Primary quite a number of teachers reflected that progress stalled at intervals, and Victoria (p. 130) explained that implementation did not quite follow the intended schedule because aspects of the action plan had not been completed as planned. Teachers surveyed by Jošić, Džinović, and Ćirović, (2014), reported that a general overload of duties hampered their ability and motivation to maintain steady engagement with reform. Parallel themes were likewise recounted by teachers at Foxglove, who struggled to find time to attend to all of their responsibilities.

School context contributed to scarcity of time at Mulberry Primary as well. Staff at Mulberry Primary regularly participated in multiple projects and initiatives, many of which ran concurrently. The headteacher, James (p. 97) felt it was vital to incorporate as much research as possible into the school practice, and actively sought out new initiatives. However, the two NQTs, Grace and Emma found it challenging to keep up with and participate in all of the initiatives taking place at the school. For their part, DASI

was the project routinely relegated to the backseat, because the NQTs perceived it to receive less emphasis from the school leadership. Rhodes and Houghton-Hill (2000) observed this in their study as well, wherein teachers lacked time to invest in and engage with a project before another one was introduced. Conversely, the leadership team at Mulberry, composed of the headteacher and three senior teachers expressed a great deal of involvement with DASI, and discussed their involvement with the initiative extensively. Ainscow, Dyson, Goldrick, & West, (2016) found that senior managers on school staff cope with large volumes of work by isolating tasks and optimizing their completion; in this way, work is completed in a timely manner. Yet the scholars found that this approach leads to fragmentation within schools, in that there is little peer collaboration on tasks due of the furious pace required to keep up with everything. This may be what happened at Mulberry Primary. One of the NQTs, Grace, described her experience with DASI thus "what initiatives might have been put into place, as a result of this project, by the time those initiatives trickled down to me, they are just directives". Due to this approach, both of the NQTs also reported uncertainty regarding which of their assigned duties were related to the DASI initiative, and found it difficult to assess their overall level of involvement with the reform. Muijs and Harris (2006) too found a tendency for school leadership and senior teachers to take charge and engage in top down style of leadership rather than employ distributed or cooperative leadership practices in school improvement. The school context at Mulberry gave rise to a number of time related challenges which in turn influenced how and to what extent the NQTs engaged with the reform effort. This is a noteworthy barrier because DASI is intended to be a whole-school improvement initiative, and situations like this counter the ethos of the dynamic model.

The only school in the sample that did not discuss any time related challenges was Primrose Primary. Indeed, staff members observed that they did not find the improvement project to have been time consuming, and referred to this factor as a supportive one. Anna (p. 112), a teacher at Primrose reflected that the improvement initiative did not add a perceptible amount of work to her day, and on the contrary the project merged well into the school routine. However, it is also necessary to note that teachers at Primrose self-reported implementing a small project, which did not require a pronounced time investment, and ultimately, practitioners were not satisfied with the outcomes they observed. I cannot and do not on the basis of this study draw any conclusions regarding cause and effect for this case, especially as staff at Primrose Primary encountered a

number of other significant barriers in their journey which they perceived to impact their experience. I refer to Primrose Primary's experience in this section because it serves as a contrast to the other cases in the sample.

Teachers identify time as a barrier in many aspects of their work. Recent research has found time to be a significant challenge to school improvement initiatives and teacher development efforts (Mendenhall, Iachini, & Anderson-Butcher, 2013; Ainscow, Dyson, Goldrick, & West, 2016). Every teacher at Hawthorn, Mulberry and Foxglove Primary identified time as a factor that had in one way or another functioned as a barrier to their involvement in the improvement project. The reform produced additional duties for practitioners in the sample which were deposited on top of existing responsibilities. In some cases the improvement project stalled due to overwork and press of immediacy, whereas in others, time related challenges lead to weak engagement with the initiative. One way to address this barrier is for the school leadership to provide dedicated time for work on reform, something that none of the schools in the sample arranged for. Additionally, the school context at the time of improvement was a factor that contributed to time related barriers at Foxglove Primary and Mulberry Primary. Staff at both schools perceived their situation to have influenced their level of participation in the improvement. Thus, the school context should be taken into account by the advisory and research team prior to the implementation of the dynamic model, so as to prepare for and address potential time related challenges stemming from this factor.

5.5.2 Lunch Time Supervisors

While the former challenge was one commonly described in prior research on school improvement, another barrier identified by teachers in this study was wholly unexpected, and rarely appears in literature. Teachers at Foxglove and Hawthorn Primary, spoke extensively about challenges presented by midday supervisors to their improvement effort. Both of these sites focused on improving student behaviour outside the classroom and lunch periods were an area to which the schools devoted significant attention. Teachers at Foxglove and Hawthorn shared near identical challenges with regards to midday supervisors, citing poor time management, and weak commitment and follow through on the part of the middays as barriers to successful implementation of their improvement initiatives. However, despite naming lunchtime supervisors as a barrier to their improvement efforts, teachers at Foxglove and Hawthorn also expressed a lot of

understanding and sympathy to the difficult job and the struggles experienced by these staff members in the course of reform.

A review of literature on midday supervisors revealed that very few articles have been devoted to lunch time support staff, and those that exist deal almost exclusively with nutrition. The few articles that linked midday supervisors to reform efforts, discussed training interventions undertaken separately with lunchtime staff (Stephens, & Shanks, 2015). I could find no articles that described a collaborative approach to improvement that was undertaken by teachers and midday supervisors jointly. Therefore, the identification of this factor as a medium of influence in the course of school improvement contributes new knowledge to the field. The impact of midday supervisors should not be overlooked because even though they interact with children for only brief periods, these staff members are a yearlong constant during what pupils perceive to be a valuable time of day (Busher, Harris, & Wise, 2000). In the vast majority of schools in England, lunch times are handled by support staff, commonly referred to as lunch time supervisors, middays and dinner ladies (Mulryan-Kyne, 2014). Middays are hired by individual schools, and both qualifications and duties of middays can vary wildly from school to school. Lunch time supervisors do not usually have formal qualifications related to work with children, and not infrequently the position of lunch time supervisor is filled by parent volunteers. In a study of one LEA in Wales, Moore, Murphy, Tapper, and Moore, (2010) found that most schools do not provide training for middays and what is more, this position rarely has a formal job description attached. Typically midday supervisors work only the duration of the pupil lunch period and limit their duties to overseeing the students eat and keeping peace during the outdoor play time that follows (Vancil-Leap, 2017).

In improving student behaviour outside the classroom, Hawthorn Primary and Foxglove Primary focused heavily on student behaviour during lunch times, inclusive of students taking lunch as well as the play period immediately following. Although in devising the action plan teachers concentrated on developing strategies for improving student behaviour, practitioners at Hawthorn and Foxglove also felt that there was room for improvement in the techniques used by middays. At Hawthorn, Mia (p. 80) and Abigail (p. 80) expressed concern regarding the way midday supervisors handled conflict with students. These teachers felt that lunch time supervisors engaged in few positive interactions with children, and that every contact between pupils and middays was rooted in discipline and reprimand. Furthermore, Catherine (p. 81) at Foxglove felt that lunch

time supervisors were not working out their full time, and shirking their responsibilities by sending children back to class without resolving conflicts which originated during lunch. The challenges identified by teachers at Hawthorn and Foxglove are not unique to their school; in most primary schools, middays observe children's play strictly from the standpoint of safety and engage with students only to resolve conflict (Mulryan-Kyne, 2014). Moore, Murphy, Tapper, and Moore, (2010) advise schools to provide training for lunch time supervisors, wherein the responsibilities of the job are made clear and the support staff is taught to reinforce positive behaviour and lead, as well as participate, in student activities where appropriate. Although there is little research on the topic of lunch time supervisors and pupil lunch time experience, outside of those focused on nutrition and exercise, several studies have indicated that mindful and active moderation is beneficial for students. Instances of aggression between students were seen to be lower in schools where lunch time supervisors emphasised pro-social behaviour and supported positive play periods (Roderick, Pitchford, & Miller, 1997). Leadership teams at both Hawthorn and Foxglove explained that midday supervisors were provided with additional training both in prior years and as part of the improvement effort. However, at the end of the year, much of the same complaints about middays remained, and little progress in their behaviour was observed. In a review of literature on lunch time staff, Stephens and Shanks (2015) found that consistent, long term interventions are more successful in reform efforts that engage support staff, and regular follow up training is essential for continued entrenchment of new behaviours.

One of the reasons schools do not routinely provide midday training is due to their short hours of work. Typically, lunch time supervisors work for an hour, to an hour and a half every day, and remain on the school property only for that short period of time (Vancil-Leap, 2017). Scholars have begun to emphasise the need for lunch time supervisors to engage in internal and external events alongside other staff members and Butcher (2009) states that "it is no longer possible for midday or other supervisory staff to 'turn up' at the prescribed hour without a wider awareness of their role" (p. 89). Though few would argue with the message of this premise, schools must provide additional compensation for midday presence outside of official work hours and that is rarely in the budget. It is also this factor that proved to be a challenge with regards to midday involvement in school improvement at Hawthorn and Foxglove Primary. While some schools in the sample invited teaching assistants to participate in staff meetings devoted to the DASI initiative, none of the schools extended this same opportunity to the lunch

time supervisors. The cause of this discrepancy was quite straightforward, staff meetings took place after school, which was far beyond the regular work hours of midday supervisors. Although headteachers could have requested their attendance, none of the leaders in the sample elected to do that, as it would have necessitated provision of additional pay. This seemingly inconsequential factor had far reaching consequences for the improvement effort at Foxglove and Hawthorn. In implementing changes to lunch times, teachers found working with middays to be a barrier to their efforts. A large number of staff members, both teachers and members of the leadership team at Foxglove and Hawthorn felt that lunch time supervisors were not open to the changes taking place, and did not consistently implement the new procedures (Evelyn, Hawthorn, p. 85; Molly, Foxglove, p. 128). Amelia (p. 85) at Hawthorn further noted that middays were resistant to the improvements taking place because they were concerned that these changes undermined their roles. Rose (1999), observed that midday supervisors frequently suffer a communication drought, because they are provided little information about what is happening in their school. In the case of Foxglove and Hawthorn, due to the middays' absence from staff meetings, they remained out of the loop for much of the improvement effort and did not acquire buy in for the reform. For successful improvement with dinner ladies and midday supervisors Stephens and Shanks (2015) advice schools to work around the hours convenient to lunch time supervisors, and actively cultivate a deeper relationship between teachers, midday supervisors and intervention specialists so as to support the development of a positive attitude towards the intervention. Reflecting back on the situation during the interviews, teachers in both cases felt that it would have been more productive to involve the middays in the improvement initiative from the first day and maintain clear and consistent lines of communication about the changes that would be taking place (Abigail, Hawthorn, p. 81; Elizabeth, Foxglove, p. 127). Hindsight aside, midday response to the improvement effort at Hawthorn and Foxglove Primary presented a hindrance to educators, and from the perspective of the teachers, impeded their improvement efforts.

It is important to note here that although middays presented a challenge to the improvement effort, teachers at both Foxglove Primary and Hawthorn Primary were also sympathetic to the difficulties lunch time supervisors faced themselves. This is a significant point, one worth discussing, because teachers did not simply write off midday supervisors as a nuisance but were able to reflect on the reasons behind their response to reform. Teachers recognized that midday supervisors did not receive clear and consistent

communication regarding the changes being implemented, and acknowledged the need to handle the situation differently in future initiatives. Additionally, teachers were aware that lunch time supervisors faced challenges in their day to day work, which were not alleviated through the improvement effort. Sophia, a teacher at Hawthorn, felt that midday supervisors had a "rotten job" to do, and one she wouldn't want to take on herself. Though lunch time supervisors work short hours, they remain under pressure for the duration, having to continuously de-escalate conflict and be vigilant about the ever present risk of pupil injury (Moore, Murphy, Tapper, & Moore, 2010). Additionally, Cecilia (p. 127), a member of the leadership team at Foxglove reflected that midday supervisors were not treated well by children, who did not show respect or listen to these staff members in the same way as they would teachers. Practitioners at Hawthorn Primary shared similar concerns; Mia and Abigail (p. 81) reflected that lunch time supervisors were routinely on the receiving end of negative attitude. Jackson, and Bedford, (2005) too note the discrepancy in treatment experienced by teachers and support staff, and connect it to the fact that the role is not generally considered to be a profession. What is more, Moore, Murphy, Tapper, and Moore, (2010) and Rose (1999) both found that midday supervisors were generally not well integrated into schools, and not treated as colleagues. This is due in part to the odd hours worked by lunch time supervisors, who arrive and leave in the middle of the school day, and work their hour without much or any engagement at all with other members of the school staff. Teachers at Hawthorn and Foxglove recognized that these problems existed, and observed that middays could often feel like scapegoats, facing criticism from both teachers and children alike. To combat the negative aspects associated with the midday's labour, some of the teachers strived to offer support to lunch time supervisors by recognizing and complementing their work. Teachers themselves are often on the receiving end of criticism from parents, headteachers, researchers and policy makers alike. Early literature on teacher resistance to reform doled out blame on practitioners without giving much consideration to the causes behind their dissent (Knight, 2009). It may have been their own experience with such treatment that allowed teachers to recognize both sides of the story in the situation which had unfolded with the lunch time supervisors. Although the barrier of middays was not resolved at either Hawthorn or Foxglove Primary in the course of the year, an understanding was reached by teachers and the leadership teams at both schools regarding how to engage with these members of staff more effectively in the future.

Middays presented as a barrier in only two of the four case studies, but it was a theme that came up again and again throughout the interviews with teachers at Hawthorn and Foxglove Primary. Unfortunately, I was not able to gain permission to interview the midday supervisors at either Hawthorn or Foxglove and thus, do not have their perspective on the topic. Nevertheless, this section provides valuable findings about a potential barrier to implementing improvement not only as it pertains to the dynamic model, but school improvement at large, which has not been identified in prior research. Future research on DASI would benefit from exploring in greater detail how teachers collaborate with lunch time supervisors, teaching assistants and other support staff in their reform efforts. Further study in this direction may indicate how to engage the skills of support staff for the purposes of school improvement thereby converting this potential barrier into a supportive factor.

5.6 Facilitators and Supports

Facilitating factors are ones that teachers perceived to support their reform journey. A range of factors was identified by practitioners, of which four main themes were consistent across cases. The design of the dynamic model, and specifically the presence of the advisory and research team, as well as the provision of optional resources were identified by teachers across multiple schools. Additionally, buy-in, and teacher communication and collaboration, were also found to serve as facilitators by some of the schools in the sample. In this section I will explore the design of the dynamic model and the ways in which elements of this model functioned as facilitating factors. Teacher communication and buy-in are expanded on in the following, separate section.

5.6.1 Design of the Dynamic Model

A significant finding from this study was that several facilitators identified by teachers at Hawthorn, Mulberry and Foxglove Primary, related specifically to features of the dynamic model. Practitioners at these schools found provision of optional resources and example strategies for improvement to be a strength of the DASI model, and a feature that facilitated their progress in the improvement project. Teachers perceived this element of the DASI framework to support the development of ownership towards the improvement initiative by leaving choice of resources and strategies in the hands of the practitioners. This is a key finding because provision of optional resources is a feature

specific to the dynamic model, and this study shows that for the schools in the sample it was a supportive element in the process of implementing reform.

Furthermore, practitioners at the same three schools identified the presence of the advisory and research team, a role fulfilled by me, to be another element of the dynamic model that facilitated their improvement effort. In particular, teachers appreciated the guidance and easy access to academic resources provided through collaborative work with a researcher. Additionally, teachers noted that routine visits by an outside professional served as a stimulant which encouraged the project to progress forward. This is another feature of the dynamic approach that separates it from some of the other school improvement models, and findings from this study indicate that teachers found this element to function as a facilitator for reform. As such, for the cases in this study, the very structure of the dynamic model was in itself supportive of improvement implementation. It is an important consideration because in this study not only did DASI guide the process of improvement, but it additionally provided participating schools with support in the course of reform. In the two subsections that follow, I compare the experience of teachers at Hawthorn, Mulberry and Foxglove Primary with regards to these two factors, and discuss how these elements influenced the improvement journeys of the schools in question.

5.6.2 Provision of Optional Resources

Specificity and degree of prescription with regards to resources, steps and strategies for reform has long been a point of discussion in the field of school improvement. On the one hand, models that provide a high level of specificity, such as Success for All, are found to be very successful in some schools, because these approaches are more likely to be implemented fully and as intended (Harris, & Chrispeels, 2006). The weakness of such prescriptive models for reform is in their lack of malleability and responsiveness to the school context. On the other hand, Datnow, Hubbard and Mehan (2002) found that the most successful school improvement projects were ones that allowed teachers to develop their own strategies so as to address the school needs and context. However, these types of approaches to improvement place far great demands on practitioners in comparison to highly prescriptive models of reform. Not all teachers are willing and able to undertake projects of this magnitude, and scholars report that practitioners do not always know what to make of or how to go about implementing this type of reform (Ainscow, Dyson, Goldrick, & West, 2016).

The DASI framework incorporates elements of both approaches. The dynamic model provides practitioners with a handbook of suggested actions and strategies for every area of the school functioning (Creemers, & Kyriakides, 2012). Schools may either select from existing strategies, or develop their own actions using the DASI model to isolate key topics of focus and the provided strategies as guiding examples. In this study, teachers from Hawthorn, Mulberry and Foxglove Primary spoke favourably of the ability to customize the improvement project to fit the context and needs of their schools. Teachers liked that the dynamic model did provide some resources and strategies because it established a starting point for discussion. Additionally, practitioners at all three schools reported that the ability to select which resources and strategies to implement, supported the development of ownership towards the reform effort.

The presence and provision of external resources was identified as a positive factor because it gave practitioners a clear idea of how to get started on the project. Emily, a teacher at Hawthorn explained,

> "The resources, particularly ones around lunch times, those have had such a huge impact within the school…and having the action plans with some information and examples already on, so that you are not starting with a blank sheet was supportive."

Similarly, James the headteacher of Mulberry Primary appreciated the guidance provided by a structured project (p. 100). Teachers viewed the handbook of resources favourably because it demonstrated how to translate the DASI framework into practical, applicable strategies for reform. Various practitioners across the three cases stated that implementing the dynamic model was straightforward, which is a key concern, as Edgar, a member of the leadership team at Hawthorn Primary, explained "…because if you have something that's put into a school that's difficult and it takes a long time, then I can assure you, it gets put on the back burner quite quickly.". The optional nature of the provided resources was considered by practitioners at Hawthorn, Foxglove and Mulberry Primary, to be another strength of the DASI framework. Charlotte, the headteacher of Hawthorn, stated that the flexibility of DASI implementation suited the school well,

> "You've recommended things, but it's been up to us what we take on board, and it's been lovely because you've given us a few different ideas, so then we could pick and choose which one we know would work with our children. So the things you've provided have been a real support."

Not only does this approach support teachers as they go about the process of reform, but research shows that it promotes successful improvement. Reynolds, Stringfield, and Schaffer, (2006) report that the most successful school improvement outcomes were observed in schools where the design team worked with practitioners to adapt the improvement program to the context of the school. Active practitioner participation in reform is key, because improvement becomes something that teachers are constructing, rather than something that is happening to them. The development of ownership towards the reform effort is key in this regard. Daisy, a deputy headteacher from Foxglove Primary, expressed this theme in her own words, saying,

> "I think one of the reasons it has worked and is working is because, we've manipulated it [the project], to make it work for us, the changes haven't been imposed. We were never told by you 'This is what you must do, you have to do this, you have to do that, you have to do the next thing'. We've talked about it as a school, we discussed it, we've canvassed opinion from the teaching staff, from the dinner ladies, from everybody in the school, and the children, and that's what makes it work. I think because everybody is, I know stakeholders is an old-fashioned word, but everybody has a stake in it working, everybody feels part of it."

Similarly, Olivia, a teacher from Mulberry Primary commented that the dynamic model supported teachers in taking ownership of the improvement process by allowing them to select and apply strategies that were relevant and appropriate for the school,

> "I would say that this project was very much school owned, because we were allowed to develop the project to suit our school, and we didn't have to fit in with a preconceived way of doing it. If we'd have had to use certain resources or had to follow a very strict pattern, we'd have found it really difficult…for us that flexibility in DASI worked really well."

The quotes referenced to in this section were spoken by practitioners from three different schools, but the message is quite analogous throughout. Malleability of DASI was identified as a key supportive feature for reform, because practitioners were able to themselves manage their project. Development of stakeholder ownership towards improvement is much desired because it promotes a more active and meaningful engagement with the initiative (Razzak, 2016). In presence of shared ownership, teachers take equal control of the planning and implementation process, in this way adjusting the program to fit the school. Ownership supports commitment to change in practitioners, because they see themselves and their school in what they are doing (Reynolds, et. al. 2017). At Hawthorn, Mulberry and Foxglove Primary, the design of the DASI model

provided space for practitioners to take an active role throughout the improvement initiative and thereby to develop ownership towards the project, which sustained engagement with the reform. This is an encouraging finding, because it demonstrates that for the schools in this study, this element of the DASI framework fulfilled its function as intended, and aided teachers in the process of project implementation

5.6.3 Research and Advisory Team

Another aspect of the DASI framework identified as a facilitating factor for implementation of the improvement project was professional support from a researcher. As discussed previously, one of the defining characteristics of the dynamic model is that this approach is realized in practice through a partnership between school staff members and one or more researchers affiliated with a university or research centre (Creemers, & Kyriakides, 2012). The advisory and research team is a core aspect of the DASI framework, and an embodiment of the theory driven and evidence based ethos of the model. For each of the schools in the sample I served as the adviser and researcher. The advisory and research team is aptly named because the role of these outside professionals is to provide their academic expertise and advise the school throughout their improvement journey (Creemers, & Kyriakides, 2015). Under DASI, researchers provide schools with hands on support by gathering and analysing data, facilitating action plan development, and presenting resources and theory relevant to the school context. Benefits of inter-professional collaboration have long been noted in research on school improvement. Both the improvement effort and teachers personally benefit from the presence of researcher support (Ross, Tabachnick, & Sterbinsky, 2002; Ainscow, Dyson, Goldrick, & West, 2012). Multiples studies conducted by Houtveen, and Van de Grift (2001, 2012) indicate that researcher facilitation of teacher development programs and inter-professional collaboration in school improvement has a discernible positive impact at both the school level and the teacher level. Rice (2002) found that university-school partnerships in school improvement allow for the development of a balanced approach to reform that is equally based on theory and practical knowledge. These research findings further emphasise that key features of the dynamic model have been developed based on existing knowledge and proven techniques.

Within this study, teachers at Hawthorn Primary, Foxglove Primary and Mulberry Primary all perceived inter-professional collaboration to have been a factor that facilitated their efforts at improvement. At Hawthorn Primary, teachers felt professional support

provided the school with a fresh pair of eyes and ideas. Staff members appreciated being exposed to a new perspective and introduced to a different way of engaging in improvement (Amelia, Hawthorn Primary, p. 89). This is in line with prior research on professional support of teachers in school improvement projects, which indicates that teacher-researcher collaboration impacts teacher understanding, skills and attitudes (Kuijpers, Houtveen, & van de Grift, 2018). Similarly, Houtveen (1990) found that guidance in the improvement implementation process by an outside professional positively correlated with diversification of approaches utilized by teachers for reform (as cited in Kuijpers, Houtveen and van de Grift, 2018). Teachers at Foxglove Primary similarly appreciated exposure to new resources and new ideas. Daisy, a deputy headteacher at Foxglove Primary discussed the closed nature of schools, saying in particular "…we close the doors, bolt them, and then you just get on with it". The deputy and her peers at Foxglove Primary further went on to comment that the strategies and guidance provided by me in the role of adviser and researcher supported their improvement effort and from their perspective bolstered the outcomes seen by the school. The closed nature of schools has long been discussed by scholars, and Hiebert, Gallimore and Stigler, (2002) emphasise the need to reframe the prevailing view that teaching is a personal and private activity and normalize inter-professional collaboration in education and in school improvement. At both Hawthorn Primary and Foxglove Primary, professional facilitation exposed staff to new approaches, and supported teachers in examining and refining existing practices in their chosen area of improvement.

Professional support also served as a means of accountability and source of motivation for the schools that took part in this study. Members of staff at Hawthorn Primary, Foxglove Primary and Mulberry Primary specifically mentioned that regular visits by a professional facilitator helped to keep the project active and moving forward. Molly, the headteacher of Foxglove felt that regularly scheduled meetings maintained active engagement in staff members (p. 136). The headteacher of Mulberry Primary, James shared similar thoughts, noting that my visits helped to keep the school on track and encouraged regular reflection on what had been accomplished and what was yet to be done (p. 101). Staff at Hawthorn Primary shared like perceptions; Mia, a teacher, explained that anticipation of an upcoming visit kept the project current (p. 89). This phenomenon has been observed and recorded in prior research on school improvement. Ainscow, Dyson, Goldrick, and West, (2012) found that in researcher facilitated improvement projects, the presence of outside professionals helped not only to keep the

school on track but also supported staff in maintaining focus on key issues of the reform effort. In my sample, the three aforementioned schools considered this aspect of professional facilitation to be a positive factor that supported their improvement effort.

Existing literature on researcher-teacher partnerships in the realm of school improvement has also found that inter-professional tensions were common and prevented well developed collaboration (Groundwater-Smith, & Dadds, 2004). Similar findings were reported by Deppeler (2006) who discussed the many roadblocks that slow development of fulfilling partnerships between teachers and professional facilitators. None of the sites in this study discussed these issues, and indeed, Hawthorn Primary, Mulberry Primary and Foxglove Primary identified teacher-researcher collaboration to be a point of support. Although Primrose Primary did not isolate professional facilitation as a supportive factor, staff also did not indicate this factor to be an adverse one.

5.7 School Culture and School Improvement

In addition to the barriers and supports discussed above, there were a further three factors that had a significant influence over how the improvement project was implemented: school culture, buy-in and teacher communication and collaboration. These factors are discussed together in a separate section, because school culture appeared to have a marked impact on how the other two factors functioned in the reform effort. School culture is often difficult to assess objectively because the observer cannot help but interpret the school's routines, and traditions through the lens of his own beliefs and experiences (Sarason, 1996). This was a key concern for me in the writing of this subchapter as having worked in schools, and experienced various school cultures firsthand, I possess my own values and assumptions on this topic. To address this threat to validity, I took the time to reflect on my beliefs and made every effort to identify existing biases before I proceeded. Additionally, this section refers back to the interview data at every opportunity, relying on participant statements to ground the findings. The following three sections will focus heavily on the experience of teachers at Hawthorn Primary and Primrose Primary, because these two cases provide opposing narratives. The school culture at Hawthorn Primary was one that appeared to embrace change, and allowed for the factors of teacher buy-in, and communication and collaboration to be harnessed as facilitators for the improvement effort. The opposite seemed true at Primrose Primary, where the existing school culture worked against the reform and lack of buy-in and teacher collaboration and communication became barriers to the initiative. The

existing context and culture of the schools seemed to have significant influence over process of improvement in each case.

5.7.1 School Culture

Although every school in the sample followed the same framework, and focused on similar areas for improvement, there were obvious differences in the projects that were implemented and the outcomes observed in the four cases. Outside of the specific factors that functioned as barriers or facilitators for the effort, school culture seemed to set the overarching tone for the improvement journey of each school. School culture is a broad concept, which encompasses the rituals, traditions, beliefs, values and perspectives held by the stakeholders associated with a particular school (Hinde, 2004). The culture of a school develops overtime, and comes to be self-reinforcing, wherein the actions of school members are guided by the cultural norms of the school, which further perpetuates the existing culture (Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). Many variables interact to shape school culture, such as the local governance structures, the neighbourhood within which the school is located, and the staff and students that attend the school, just to name a few.

School culture has been found to have significant influence over a wide range of factors, including student achievement, and teacher job satisfaction (Wang et. al., 1997; Gordon, & Patterson, 2008). Research in the field of educational effectiveness and school improvement has shown that school culture mediates how schools react when faced with the prospect of change (Gordon, 2002; Datnow, Hubbard, & Mehan, 2005). School culture may influence how much time is invested in the reform, how authentically the program is followed, and whether change is embraced or rejected (Hinde, 2004). The culture of a school can work to support the improvement effort, or work against all attempts at reform. In this section I will discuss how organizational culture at Hawthorn Primary and Primrose Primary interacted with the improvement project at each school. In these two cases, the influence of school culture was evident in how the school leadership approached reform, in teacher predisposition towards the project, and how the improvement project was actualized in practice.

Headteachers, and leadership personnel more broadly, play a significant role in shaping school culture, because regardless of other cultural influences, teachers take guidance from these individuals with regards to pedagogy, professional conduct and countless other variables pertaining to their job, both minute and overarching (Hinde,

2004; Fink, & Resnick, 2001). Schools that are adaptable and successfully weather periods of stress have headteachers that work collaboratively with staff, provide support structures, and consistently promote a shared vision for the school (Fullan, 2003; Leithwood et al. 2004). At Hawthorn Primary, the headteacher, Charlotte, was receptive to staff input on all decisions that affected the staff and school. When asked to discuss how Hawthorn Primary came to participate in the DASI project, teachers and the leadership team all expressed that it was a joint decision made together during a staff meeting. Charlotte, the headteacher reflected "I did say to them 'I don't really want to go ahead with something, unless you're really onboard', but they were all for it, and thought it was a great idea, so everybody was really involved in the decision". Teachers provided similar replies to this question, with Mia commenting, "The headteacher brought it to us at a staff meeting, and gave us the outline of what it was all about, and we decided collectively that this was something that we'd all do". When asked to discuss why they supported the decision to participate in the project, Amelia explained that she trusted the school leadership, "I know the senior leadership team are very strong, and the things that they choose to try are based on very sound evidence and judgement". The culture at Hawthorn Primary was receptive to change; teachers were open to new ideas and willing to try new things. There was wide-spread staff support for the improvement project, and teachers were particularly motivated to engage with the areas that were chosen as the focus for reform (Abigail, p. 88; Amelia, p. 88; Evelyn, p. 80). With regards to project implementation, teachers spoke of high engagement with the reform effort, and the goals set out in the action plan were reported to be realized in practice (Emily, p. 80; Abigail, p. 79). What is more, staff noted that they enjoyed coming together to work on a common goal (Mia, p. 87; Edgar, p. 80). Change is a stressor to organizations, and adaptability is widely recognized as a vital quality for modern schools (Sarason, 1996). At Hawthorn Primary teachers demonstrated essential characteristics of adaptability: commitment to a shared vision, high motivation, active engagement, and self efficacy. These traits are also frequently identified as essential characteristics of a positive school culture (Fairman, & Clark, 1982; Schweiker-Marra, 1995; Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). Hawthorn Primary successfully navigated the planning and implementation stages of the improvement project, but to be sustained, reforms demand long term investment. Fullan (1991) describes effective principals as those that not only facilitate change but also reinforce the change in school culture both conceptually and logistically. In the course of the year, Charlotte, the headteacher integrated the changes into the school

routines by imbedding the new practices at the policy level (Charlotte, p. 82-83). Additionally, the headteacher reported that the improvement project did not entirely come to an end, but rather integrated into the school culture (Charlotte, p. 83). More than temporarily restructuring day to day practices, staff at Hawthorn Primary embraced new ideas and ways of doing things. At Hawthorn Primary the DASI project was well received, and the existing culture supported teachers in weathering through the changes.

Primrose Primary had a rather different experience with the reform effort. Being a small school, Primrose Primary employed a modest number of staff, and the leadership team consisted solely of the headteacher, Audrey. In the course of her interview, Audrey explained that while her usual style was not authoritarian, the choice to pursue the improvement project was an executive decision rather than a collective one (p. 114). However rarely exhibited, this leadership style may have contributed to the formation of a top heavy power dynamic between the headteacher and her staff. Sarason (1996) notes that successful change requires school leaders to proceed in such a way that staff are supported in developing a sense of ownership over the change goals and process. In their interviews teachers at Primrose Primary relayed that they did not feel that the culture of the school invited shared decision making when it came to the reform (Eleanor, p. 114). Leithwood et al. (2001) emphasise that school principals must be aware of and in tune with the school culture prior to initiating change, for a misalignment of priorities between staff and leadership will result in a lack of shared vision. A shared sense of what is important is one of the key traits of a positive and functional school culture (Peterson, & Deal, 1998). While there were areas on which the staff at Primrose Primary held shared beliefs, these common values were not ones that appeared to embrace change. The school culture at Primrose established the common understanding that the school was already effective, as expressed by Lily, "The behaviour is very good, and personal and social care in the school is very good…so we didn't really have that far to go" and at most there was only room for tweaks "…we went down the route of behaviour because it could be tweaked.." as discussed by Claire, and the headteacher, Audrey "Actually we weren't at a very low base, so, we were looking for tweaks…". Thus, when the headteacher decided to undertake a school improvement project, there was a lack of a shared vision in the school as to why it was necessary. As Eleanor explained "…we didn't really understand why we're doing it, it was just something else to think about…we couldn't see where we were going". Schools that demonstrate the ability to adapt, have leaders who engage purposefully with staff to inspire in them the belief in the value of change, and a desire to

work towards a clear goal (Fullan, 2003). Staff at Primrose Primary lacked a shared vision for change and a commitment towards a common end goal, which may have contributed to the selection of a topic for reform that the teaching staff was not truly interested in pursuing (Claire, p. 109). Consequentially, staff support for the improvement effort was low, as was their engagement with the process, a fact that was recognized by the teachers at Primrose who described the project being implemented as small (Lily, p.111; Anna, p. 112). To grow a school culture that embraces reform, headteachers must tirelessly support the changes being implemented, both ideologically, and practically (Hollingworth, Olsen, Asikin-Garmager, & Winn, 2018). To maintain staff efficacy in the value of the work being done, leaders need to cheerlead the effort, and take active part in the process themselves by making organizational arrangements, monitoring and evaluating the project. At Primrose Primary, Audrey, the headteacher seemed to lose efficacy in the project (p. 111-112) and without leadership support so did the teachers. The project was wrapped up quickly thereafter, having only made temporary procedural changes at the school level. The established school culture at Primrose Primary did not appear to stress the value of change and improvement, but did reinforce the narrative of the school as an already effective entity. The short lived DASI project went against the grain of the shared school values and so received little support. Upon the conclusion of the project teachers at Primrose returned to their familiar ways of doing things, as those were deemed to be already effective. The culture of Primrose Primary functioned as a barrier to the reform effort, and the underwhelming outcome of the improvement project further supported the existing perceptions held by the school staff.

Gordon and Patterson (2008) argue that it is the established cultural beliefs and values at the school that globally influence how improvement initiatives are implemented. School cultures may embrace and facilitate change, or reject and hinder attempts at reform (Schweiker-Marra, 1995). The improvement projects implemented at Hawthorn Primary and Primrose Primary seemed to have been affected at every stage by the respective cultures of these two schools. What is more, existing school culture also appeared to interact with and influence how the factors of buy-in and teacher communication and collaboration exhibited in relation to the improvement effort. In the two sections that follow, I will discuss how these factors functioned in the reform effort, and locate the effect of school culture on the capacity in which they performed.

5.7.2 Buy-in

Whereas early research on teacher participation in school improvement focused heavily on teacher resistance, more current research has begun to consider reform from the perspective of practitioners. There is a growing body of work exploring teacher motivation, engagement and buy-in, in relation to school improvement and reform (Datnow, & Castellano, 2000; Turnbull, 2002). Early efforts indicate a strong likelihood of an existing relationship between teacher buy-in and success of school improvement initiatives. Teacher perceptions of reform influence how they approach implementation, thus acquiring teacher buy-in may lead to a more authentic adaptation of the improvement initiative (Feuerborn & Chinn, 2012). Teacher buy-in incorporates a variety of factors within itself, and definitions of this concept vary scholar to scholar. Generally, teachers who buy-in into a project, accept the improvement model, are personally motivated to engage in the project, committed to making lasting changes, and believe they are capable of applying the model (Turnbull, 2002; Silin, & Schwartz, 2003; Yoon, 2016). Teacher buy-in is thought to be influenced by a wide range of factors related to the teacher, the school and the improvement model itself. At the teacher level, prior experience with school improvement, and teacher efficacy can both influence perceptions towards future endeavours (Yoon, 2016). At the school level, leadership, and the school culture are thought to carry significant influence over teacher buy-in. Finally, the goodness of fit between the model and the school practices, and teacher's own beliefs can also impact teacher buy in (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006).

Teacher buy-in presented at various levels in every single case of this study, but the effect of this factor on the improvement effort was quite pronounced at Hawthorn Primary and Primrose Primary. In this section, I compare these contrasting cases and explore the causes behind the variable levels of buy-in, and the impact of buy-in on these schools' respective improvement journeys. Teacher buy-in appeared to have a strong influence over how the improvement project was implemented at both schools. At Hawthorn Primary, teachers reported very high levels of buy-in for both the project as a whole and specifically the areas selected for improvement; practitioners at this school identified buy-in to be a supportive element in their journey. At Primrose Primary, however, teachers reported a lack of buy-in for both the reform effort and the topic of the endeavour, citing this factor to be a challenge to their experience with improvement. While a variety of factors had some level of influence on teacher buy-in, leadership and

the topic of improvement appeared to have the most striking impact on buy-in and I focus the proceeding comparison largely around these themes.

In the course of the interviews, all teachers at Hawthorn Primary expressed buy-in for the improvement project, and additionally found it to be a facilitating factor for the implementation of the initiative. Teachers linked buy-in to supportive leadership and the areas selected for improvement. Both of these themes have come up in prior research on teacher buy-in, especially so the effect of school leaders. Headteachers are believed to both directly and indirectly influence how teachers perceive and interact with school reform (Spillane, Halverson, & Diamond, 2004). Headteachers have a significant role to play in establishing the school culture (Hargreaves, 1995). Effective leaders are well in-tune with the culture of the school, and responsive to the needs of the staff. Teachers are positively predisposed towards change in a culture where they feel heard and their needs are met by the headteacher (Hinde, 2004). What is more, leadership support for particular initiatives or models has been observed to enhance teacher buy-in (Silin & Schwartz, 2003). This appeared to hold true for teachers at Hawthorn Primary. Charlotte, the headteacher of Hawthorn, made the decision to engage with the DASI project only after canvassing opinion from the teachers. Datnow and Castellano (2000) note that teachers express higher buy-in for improvement initiatives when they perceive school leadership to support the model. This was evident in the case of Hawthorn Primary, wherein teachers trusted their leadership team, and expressed early buy-in for DASI, as the result of their headteacher's support for the model. Furthermore, the culture at Hawthorn Primary was one generally positively predisposed to improvement initiatives as a whole; Isabel summarized the school's approach to reform by stating simply "It is beneficial to us all. Anything that benefits us all is worth doing". Diamond, Randolph, and Spillane, (2004) emphasise that teacher beliefs and practices are heavily influenced by the school environment, and it is the headteachers who have significant sway over the development of the school culture. At Hawthorn Primary, the school leadership team appeared to have successfully shaped an environment conducive to improvement, which supported practitioner buy-in for incoming projects.

Another factor that made a significant contribution to the development of teacher buy-in at Hawthorn Primary was the area selected for improvement. Staff members selected two areas for improvement: teacher collaboration and student behaviour outside the classroom. At Hawthorn Primary, student behaviour outside the classroom was an area of the school functioning that was known to require improvement and teachers were

pleased to see that the questionnaire similarly identified this area. Not only did every single teacher express support for pursuit of improvement in this area, staff members were excited to work in this direction (Abigail, p. 88). At Hawthorn Primary, teachers were in consensus that improvement was needed and had the desire for change to occur. Taylor, Pearson, Peterson, and Rodriguez, (2003) emphasise that these are key requirements for successful improvement. Teachers that buy-in to the improvement being undertaken are committed to making changes to their practice, and work diligently to realise the objectives of the reform (Silin, & Schwartz, 2003). This was reflected in the experience of teachers at Hawthorn Primary. Staff members worked together to implement an extensive improvement project, making changes to both policy and practice. Datnow, and Castellano, (2000) suggest teachers with high buy-in are more willing to complete extra work, which may positively impact on the degree of improvement observed in the reform. This appeared to be true for teachers at Hawthorn Primary who, at the conclusion of the improvement initiative, were pleased with their work and perceived there to be discernible improvement in both areas of focus. For Hawthorn Primary buy-in facilitated implementation of the dynamic model, which may have positively reflected in the outcomes observed at the conclusion of the year.

The experience of teachers at Primrose Primary serves as a direct contrast to the previous case. During one-on-one interviews at the end of their journey, teachers at Primrose shared their perspectives on the improvement initiative and on their participation within it. I had the opportunity to interview every single member of the teaching and leadership team at Primrose Primary, and all of the teachers shared similar reflections on the improvement effort undertaken by their school. The key theme and finding for Primrose was the lack of teacher buy-in for the improvement initiative. None of the teachers had 'bought-in' at the start of the initiative, and that remained constant throughout the entire year of project implementation. The lack of teacher buy-in was rooted in two factors. First, teachers had not been consulted by the headteacher about participation in the project, but rather informed that an external initiative would be taking place. Second, teachers at Primrose Primary did not feel that the topic of improvement was either necessary or relevant for their school. Absence of teacher buy-in presented through low commitment to making long term changes, and reduced engagement with the initiative.

The DASI framework emphasises that staff consensus and teacher voluntary commitment must be established prior to project actualization (Antoniou, Kyriakides, &

Creemers, 2015). Teacher agreement with the aims and objectives of the improvement effort is an integral part of the DASI philosophy. Staff consensus is being incorporated into a growing number of school improvement models because there is increasing evidence that teacher resistance may originate from leadership imposed reform (Stinson, 2009). At Primrose Primary, the decision to undertake the project was made solely by the headteacher, Audrey. Teachers were neither consulted, nor fully briefed on the dynamic model prior to the introductory staff meeting devoted to the project (Audrey, p. 114). Although I discussed the importance of voluntary participation during our first encounter, it is likely that the culture of the school did not provide teachers with room to bring up concerns about the reform or remove themselves from it due to the expectations of the headteacher. When asked to reflect back on Primrose's decision to engage with the dynamic model, Lily stated "we just went along with it, really". This is a far cry from the willing participation and commitment to common objectives desired by the DASI framework, and suggests a culture of disengaged compliance. School improvement necessitates teachers to make changes to their beliefs and practices, and oftentimes, reform challenges core beliefs held by teachers (Silin & Schwartz, 2003). To engage in change authentically, teachers must feel the need for improvement and have the will to participate in the process (Yoon, 2016). Conversely, at Primrose Primary, Eleanor commented that "we didn't really understand why we're doing it", and other teachers echoed similar sentiments. Thus, teachers had no buy-in for the initiative because they had no hand in electing to undertake the reform, and moreover did not see a need for it to occur at all. Teachers in schools with closed off, compliant or resistant cultures, oppose change, fear risk taking, and reject ideas coming into the school from outside sources (Hinde, 2004). Teachers at Primrose Primary, appeared to have little control over what projects entered the school, and this approach did not instill in the school a culture that embraced new ideas. Teacher discontent was not expressed or even suggested to me by any of the staff members up until the interviews. This is not a unique case, and a similar experience has been reported by Stinson (2009). During a yearlong project in Singapore, Stinson's (2009) sample of teachers appeared willing and keen to engage in a drama based teacher development project, whereas in truth, they were quite resistant to the endeavour because the initiative was imposed on them by the principal. Just as I found in this study, Stinson (2009) too concluded "while the research team made it clear that we were asking them to participate voluntarily, opting out was not possible within this school context" (p. 237). In the case of Primrose Primary teachers were removed from the

selection process and did not have a chance to develop buy-in for the improvement initiative from the outset.

Another factor that contributed to the absence of teacher buy-in, was the mismatch between the selected area of improvement and teacher perceptions of areas requiring improvement. Primrose Primary elected to pursue improvement in student behaviour outside the classroom, basing their selection on the results of the teacher questionnaire. However, during the interviews, teachers disclosed that they did not believe this area of the school functioning required improvement. Every single one of the teachers emphasised that student behaviour was good and they did not understand how they came to select this area (Lily, p. 109; Eleanor, p. 109). I will reiterate once more that these perspectives were not voiced at the moment of selection. Berman and McLaughlin (1978) consider the mobilization point of improvement to be key to the outcomes of reform. The scholars identify this as the point when plans are formed and believe decisions made in this period have long reaching consequences for the effects observed as the result of the improvement initiative. For Primrose Primary, selection of student behaviour outside the classroom was one of those key choices that had significant consequences for their improvement journey and ultimate outcome of the project. As discussed above, teacher buy-in is important because it exhibits in commitment to changes and engagement with the improvement strategies being undertaken; without commitment and active participation little outcomes are to be expected (Silin, & Schwartz, 2003). After all, teachers cannot authentically imbed that which they do not support or believe in (Fullan, 1999). In her study, Stinson, (2009) noted that though her sample of teachers seemed committed, they contributed little to the project, and frequently located it last in their list of responsibilities. Similarly, Grigg, Kelly, Gamoran, and Borman, (2013) found their science based intervention did not succeed as expected because teachers did not adhere to the program components. In the case of Primrose Primary, I too found that the lack of teacher buy-in manifested in the development and implementation of a small project that required little time investment from the participants. At the conclusion of the improvement initiative, teachers felt that there was little progress in student behaviour outside the classroom. Thus, in the case of Primrose Primary, buy-in was a significant challenge to implementation of the dynamic model, which ultimately had a negative impact on the outcomes observed at the conclusion of the reform.

A growing number of school improvement models establish teacher consensus and commitment as a requisite for reform to take place (Datnow, & Castellano 2000;

Creemers, & Kyriakides, 2010). This has come about as a result of studies that drew attention to the importance of teacher buy-in for the success of the improvement effort (Stinson, 2009; Silin & Schwartz, 2003). In this study, buy-in was a factor of particular influence in two schools, Hawthorn Primary and Primrose Primary. In these two cases, buy-in served, respectfully, as a facilitator and as a barrier to the reform effort; the impact of this factor was evident in how teachers evaluated the success of the initiative at both schools. The reason why buy-in served such different roles in these schools can be traced to the schools' cultures, and specifically the role of the school leaders. At Hawthorn Primary the school culture was one that welcomed change and the headteacher sought and acquired buy-in for the initiative. However at Primrose Primary, the headteacher did not consistently consult her staff regarding new projects, which led to a school culture in which teachers were overtly compliant, but quietly resistant to change. At Primrose Primary, buy-in was not harnessed as a facilitator, indeed not acquired at the outset of the project at all, and the absence of it became a significant barrier to the improvement effort.

5.7.3 Teacher Collaboration and Communication

Teacher collaboration and communication was perceived by staff at Hawthorn, Mulberry and Primrose Primary to have had a perceptible impact on the implementation of the DASI project. Although some literature separates teacher communication and teacher collaboration into two separate factors, I followed the example of Berebitsky, Goddard, and Carlisle (2014) and grouped these themes together, because I found them to be too intimately entwined to detach into different subsections. Communication has been noted to be an essential aspect of effective collaboration, after all, collaboration requires much planning, discussion and problem solving – all achieved through quality communication (De Nobile, 2017). Teacher communication and collaboration have long been studied in the field of school improvement, and literature indicates that these factors impact student achievement, both separately and jointly. In the sphere of school improvement, Goddard, Goddard, and Tschannen-Moran (2007) found teacher collaboration to be related to student outcomes in mathematics and reading. Teacher communication has similarly been seen to impact student outcomes in reading; pupil achievement is higher in schools that exhibit frequent and effective teacher communication (Taylor, Pearson, Clark, & Walpole, 2000). In a study that examined teacher collaboration and communication as one, Berebitsky, Goddard, and Carlisle (2014) found high functioning in these factors to be essential for improvement of schools

facing challenging circumstances. Within this study, teacher collaboration and communication was identified as a facilitator for improvement in some schools, and a barrier to it in others. Teachers at Hawthorn Primary felt that peer support and school culture aided their engagement with reform. Conversely, practitioners at Mulberry and Primrose Primary perceived poor communication and collaboration between staff members to have had a negative influence over their improvement efforts.

At Hawthorn Primary, teacher collaboration and communication featured in various roles throughout the course of the reform effort. Outside of teacher collaboration and communication as a factor of influence over the school reform, staff members at Hawthorn also selected teacher collaboration as one of their two areas for improvement. The results of the teacher questionnaire indicated that staff members at Hawthorn Primary perceived this area of the school functioning to be well developed. However, the leadership team suggested that the school allocate this area additional attention, and teachers supported this proposal. Hence, in addition to measures taken to improve student behaviour outside the classroom, the school also pursued a targeted improvement effort towards collaboration. This decision was made jointly by the staff members, and that in itself was also a collaborative task and an example of effective communication. Egodawatte, McDougall, and Stoilescu, (2011) emphasise that democratic decision making is key in a collaborative relationship. By engaging in a democratic vote regarding the decision to pursuit the DASI project, and additionally in the selection of areas for improvement, the leadership team at Hawthorn Primary, further emphasised the importance of working together as a school, and encouraged the growth of a collaborative environment. Effective and high performing schools are found to be headed by headteachers who develop a collaborative environment wherein teachers, teaching assistants and the leadership team work together to make decisions and tackle issues (Heck, Larsen, & Marcoulides, 1990). At Hawthorn Primary, the headteacher was committed to developing a school culture that was open to teacher collaboration, and invested time and effort into this pursuit. Thus, even prior to undertaking the DASI project, teachers at Hawthorn were a part of an environment which nurtured collaboration and communication. Amelia described the school culture in the following way

> "It's very positive, but that is how we work here, you very seldom get any negativity about anything we decide to do as a school. If we go for it, we go for it, and everybody is on board, and I think that's a really big success of the school. If there's anything we don't feel is working, there

> is also a forum, and opportunities for saying 'I am not sure about this' and you know you will be listened to."

These same communication and collaborative practices were applied by teachers to the DASI project. In implementing strategies for the dynamic model, teachers reported that the school staff at all levels worked together to realize the project, and this supported the reform effort (Mia, p. 86). In their description of high functioning teacher collaboration, Woodland, Kang Lee and Randall (2013), discuss the importance of dialogue, decision making, action taking and evaluation. Staff members at Hawthorn Primary successfully navigated dialogue and decision making at the outset, and throughout, the improvement project. For the latter factors of effective collaboration, Woodland, Kang Lee and Randall (2013), explicate that teachers must work together to implement the strategies that were planned as intended, and furthermore, routinely evaluate the effectiveness of these strategies in an organized manner. With regards to action taking, teachers at Hawthorn Primary, reported that they fulfilled their action plan strategies and did so by working collaboratively. As part of their collaborative effort, teachers took part in co-teaching, and coaching. To increase her own knowledge of ICT, Isabel observed a teacher who specialized in the area, whereas Abigail worked with Emily to set up a joint science day for their students (p. 79). Peer coaching and peer teaching are particularly strong strategies in collaborative work, because they foster the development of new skills through non-threatening colleague observation and feedback (Egodawatte, McDougall, & Stoilescu, 2011). Although this approach to cooperation sounds commonplace, it is known to be underutilized in schools because it requires an environment of trust and disengagement from the belief that teaching is private, which is still held by many practitioners (Little, 1990). At Hawthorn Primary, teachers voluntarily engaged with high impact collaborative approaches because the established culture was supportive of this pursuit. What is more, teacher feedback to participation in these strategies was positive (Evelyn, p. 80). Evaluation, the last factor of effective collaboration identified by Woodland, Kang Lee and Randall (2013), was similarly put in place at Hawthorn for the benefit of the improvement effort. Edgar (p. 80), Mia (p. 86) and Abigail (p. 86) all described staff members at Hawthorn Primary coming together routinely throughout the year to reflect on the improvement process and assess their progress. Teacher communication and collaboration played a vital role in supporting the improvement project undertaken by Hawthorn Primary. Although the school had previously established effective collaborative practices, over the course of the initiative teachers further

improved upon them. At the end of the year, teachers at Hawthorn Primary perceived their improvement effort to have been successful and attributed that success in no small part to effective teacher collaboration and communication practices in the school.

Teachers at Primrose Primary found communication and collaboration to have been a barrier to their improvement journey. The experience of teachers at Primrose Primary directly contrasts that of their counterparts at Hawthorn Primary. Where Hawthorn Primary had an established culture amenable towards collaboration, staff at Primrose Primary identified pre-existing challenges in communication. The DASI project encountered this barrier right at the outset of the initiative. Friend and Cook (1990) establish voluntariness to be the most essential characteristic for collaboration, stating simply "…school professionals coerced into joint activities with colleagues will not be collaborating" (p. 74). The experience of teachers at Primrose Primary illustrates this point in practice. Audrey, the headteacher of Primrose, made the decision to engage in the DASI project without consulting her staff. During the end of year interview, teachers disclosed to me that they did not understand the need for the DASI project, and went along with the initiative only because they were asked to do so by the headteacher. Effective headteachers strive to build a culture of trust and develop positive relationships with their staff; they provide reasons for pursuing reform and seek staff input before making major decisions (Fullan, 2003; Price, 2012). Louis et. al. (2010) report that improvement is more likely to be sustained in a school culture that is committed to collective decision-making. Actions taken by the headteacher of Primrose Primary with regards to initiating the reform effort did not cultivate a culture of open communication and collaboration at the school. Communication and collaboration barriers proceeded to impact other aspect of the reform effort.

Teachers at Primrose also did not feel that the topic chosen for improvement was one that required attention. Woodland, Kang Lee and Randall (2013) note that low functioning collaboration supports communication that only reaffirms existing practices and perspectives, whereas high level collaboration allows for disclosure of differences in opinion and resolution thereof. At Primrose Primary, teachers appeared to engage in low level communication because although they disagreed with the direction taken by their conversation, they did not voice dissent at the time of topic selection. De Nobile (2017) posits that communication occurs between all members of staff in a school and is moderated by complexity, quality, quantity, receptiveness and responsiveness of the participants. Staff members at Primrose were neither receptive nor responsive in their

communication practices as these pertained to the DASI initiative. This was a barrier to collaborative implementation of the reform. It is likely that the school culture of disengaged compliance contributed to the communication and collaboration challenges that shadowed the reform effort. Few traits of high functioning teacher collaboration were evident at Primrose in the course of project implementation. Dialogue and decision making were neither open nor democratic (Woodland, Kang Lee, & Randall, 2013). Collaborative action taking was only enacted at the surface level and did not become ingrained in the school culture. Berebitsky, Goddard, and Carlisle (2014) emphasise that authentic change requires more than following directions; teachers must be motivated to change and must work together to uncover what is needed and what works in their school. Teachers at Primrose Primary self-described their improvement project as small, and all members of staff admitted that the reform could have been more extensive (Lily, p. 111; Anna, p. 112). Furthermore, collaborative work on the DASI project was limited and teachers exchanged little information on the initiative outside of formal staff meetings. Lily stated that teachers implemented their portions of the DASI project individually and collaborative work occurred almost exclusively during planning sessions (p. 115). Claire, reflected that other teachers were likely unaware of what took place during Friday assemblies because it was outside of their scope of responsibility (p. 115).

There are also signs that low levels of teacher collaboration in the DASI project reflected the existing dynamic at the school. The school culture at Primrose Primary was not one that supported change. Both the headteacher, and teachers stated the belief that Primrose Primary was a successful school, which did not require broad improvement but rather tweaks. A desire to improve, and an environment that encourages teachers to try new approaches is vital for sustained reform (Berebitsky, Goddard, & Carlisle, 2014). Even effective schools must continue to pursue improvement, because effectiveness is not a stable constant in the education setting (Creemers, & Kyriakides, 2012). Although Primrose Primary regularly took part in improvement initiatives, the school staff did not carry a mindset that supported authentic engagement with reform. This environment was not conducive for the development of high functioning teacher communication and collaboration on improvement initiatives. Teachers at Primrose Primary found communication and collaboration to have been a challenge in the implementation of the DASI project. As in Hawthorn, the existing school culture at Primrose had an influence on the collaborative practices that were applied to the reform effort. At the conclusion of the intervention, staff members did not observe significant improvement in student

behaviour outside the classroom, and low level communication and collaboration practices appeared to contribute to this outcome.

Collaboration and communication similarly proved to be a barrier to the implementation of the DASI project at Mulberry Primary. Challenges in communication and collaboration were not established, as at Primrose Primary, but had rather developed over the course of the 2015-2016 school year at this site. The same year Mulberry Primary undertook the DASI project, the school had also welcomed two newly qualified teachers, Emma and Grace. In the interviews at the end of the year, both of the NQTs had expressed that they struggled to engage in the reform, and felt that communication and collaboration practices at the school required improvement (Emma, p. 98; Grace, p. 98). Open, reciprocal communication is important for teachers who are at the beginning of their careers (Dannels, 2014). A supportive environment is vital for job satisfaction and job commitment of new teachers. However, similarly to Emma and Grace, NQTs have been found to experience few opportunities for professional development upon entering their first school, and for these staff members tense relationships are more common than collaborative partnerships (Cherubini, 2009). Friend and Cook (1990) note that development of common language and communication as the backbones of community development and from the perspective of the NQTs, it is this that was missing at Mulberry Primary. Emma and Grace perceived to have received little information about the DASI initiative over the course of the project. Communication underload, as experienced by Emma and Grace, should not be overlooked as a peripheral issue because it has been seen to negatively impact efficacy (Dannels, 2014). In addition to finding low communication to be a challenge to their participation in the DASI project, Emma and Grace identified that the type of communication they did receive, did not reflect a collaborative approach to reform.

In addition to variations in the volume of communication, De Nobile (2017) suggests that school communication differs by type. According to the scholar, practitioners in schools regularly engage in supportive, directive, cultural, and democratic communication patterns. Supportive, cultural and democratic ways of communicating promote the development of collaborative practices and environment (De Nobile, 2017). The primary goal of directive communication is to transmitting instructions; while it is a necessary form of communication, it does not sustain the development of effective collaboration among practitioners. At Hawthorn, the NQTs found themselves to be on the receiving end of directive communication as it pertained to the DASI project. Grace said,

> "There are five teachers, and three of them are on the senior management and two of us aren't so, what initiatives might have been put into place, as a result of this project, by the time those initiatives trickled down to me, they are just directives. I am aware that things have been put into place as the result of DASI, but I am not aware of exactly what was related to that and what was related to something else."

James, the headteacher at Mulberry Primary recognized that communication on the DASI initiative was not always made explicit, explaining

> "We don't set up meetings for 'Oh, today we're talking about the DASI project' you know, we'll be talking about, improving behaviour at lunch time, or improving the systems around play, but you can't really separate that from other things happening in the school."

The NQTs identified this approach to be a hindrance to their involvement with the improvement project, because dearth of communication limited their ability to be authentically engaged with the reform effort. Although Emma and Grace followed directives and implemented strategies related to the DASI project, they did not authentically engage in collaboration with other staff members. Hence, the involvement of these teachers in the improvement project was not exploited to its full capacity, thereby limiting the degree of impact these teachers could have had on the project.

With regards to the key features of collaboration as proposed by Woodland, Kang Lee and Randall (2013), the NQTs were only peripherally involved in action taking, and on the whole experienced little collaborative practice in their experience with the DASI project. From the interviews with James and Olivia it was unclear whether the leadership team and the senior teachers did engage in the project in a more collaborative manner outside of the NQTs. Egodawatte, McDougall, and Stoilescu, (2011) note that in school improvement, existing teams frequently find it difficult to incorporate new teachers, struggling to develop open communication and adjust practices so as to include the new additions. Emma and Grace discussed similar themes, and felt that they were not well integrated into the existing culture of the school. Mulberry Primary made impactful changes to both policy and practice, on the basis of the DASI project, and senior members of staff were pleased with both their effort and the outcomes they observed at the end of the year. However, the school did not approach the reform in a collaborative manner, and the newly qualified teachers on staff felt they contributed little to the reform. Communication and collaboration was a challenge for the improvement effort at Mulberry Primary, though this was not perceived to be so by the senior members on staff.

The significance of teacher collaboration and communication for school improvement has long been noted in literature (Berebitsky, Goddard, & Carlisle, 2014). These factors proved to be influential in this study as well. Of the four cases in this study, teachers at three schools felt that this factor had a discernible impact on their improvement journey. At Hawthorn Primary, teacher communication and collaboration functioned as a supportive factor that facilitated the improvement effort. At Primrose and Mulberry Primary, communication and collaboration served as a barrier to implementation. What is more, the importance of school culture and pre-existing teacher communication and collaboration practices was observed at Hawthorn Primary and Primrose Primary. On the other hand, Mulberry Primary demonstrated that communication and collaboration practices atypical to the established school environment can develop over the course of the year and similarly impact the improvement effort. These findings indicate that as a factor in school improvement, teacher collaboration and communication is not a stable constant but rather a fluctuating element that responds to and is reflective of the school culture and context. This also suggests that it is a factor that is malleable and under the right conditions may be engaged to serve as a facilitator. Whether a barrier or a facilitator, teacher communication and collaboration practices have significant influence over how teachers apply school improvement approaches. The findings of this study indicate that similar to other school improvement models, the implementation of the DASI framework may be affected by teacher communication and collaboration practices.

5.8 Student Behaviour Outside the Classroom

The most prevalent cross-case theme was rather unexpectedly the area of 'student behaviour outside the classroom'. Every single school in the study selected this area of the school functioning as one point of focus for improvement. This factor addresses student behaviour in the periods of time that students are present on school grounds but momentarily outside of class, such as break times between lessons, lunch times and the spells between drop off and pick up. These periods of time carry great significance for primary school pupils (Baines, & Blatchford, 2010). Break times allow children to develop social skills and learn to resolve conflict, as well as have a well-deserved rest from lessons by engaging in enjoyable activities. The school playground also allows children access to play and peer socialization that they may not have outside of school

(Pellegrini, Kato, Blatchford, & Baines, 2002). However, pupil behaviour outside the classroom is an area that is often overlooked until the school begins to experience severe behavioural disturbances, such as fights or bullying (Mulryan-Kyne, 2014).

Concerns around break times are numerous and varied. Most grievances develop on the playground, and acute misbehaviour in the form of bullying has been found to originate in this time period as well (Craig, Pepler, & Atlas, 2000). Some schools identify overcrowding and poorly designed and resourced play areas as the cause of behavioural issues. Others believe wide spread poor behaviour originates from a small number of misbehaving children who are then a catalyst for broader unruly behaviour (Mulryan-Kyne, 2014). Low quality of play and weak engagement have also been cited as a cause of concern for staff who worry children are not getting the most from their break times (Bishop, & Curtis, 2001). Additionally, ability and training of lunch time supervisors is a sensitive topic but one that commonly surfaces in discussions about student behaviour outside of class (Blatchford, 1994). A common complaint raised by teachers is that playground scraps are left unresolved by midday supervisors and make their way into the classroom (Mulryan-Kyne, 2014). The most common side effect of poor behaviour outside the classroom is experienced by teachers, who are required to sacrifice class time to deal with conflicts that originate in the playground and the school hallways. Post-lunch time lessons may also suffer in quality and length as teachers struggle to regain children's attention and re-establish a calm learning environment after rambunctious outdoor play (Blatchford 1989; Mulryan-Kyne, 2014). Pellegrini and Bohn (2005) found pupil experience outside the classroom can impact achievement and attitude towards school. Recent research on bullying and school climate also indicates that school work and overall achievement of students who feel unsafe in school noticeably suffers in the long term (Kochenderfer & Ladd, 1996). Thus, though often overlooked, student behaviour outside the classroom is an area of the school functioning that begets attention because if left unchecked, problems in this area may in time come to negatively impact other aspects of the school functioning.

UK based research suggests that quite a high number of schools routinely struggle with student behaviour at break time (DES, 1989). Nevertheless, I must admit that I was somewhat unsettled that my entire sample of four unrelated schools undertook improvement in this specific area, especially since prior research on the DASI framework shows no comparable trends in other countries. To develop insight into the topic, I asked teachers at every school to share their views on the suitability of the topic selected for

improvement. Teachers and the leadership teams at both Hawthorn Primary and Foxglove Primary unanimously agreed that student behaviour outside the classroom was well suited as a focus of reform for their school. At Mulberry Primary, the leadership team, composed of the headteacher and three senior teachers, perceived the area of student behaviour to have been well suited for improvement at their school, while two newly qualified teachers held alternative opinions. Primrose Primary stood out alone in the sample because both the teachers and the headteacher felt that student behaviour outside the classroom had been the wrong area to have pursued for improvement. When asked what influenced topic selection, teachers across all sites identified the questionnaire to have been be a factor that had a not insignificant impact on their decision process.

Here I make a brief aside to revisit the staff questionnaire. To identify priorities for improvement, the DASI framework provides a means of collecting data on the functioning of various factors in the school via a staff questionnaire. In addition to illuminating potential areas of strength and weakness, the data gained from this instrument supports teachers in establishing dialogue about particular areas. The questionnaire used to collect data for this purpose was developed by Creemers and Kyriakides (2006) and refined over the years (Antoniou, 2009; Creemers, & Kyriakides, 2012). This research instrument was developed on the basis of what existing research has shown to be effective practice; instead of questions, the tool is comprised of statements about actions that occur within the school. The questionnaire asks teachers to indicate to what extent they agree or disagree that the actions listed are realized in the school. If members of staff disagree with the statement, they thus indicate that the action in question rarely if ever occurs in the school. The data collected by the questionnaire allows for factors to be ranked in accordance with their perceived performance, and areas with low scores are identified as suggested priorities for improvement (Creemers, & Kyriakides, 2010). Schools are in no way bound or obliged to undertake any of the advised areas for improvement, the choice is left entirely up to the teachers and the leadership team.

For every school in my sample, student behaviour outside the classroom attained either the lowest or second lowest score on the questionnaire. For Primrose Primary and Mulberry Primary, student behaviour outside the classroom attained the lowest score of all factors, while at Hawthorn Primary and Foxglove Primary, the area took the second lowest rating. The interviews helped to shed light on the reason behind the low rating attained by this area of the school functioning across a diverse range of sites. The cause was quite straightforward – teachers across all four sites did not generally take part in

most of the actions and activities listed in the questionnaire. In England, break times and lunch times are rarely the domain of teachers; these periods of the school day are usually handled by support staff, which includes teaching assistants, dinner ladies and midday supervisors, which was the situation for every one of the schools in the sample. Teachers at Primrose Primary, Mulberry Primary, Hawthorn Primary and Foxglove Primary did not have any duties associated with break time and lunch time routines. For their part, support staff responsible for break time and lunch time supervision generally limit their participation to strictly supervision and conflict resolution as it comes up (Mulryan-Kyne, 2014; Vancil-Leap, 2017). Organization of games, active engagement with pupils and targeted interaction with potentially vulnerable children as advised in the DASI handbook was rarely realized. This insight, alongside the results from the questionnaire set off further discussion about student behaviour outside the classroom within the schools that took part in the study. These conversations took place during the staff meeting dedicated to the selection of areas for improvement. Teachers at Hawthorn Primary, Mulberry Primary, Foxglove Primary, and to a lesser extent at Primrose Primary, identified pockets of undesirable behaviour and recurring challenges surrounding lunch times. Indeed, every school in the sample acknowledged experiencing at least one of the challenges identified in existing literature on student behaviour (Blatchford, 1989; Blatchford, 1994; Kochenderfer, & Ladd, 1996; Pellegrini, & Bohn, 2005; Mulryan-Kyne, 2014). At Hawthorn Primary teachers were concerned with time loss in the post lunch class period, small pockets of conflict breaking out at lunch times and both the quality and quantity of supervision provided by midday support staff. Teachers at Foxglove Primary faced similar issues, and additionally focused on low quality of play and few resources available for play during pupil break time. At Mulberry Primary, quality of play, organization of the lunch time process and loss of class time post lunch were identified as points to be addressed. Even at Primrose Primary teachers discussed problems surrounding isolated incidents of misbehaviour. It were all these considerations in conjunction with the results of the questionnaire that prompted the schools to select student behaviour outside the classroom as the area for improvement. Which is to say that this area was chosen at each site because at the time of selection teachers at their respective schools came to mutually agree that it was an area worth pursuing.

At the end of the school year, during the interviews, I asked teachers whether they still felt that the selected area of improvement was appropriate for their school, or if in hindsight another topic would have been better suited. At Hawthorn Primary and

Foxglove Primary both the teachers and the leadership teams reaffirmed the suitability of their chosen area for improvement. At Mulberry Primary the senior teachers and the leadership team perceived student behaviour outside the classroom to have been the appropriate area for improvement, however, the two newly qualified teachers felt a focus on staff communication and collaboration would have served them better. Opinions at Mulberry Primary were divided at the conclusion of the year, because in the duration of the year a new challenge had developed. As discussed previously, two NQTs joined Mulberry Primary the same year that DASI was implemented. The issues identified by the NQTs at the end of year were not yet established at the time the area of improvement was selected. Thus, I interpret student behaviour outside the classroom to have been an appropriate area of improvement for Mulberry Primary. I do not discredit the perception of the newly qualified teachers, however the challenge identified by these staff members originated over the course of the year and was not one that could have been recognised or addressed by DASI at the commencement of the program. In other words the emergence of a new challenge does not invalidate the suitability of the initial area for improvement. At Primrose Primary both the headteacher and the teaching staff perceived student behaviour outside the classroom to have been the wrong area for improvement at their school. During the end of the year interviews, teachers explained that while student behaviour did need to be tweaked, they did not perceive this area to have been in need of a dedicated reform project. Every teacher on staff at Primrose Primary identified communication and collaboration to be the area of need that would have been better suited for reform. What it more, teachers at Primrose Primary disclosed that they doubted the suitability of student behaviour outside the classroom as the topic for improvement even in the moment it was selected. The causes, ramifications and sequence of events that led to the selection of student behaviour outside the classroom were covered in greater detail in the previous chapter.

To summarize, at the end of the improvement effort, three schools confirmed the suitability of student behaviour outside the classroom for their school, while one identified a lack of fit. What conclusions are to be drawn from this? A number of factors influenced the selection of area for improvement, for the schools in this study. Every school confirmed that the results of the questionnaire had a degree of influence in directing teacher discussion at the staff meeting. However, teachers' own experiences with student behaviour outside the classroom also influenced their decision to support the selection of this area for improvement. Research shows student behaviour outside the

classroom to be routinely overlooked in reform endeavours, even though many English schools suffer recurring problems during break times and lunch times (DES, 1989; Mulryan-Kyne, 2014; Kyriakides, et. al., 2014). For the schools in this study, the dynamic model brought to light an area of the school functioning that had not been recently addressed. The ensuing discussion at each school revealed in teachers both a personal interest in the topic and school wide desire for improvement in this area. In conclusion, although the topical conformity was unusual, the reasons behind the selection made by the schools were straightforward.

Chapter 6: Conclusion

6.1 Overview - Conclusion

In this final chapter, I contemplate the thesis as a whole. I begin with a summary of the findings, wherein I return to the research questions and briefly outline the key themes that emerged from this study. In the following section I discuss the implications of these findings, and the contribution this thesis makes to the field of school improvement. I continue by outlining the limitations that frame the study, and in the penultimate section I suggest several avenues for follow up research. I conclude this chapter and the thesis itself with a few final thoughts.

6.2 Summary of Findings

I set out two interrelated objectives for this thesis. First, I thought it necessary to develop insight into the teacher perspective on the process of implementing the dynamic model, and learn of the challenges and supports practitioners experienced in the course of implementing the reform. Second, I was curious to learn whether practitioners perceived their efforts at reform under the DASI model to have been successful. To address these objectives I developed four research questions which guided the study. In this section I return to the research questions and provide a short overview of the findings for each one.

1. What changes have been made by the schools in their daily routines and school policy on the basis of the dynamic approach to school improvement?

The four schools that participated in the study implemented the dynamic model over the course of a single school year. At the start of the year staff at each of the schools chose an area of focus for improvement, and developed action plans based on strategies provided in the DASI handbook. Participating schools had the freedom to adapt the suggested techniques to better suit their school's context, as well as develop their own strategies for improvement rather than using the provided material. Teachers at Hawthorn Primary chose to focus their reform on two areas of the school functioning: student behaviour outside the classroom and collaboration and interaction between teachers. In addressing student behaviour outside the classroom, teachers at Hawthorn Primary focused on lunch time behaviour. Teachers developed a new lunch time behaviour code, established a peer-monitoring system, and set up a communication book with the lunch time supervisors. Additionally, the leadership team updated the school policy on student behaviour to incorporate these changes. Teachers at Hawthorn also implemented

strategies to improve their functioning in the area of collaboration and interaction between teachers. Over the course of the school year teachers engaged in co-operative teaching during specially planned enterprise days, participated in peer-mentoring, and observed each other teach. School policy on teacher collaboration was not renewed in the course of the project but was set to be updated in the following year.

Mulberry Primary selected student behaviour outside the classroom as the sole area of focus, and concentrated the project on student lunch times. Staff implemented a staggered lunch system for pupils in different years, and provided additional furniture to offer a more pleasant experience for pupils. Additionally, the school hired a sports coach, launched a student buddy system and introduced Tai Chi at the conclusion of the lunch period to help children calm down and prepare themselves to return to class. The headteacher of Mulberry Primary updated the existing school policy on behaviour to reflect the changes that were made in practice.

Teachers at Primrose Primary also selected student behaviour outside the classroom as the area of focus for the improvement initiative. Teachers set up a series of themed assemblies to introduce the concepts of empathy and self-regulation, so as to support children in developing these character traits. Pupils who displayed positive behaviour were rewarded by members of the student council and received recognition during school assemblies. These changes were implemented over the course of one term and then discontinued. The headteacher of Primrose Primary elected not to make any changes to the school policy on the basis of the improvement project.

Foxglove Primary chose a single area of focus for the improvement effort, student behaviour outside the classroom. Teachers worked with students to develop a new behaviour code, and asked student to contribute their own ideas on how to improve lunch times. To improve student lunch times, teachers at Foxglove organized new lunch time zones, resourced these with new toys and games, and spent a part of their own lunch times with the students to support them in the transition. The headteacher of Foxglove Primary reported that changes to the school policy on the basis of the improvement project were not yet made, but the behaviour policy would be reviewed the following year, and new practices would be incorporated into the policy at that point.

Although the schools in this study worked independently from one another, a number of trends can be observed across the cases. All four schools chose to pursue improvement in the area of student behaviour outside the classroom. This decision was reported to be partially motivated by the results of the questionnaire, which gave this

factor the lowest or second lowest rating for all schools. Furthermore, most of the schools elected to focus their improvement effort specifically on student lunch times. During the end of year interviews, teachers across the four schools reported that most of the problem behaviour and students' own complaints originated in this period, and afternoon class time was often disrupted to resolve issues that originated at lunch time. In addressing student behaviour outside the classroom all of the schools selected several strategies from the optional resources provided in the DASI handbook, and some of the schools additionally developed their own approaches. Finally, although all schools were expected to improve their policies alongside the strategies being implemented in practice, only two of the four schools did so in the course of the year.

2. Did teachers perceive their improvement effort under the dynamic model to have been successful?

Perceptions of success differed case by case, and in one instance teacher perceptions of reform success varied within the school. At Hawthorn Primary teachers and members of the leadership team all felt that the improvement effort was successful. Teachers named numerous supports that aided project implementation, and identified few challenges on their journey. At the conclusion of the project, the school had made changes to both practice and school policy, and staff asserted that they observed positive changes in the areas they worked to improve. At Mulberry Primary, the feedback on the project was mixed. Members of the leadership team took point on the improvement project, and were able to discuss in detail the changes that were made and the outcomes that were observed over the life span of the project. These members of staff were satisfied with the reform effort, and considered the project to be a success. On the other hand, the two newly qualified teachers on staff experienced numerous barriers to participation in the improvement project, and in the end of year interviews shared that they struggled to see the outcomes of the initiative. At Primrose Primary, all staff members perceived the improvement project to have been unsuccessful. The reform effort was small in scale and implemented for a limited period of time before being discontinued. School policy was not changed, and teachers went back to their old routines and practices at the conclusion of the initiative. In contrast to other schools, the teachers at Primrose Primary encountered a lot of barriers and struggled to name any facilitators that assisted their journey. At Foxglove Primary, teachers felt that it was too early to judge the success of the improvement initiative. Time and the school context were identified as the barriers

which hindered project implementation, but teachers expected the situation to change in the new school year. Teachers expressed that the project was still in progress, and while there were pockets of success, the school expected to see greater outcomes once the project reached its full potential.

The degree of success perceived by teachers across cases at the conclusion of the improvement journey seemed to be influenced by the amount and severity of challenges and supports identified by the staff at the school in question. Practitioners that reported experiencing significant challenges in the course of reform, perceived their efforts at improvement to have been largely unsuccessful. On the other hand, teachers that identified more facilitators in their journey than challenges, generally considered their efforts at improvement to have been successful.

3. What factors were a challenge or an obstacle to the implementation of the dynamic approach to school improvement?

Teachers in three out of the four schools named time as the top challenge they encountered in the process of implementing the improvement project. Staff at Hawthorn Primary, Mulberry Primary and Foxglove Primary reported working on program components before and after school because they were not provided with additional time in the school day to devote to the improvement project. What is more, teachers in most cases were dividing attention between a number of concurrently running projects, in addition to the responsibilities associated with their teaching duties and the dynamic model. The factor of time is a known obstacle to school improvement, and has been identified in prior studies (Mendenhall, Iachini, & Anderson-Butcher, 2013). Lack of time may hinder fealty to improvement program components and result in missed meetings, and shortened implementation periods (Jošić, Džinović, & Ćirović, 2014). Teachers in this study reported that the lack of time produced some of these same barriers in the course of programme implementation.

A challenge that had not been identified in prior research but proved salient in this study was the impact of support staff. Teachers at Hawthorn Primary and Foxglove Primary reported that lunch time supervisors functioned as a barrier to the process of improvement. Improvement efforts at these schools focused in part on the lunch times, and changes in practice affected the established routines of the lunch time staff. Teachers at Hawthorn and Foxglove reported that lunch time supervisors demonstrated poor commitment to the changes being made, and were generally disengaged from the

improvement effort. However teachers at both schools also reflected that these members of staff were not included in the planning stages of the reform, which may have explained their reaction to the changes being implemented around them.

A further two challenges identified in this study were buy-in and teacher communication and collaboration. Teachers at Primrose Primary and Mulberry Primary found the absence of these factors to hinder their engagement in the improvement effort. The school culture at Primrose and Mulberry influenced how these factors presented in the reform effort. Not only were buy-in and teacher communication and collaboration not harnessed as facilitators, but the lack of buy-in and weak collaboration in the reform became a challenge to the implementation of the improvement effort. Prior research in the field of school improvement has similarly shown that teacher response to reform is to some degree influenced by the school culture (Datnow, Hubbard, & Mehan, 2005). The findings of this study indicate that in implementing the dynamic model, teachers in participating schools did encounter challenges, and the reported challenges were similar to those identified in prior research on other frameworks of improvement. While it is not possible to generalize these findings outside the participating schools, the data encourages further study into the topic for the dynamic model and provides a starting point for future research this direction.

4. What factors had a supportive influence on the implementation of the dynamic approach to school improvement?

Teachers at Hawthorn Primary, Mulberry Primary and Foxglove Primary reported that elements of the DASI framework were supportive to their reform effort. Teachers across these three cases found the provision of optional resources to facilitate the development of the action plans. Teachers and members of the leadership team at Hawthorn, Mulberry and Foxglove stated that suggested strategies established a starting point, while at the same time allowing room to customize the approaches to better suit the context of their schools. Staff across the same three cases also identified the routine presence of an advisory and research member to have facilitated their improvement initiatives. In the end of year interviews, teachers shared that inter-professional collaboration was a source of motivation and accountability; regular visits helped to keep the project going. These findings suggest that for the schools in this study the structure of the dynamic framework facilitated the process of improvement. Although these findings

cannot be generalized outside of the participating schools, it is a concept that would benefit from further inquiry.

The second key finding of this study with regards to facilitators was that, in line with prior research, teachers identified buy-in and teacher collaboration and communication as factors that had a supportive influence on their reform effort. Staff at Hawthorn Primary and Foxglove Primary expressed that buy-in for the improvement project kept them motivated and engaged with the initiative throughout the year. Teacher collaboration and communication was another factor which influenced project actualization favorably at Hawthorn and Foxglove; sharing the workload and the mental strain helped teachers through the challenges that came along with the reform. The findings from this study also appear to indicate that existing school culture in these two cases may have had an influence over the supportive functionality of buy-in and teacher collaboration. Not all of the schools in the sample were able to engage buy-in and teacher collaboration in the supportive capacity, and for some schools in the study these factors became a barrier in the improvement process.

6.3 Implications and Theoretical Contribution

Outcomes of reform efforts vary school to school, even when the same improvement model is followed in every case. Present day educational effectiveness and school improvement research recognizes the importance of accounting for the school context and scholars encourage the development of differentiated approaches to school improvement (Reynolds, et al., 2016). One avenue of research in this direction has looked to the experience of teachers. In particular, studies have begun to examine the challenges and facilitators teachers encounter in the course of implementing reform, seeking to identify if and how these factors influence the outcome of the initiatives (Mendenhall, Iachini, & Anderson-Butcher, 2013). Practitioner experience with school improvement is vital knowledge because it is the teachers that implement reform first hand, and their actions are thought to carry great significance for the outcomes (Ainscow, Dyson, Goldrick, & West, 2016). While the effectiveness of the dynamic model on cognitive and affective outcomes has been studied, teacher perceptions regarding the process of implementing DASI have not been examined in great depth. This thesis endeavoured to make inroads into this topic for the dynamic model.

One of the most prominent findings from this study was that two of the cross-case supportive factors identified by teachers named specifically the built-in features of the

dynamic model. Provision of optional resources, and researcher-practitioner partnerships were identified as facilitators in three of the four schools in the sample. These are key structures within the dynamic framework, ones that separate it from some of other school improvement models. This finding tentatively suggests that DASI as a framework is designed in such a way that it not only provides schools with a model for how to engage in improvement, but also supports teachers in the process of implementation. Significantly more research on this theme is necessary before any conclusions can be reached, but these early findings are worth further consideration.

The most prolific challenges and supports across the four cases were the factors of time, buy-in, and teacher communication and collaboration. Notably, these are also all factors that teachers have identified in prior research on barriers and facilitators that present in school improvement (Knight, 2009; Jošić, Džinović, & Ćirović, 2014). The presence of these themes in this study suggests that application of the DASI framework carries with it some challenges and supports that are commonly encountered in the field of school improvement. Findings from other reform efforts cannot be generalized towards DASI, but the knowledge that a number of challenges and supports experienced by teachers implementing the dynamic model are reasonably similar to what has been identified in existing literature is important to consider as this topic is studied further. It is essential to learn what challenges affect teachers in the course of reform because barriers may inhibit the initiative in a wide variety of ways, whether through teacher disengagement or lack of program fealty (Mendenhall, Iachini, & Anderson-Butcher, 2013). Nesselrodt, Stringfield, and Schaffer, (1997) stress the importance of removing barriers to reform where possible, suggesting that successful improvement is more likely when challenges are fewer. The results of this study indicate that the topic of teacher perceived challenges and supports is relevant to the dynamic model, and should be explored further. Follow up studies on this topic may seek to develop and pilot strategies that would address some of the barriers experienced by practitioners in the course of reform, or design measures to increase the facilitators available to teachers.

An unexpected theme, and barrier for two of the cases were midday supervisors. This challenge has not been identified as a factor in prior research and a review of literature revealed a rather small knowledge base on lunch time supervisors in the field of school improvement. However, scholars have begun to draw attention to teaching assistants and their role in school reform in England (Fricke, et. al., 2017). I believe the findings outlined in this thesis similarly point towards the need to examine and account

for the role of support staff in school improvement. It is possible that these members of staff routinely engage in improvement projects by implementing strategies in partnership with the teachers and otherwise adhering to the changes being put in place across the school. Though they appear to be rarely recognized for their contribution, the role of support staff in school reform may be greater than expected, and their perspectives and experiences should similarly be taken into consideration. The DASI framework could potentially benefit from providing recommendations for the suitable involvement of non-teaching members of staff in school reform.

A key finding that emerged from this study was that the culture of schools appeared to influence the improvement effort both in reception and implementation. Additionally, it was the school culture that to some extent explained why factors were harnessed as facilitators or became barriers to the process of improvement. The influence of school culture was most evident on teacher buy-in to the incoming initiative, and teacher communication and collaboration in the improvement effort. In some schools these were harnessed as facilitators, as in the case of Hawthorn Primary, and in others their absence functioned as a barrier that hindered the process, as at Primrose Primary. Prior research on school culture has found it to be a factor of significant influence in school reform (Gordon, & Patterson, 2008; Hinde, 2004). Organizational culture is ingrained in every aspect of the school's functioning; it guides how teachers teach and whether change is embraced or rejected (Datnow, Hubbard, & Mehan, 2005). The far-reaching effects of school culture have led several models of school improvement, including Improving Quality of Education for All and the Accelerated Schools Program, to place significant emphasis on cultural change (Harris, & Young, 2000; Maxwell, Huggins, & Scheurich, 2010). For these models it is an overarching element of every school improvement effort. While the dynamic model includes factors associated with the school culture at the classroom and school levels of the framework, school improvement under the dynamic model does not always address school culture specifically. Given the prominence of school culture in this study, the dynamic model would benefit from integrating processes that examine and work with the organizational culture of schools that pursue improvement under this model.

A further contribution of this thesis, is one made through methodological variation. The dynamic model has been studied at length through quantitative methodologies, but qualitative research on this framework has not reached its full potential. For this study I utilized a largely qualitative methodology, relying heavily on

interviews for data collection. Data gathered through this approach allowed for a glimpse into the process of applying the dynamic model from the perspective of the participants – a topic that has not been explored in detail in prior research on the framework. Although there are set phases for DASI implementation, the realization of the process in schools is in some ways a black box. Through the use of qualitative methodology this thesis allowed a keyhole into the procedure, and revealed themes that have not been identified in existing literature on the DASI framework. Practitioner perception of project outcomes was a valuable topic to explore because unlike quantitative measures, the answers provided via staff interviews were discussed in detail. A high variation was observed in teacher perceptions of their success with the dynamic model, and the causes do appear to connect to the challenges and supports experienced by practitioners. Teacher subjective perspectives on the outcome of improvement initiatives are imperative to know in addition to objective evaluation of outcomes, because there may not be congruence between these measures. Statistically successful projects may be poorly reviewed by practitioners and vice versa, and awareness of such discrepancy is necessary so as to learn what factors influence these patterns. The findings of this study indicate that additional qualitative research would benefit further development of the dynamic model.

The findings of this study once more demonstrate that improvement does not occur at the same pace, or in the same manner even for schools that follow the same model. Though the four cases discussed in this study identified similar themes, teachers at different schools were influenced by these factors in drastically different ways. Numerous factors were recognised as challenges and facilitators, and these were perceived by practitioners to impact the process of project implementation and even the outcomes observed at the conclusion of the reform effort. Similarly to other studies of this nature, this thesis emphasises the need for further research into the practitioner experience with project implementation. The knowledge of the conditions under which improvement is most likely to succeed will allow for the development of strategies to address the challenges and boost supports experienced by teachers, thereby creating an environment that welcomes authentic, long term improvement (Ainscow, Dyson, Goldrick, & West, 2016). The success of the DASI model is in its evolution and adaptability; as new data emerges, the framework is adjusted and updated (Creemers, & Kyriakides, 2008). The findings of this study are well positioned to contribute to further development of the dynamic model.

6.4 Limitations

The limitations of this study are located in the sample, aspects of data collection and length of project implementation. The most significant limitation of this study is that the findings cannot be generalized because the sample is not representative of England's schools. The sample for this study was small and entirely self-selected; I had little control over which and how many schools would ultimately agree to participate in the study. Although I made every effort to recruit a wide range of schools, diversity of cases, geographically, contextually and demographically was limited. Hence, I am not able to draw conclusions about the potential DASI experience of teachers across a range of schools. Moreover, it is necessary to note that because the schools in the sample willingly elected to pursue an improvement project, they may possess a readiness or predisposition towards improvement that other schools in England do not reflect.

Another limitation of this study is that much of the collected data was self reported by the participants. Outside of attending staff meetings, I was not able to conduct observations to witness project implementation first hand, which leaves room for participant bias to colour the narrative. The process of implementation, and the outcomes of the initiative were narrated by the study participants; the data would have been considerably enriched had I used additional, objective measures of data collection in conjunction. To address this limitation, I recruited a large sample of staff members at each school to participate in the end of year interviews so as to compare and contrast the data against several points of reference. Admittedly, this does not entirely eliminate the potential participant bias, but other avenues to resolve this challenge were outside of my abilities. I decided against employing additional measures because the study, run simultaneously at four sites, was challenging and time consuming, and I was not certain I would have been able to manage collection and analysis of an even greater volume of data. Furthermore, this was a labour intensive study for the participants as well, and I did not wish to place more burden on them by requesting they participate in, or administer additional measures.

The final limitation present in this research is that the study took place over a period of a single year. Whenever possible, school improvement studies are implemented over a number of years, as it has been noted that long-term application provides a more accurate measure of the outcomes (Creemers, & Kyriakides, 2008). A multi-year project would have allowed the examination of how teacher perceptions on the dynamic model evolve over time, and note whether barriers and facilitators identified by practitioners

change or remain constant. As with the previous limitation, I was concerned about practical limitations, such as the feasibility of an extended study, and the labour associated with the collection and analysis of two years' worth of data.

This study suffers from some of the limitations that are commonly associated with qualitative studies. I attempted to address these weaknesses by pursuing a multiple case study approach, rather than the single case model, which permitted cross-case analysis and gave access to a broader sample of participants. Moreover, I based the study on an existing, validated framework, which allows the findings to contribute further knowledge towards the model. Although the limitations present in this study do not allow for generalization of the findings, I believe that the data can provide direction and a starting point for future research on the dynamic model.

6.5 Recommendations for Further Research

Qualitative research on the dynamic model is not plentiful, and though the framework has been extensively studied through quantitative means, there remains much to discover about the process of implementing DASI as experienced by practitioners. This study has sought to make inroads into the qualitative sphere of research for the model, and provide insight into the teacher perspective on the application of the dynamic model. The findings of this study suggest several possible avenues to pursue in prospective research. This study has identified a variety of barriers and facilitators encountered by teachers in their improvement journey, but it is unclear to what degree these factors influenced practitioner engagement with reform. Further research on the topic could explore how much sway challenges and supports have on the amount of time teachers devote to the DASI initiative. Furthermore, it would be worth examining what measurable degree of impact challenges and supports ultimately produce on the outcomes of improvement projects. Findings from such research could potentially explain some of the variance observed in outcomes of schools that implement the dynamic model. Another avenue worth exploring, are the role specific barriers experienced by teachers, headteachers, teaching assistants, and midday supervisors in the course of implementing the dynamic approach. In this study I interviewed teachers, headteachers, and a senior teaching assistant, however, the focus remained on the perspectives and experiences of teachers. It would be worth exploring whether challenges and supports vary by role; DASI is a whole school model of improvement, and the experience of all staff members should be considered. Methodologically, DASI would benefit from a greater number of

mixed method studies, wherein qualitative instruments and quantitative measures are given equal attention.

6.6 Conclusion

Broadly, this thesis sought to explore how teachers experienced the dynamic model and to gain insight into the journey these practitioners traversed in the process of implementation. I turned my focus in this direction partially because of my own experience implementing school improvement projects as a teacher, and because I noted a gap in existing research on the DASI framework, and saw an opportunity to make a meaningful contribution to the knowledge base of the model. Over the course of the year, I joined a number of schools on their dynamic journey of improvement. The four schools presented in this thesis, took their own unique paths towards reform. Though the experience of each school was different, common themes wove throughout all of the cases. Teachers identified a variety of factors that functioned as barriers and facilitators, many of these similar to elements identified in prior research on other models of reform. Teachers carry the brunt of the load with regards to improvement implementation, and knowledge of practitioner perceptions and experiences is vital for further development of school improvement models. Awareness of what impedes and supports teachers in school reform is a step towards greater understanding of the process through which schools become effective, and what can hinder or advance the effort. The findings from this thesis may pave the way towards acquiring this knowledge for the DASI framework.

References

Abawi, L., (2013). School meaning systems: The symbiotic nature of culture and language in use. *Improving Schools, 16*(2), 89-106.

Achinstein, B. (2002). Conflict amid community: The micropolitics of teacher collaboration. *Teachers College Record, 104*(3), 421-455.

Ainscow, M. (2015). *Towards Self-Improving School Systems: Lessons From a City Challenge*. London: Routledge

Ainscow, M., Dyson, A., Goldrick, S., & West, M., (2012). Making schools effective for all: Rethinking the task. *School Leadership & Management, 32*(3), 197-213. DOI: 10.1080/13632434.2012.669648

Ainscow, M., Dyson, A., Goldrick, S. & West, M. (2016). Using collaborative inquiry to foster equity within school systems: Opportunities and barriers. *School Effectiveness and School Improvement,* 27(1), 7-23.

Altrichter, H., & Kemethofer, D. (2015). Does accountability pressure through school inspections promote school improvement? *School Effectiveness and School Improvement, 26*(1), 32-56.

Anderson-Butcher, D., Lawson, H. A., Iachini, A., Flaspohler, P., Bean, J., & Wade-Mdivanian, R. (2010). Emergent evidence in support of a community collaboration model for school improvement. *Children & Schools, 32*(3), 160-171.

Antoniou, P., Kyriakides, L. & Creemers, B. P. M., (2009). Developmental stages of teaching skills: Suggestions for teacher initial training and teacher professional development. In Koutselini, M. (Eds). *Education, Training and Pedagogy*, Department of Education, University of Cyprus. Nicosia: Cyprus.

Antoniou, P., & Kyriakides, L. (2011). The impact of a dynamic approach to professional development on teacher instruction and student learning: Results from an experimental study. *School Effectiveness and School Improvement, 22*(3), 291-311.

Antoniou, P. (2013a). A longitudinal study investigating relations between stages of effective teaching, teaching experience and teacher professional development approaches. *Journal of Classroom Interaction*, *48*(2), 25-40.

Antoniou, P. (2013b). Development of research on school leadership through evidence-based and theory driven approaches: A review of school leadership effects revisited. *School Effectiveness and School Improvement*, *24*(1), 122-128.

Antoniou, P., & Kyriakides, L. (2013). A dynamic integrated approach to teacher professional development: Impact and sustainability of the effects on improving teacher behavior and student outcomes. *Teaching and Teacher Education*, *29*(1), 1-12.

Antoniou, P., Kyriakides, L., & Creemers, B. P. M. (2015). A dynamic integrated approach to teacher professional development. Rationale and main characteristics. *Teacher Development*, *19*(4), 535-552.

Antoniou, P. (2016). Characteristics of effective teacher training and professional development programmes. In Norton, P. (Ed). *Professional Development: Recent Advances and Future Directions.* New York, USA: Nova Science Publishers.

Antoniou, P., Louw, J., & Gronn, P. (2016). School self-evaluation for school improvement. Examining the measuring properties of the LEAD surveys. *Australian Journal of Education*, *60*(3), 191-210. DOI: 10.1177/0004944116667310.

Arifeen, M. (2012). Purpose of education in life. *Pakistan & Gulf Economist, 31*(17), 15-16.

Axinn, W. G., & Pearce, L. D. (2006). *Mixed method data collection strategies*. New York: Cambridge University Press.

Baines, E., & Blatchford, P. (2010). *Children's games and playground activities in school and their role in development*. The Oxford Handbook of the Development of Play. Oxford: Oxford University Press.

Ball, A., Anderson-Butcher, D., Mellin, E., & Green, A. (2010). A cross-walk of professional competencies involved in expanded school mental health: An exploratory study. *School Mental Health, 2*(3), 114-124.

Bandura, A. (1996). *Social cognitive theory of human development.* In T. Husen & T. N. Postlethwaite (Eds.), International encyclopedia of education (2nd ed., pp. 5513-5518). Oxford: Pergamon Press.

Barber, M., Whelan, F. & Clark, M. (2010). *Capturing the leadership premium*. McKinsey & Company. Retrieved from http://mckinseyonsociety.com/capturing-the-leadership-premium/

Barth, R. (1986). The principal and the profession of teaching. *The Elementary School Journal, 86*(4), 471-492.

Barth, R. (1990). *Improving schools from within: Teachers, parents, and principals can make a difference*. Oxford: Jossey-Bass.

Bartlett, L. (2004). Expanding teacher work roles: A resource for retention or a recipe for overwork? *Journal of Education Policy, 19*(5), 565-582.

Bates, A. (2014). (Mis)Understanding strategy as a "spectacular intervention": A phenomenological reflection on the strategy orientations underpinning school improvement in England. *Studies in Philosophy and Education, 33*(4), 353-367.

Beckett, L., & Nuttall, A. (2017). "A 'usable past' of teacher education in England: History in JET's Anniversary Issue." *Journal of Education for Teaching 43*(5), 616-27.

Bell, L. (2002). Strategic planning and school management: Full of sound and fury, signifying nothing? *Journal of Educational Administration, 40*, 407-424.

Bellei, C., Vanni, X., Valenzuela, J. P., & Contreras, D. (2016). School improvement trajectories: An empirical typology. *School Effectiveness and School Improvement, 27*(3), 275-292.

Benavot, A. & Koseleci, N. (2015). *Seeking Quality in Education: The Growth of National Learning Assessments, 1990-2013*. Paper commissioned for the Education For All Global Monitoring Report.

BERA, (2011). *Ethical guidelines for educational research*. Retrieved from http://www.bera.ac.uk/

Berebitsky, D., Goddard, R. D., & Carlisle, J. F. (2014). An examination of teachers' perceptions of principal support for change and teachers' collaboration and communication around literacy instruction in Reading First schools. *Teachers College Record, 116*(4), 1-27.

Berkovich, I. (2011). No we won't! Teachers' resistance to educational reform. *Journal of Educational Administration, 49*(5), 563-578.

Berman, P., & McLaughlin, M. (1978). *Rethinking the federal role in education*. Santa Monica, CA: Rand Corp.

Bernauer, J. (2002). Five keys to unlock continuous improvement. *Kappa Delta Pi Record, 38*(2), 89-92.

Birks, M., & Mills, J. (2015). *Grounded theory: A practical guide*. London: SAGE Publications Ltd

Bishop, J. C., Curtis, M. (2001). *Play today in the primary school playground: Life, learning and creativity*. Philadelphia: Open University Press.

Blatchford, P. (1989). *Playtime in the Primary School: Problems and Improvements.* Windsor and London: NFER and Routledge.

Blatchford, P. (1994). Research on children's school playground behaviour in the United Kingdom. In Blatchford, P., & Sharp, S. (Eds.) *Breaktime in School*, (pp. 16–35). London: Routledge

Bogotch, I., Mirón, L., & Biesta, G. (2007). Effective for What; Effective for Whom? Two Questions SESI Should Not Ignore. In T. Townsend (Ed.), *International Handbook of Effectiveness and Improvement*, (pp. 93-110). Berlin: Springer.

Borman, G. D., Hewes, G. M., Overman, L. T., & Brown, S. (2003). Comprehensive school reform and achievement: A meta-analysis. *Review of Educational Research, 73*, 125-230.

Bosker, R. J., Creemers, B. P. M. & Stringfield, S. (1999). *Enhancing educational excellence, equity and efficiency*. Netherlands: Kluwer Academic Publishers.

Branch, G., Hanushek, E., & Rivkin, S. (2012). *Estimating the effect of leaders on public sector productivity: The case of school principals*. NBER Working Paper Series No 17803. Retrieved from http://www.nber.org/papers/w17803

Brinkmann, S., & Kvale, S. (2009). *InterViews: Learning the craft of qualitative research Interviewing*. Los Angeles: SAGE.

Broadhead, P., Cuckle, P., Hodgson, J., & Dunford, J. (1996). Improving primary schools through school development planning: Building a vision, exploring the reality. *Educational Management Administration & Leadership, 24*, 277-290.

Brown, C., & Poortman, C. L. (2018). Networks for learning: Effective collaboration for teacher, school and system improvement. New York, NY: Routledge.

Brown, M., & Bolen, L. (2008). The school-based health center as a resource for prevention and health promotion. *Psychology in the Schools, 45*(1), 28-38.

Bryman, A. (2012). *Social research methods* (4th edn.). Oxford: Oxford University Press.

Burns, J. (1978). *Leadership*. London: Harper and Row.

Bush, T. (2017). School Improvement through government agencies: Loose or tight coupling? *Improving Schools, 20*(1), 35-47.

Busher, H., Harris, A., & Wise, C. (2000). *Subject leadership and school improvement.* London: SAGE Publications Ltd.

Butcher, V. (2009). Midday supervisors. In Moorcroft, R., & Caton, G. (Eds.). *School management and multi-professional partnerships* (pp. 83-91). London: Continuum.

Campbell, R. J., Kyriakides, L., Muijs, R. F., & Robinson, W. (2003). Differential teacher

effectiveness: Towards a model for research and teacher appraisal. *Oxford Review of Education, 29*(3), 347-362.

Can, I., Koydemir, S., Durhan, S., Ogan, S., Gozukara, C., & Gizem Cokluk, G. (2017). Changing High School Students' Attitudes Towards Mathematics in a Summer Camp: Happiness Matters. *Kuram Ve Uygulamada Egitim Bilimleri 17*(5), 1625-648.

Caporaso, J. A. (1973). Quasi-experimental approaches to social science: Perspectives and problems. In J. A. Caporaso, & L. L. Roos, (Eds) *Quasi-Experimental Approaches: Testing Theory and Evaluating Policy.* (pp. 3-38). Thousand Oaks, California: SAGE Publications, Inc.

Cassen, R., McNally, S., & Vignoles, A. (2015). *Making a difference in education: What the evidence says*. London: Routledge

Castro-Villarreal, F., & Rodriguez, B. (2017). Using consultee-centered consultation with teachers in a contemporary school setting to inform culturally responsive practice. *Contemporary School Psychology, 21*(3), 240-254.

Chapman, C. (2005). *Improving Schools Through External Intervention*. London: Continuum

Chapman, C. & Harris, A. (2004). Strategies for school improvement in schools facing challenging circumstances. *Educational Research, 46*(3), 119-228.

Chapman, C., Gunter, H., & Ainscow, M. (2009). *Radical reforms: Perspectives on an era of educational change*. London: Routledge.

Chapman, C., Muijs, D., Reynolds, D., Sammons, P., & Teddlie, C. (2016). *The Routledge international handbook of educational effectiveness and improvement: Research, policy and practice*. London: Routledge.

Chapman, C., Reynolds, D., Muijs, D., Sammons, P., Stringfield, S., & Teddlie, C. (2016). Educational effectiveness and improvement research and practice: The emergence of the discipline. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 1-25). New York: Routledge.

Chapman, J. D. (1991). The effectiveness of schooling and of educational resource management. Paper presented to the Organisation for Economic Co-operation and Development (OECD), Paris.

Chmielewski, A. K., Mundy, K., & Farrell, J. P. (2017). International Indicators and

Assessments: Issues for Teachers. In K. Bickmore, R. Hayhoe, C. Manion, K. Mundy, & R. Read (Eds.), *Comparative and International Education: Issues for Teachers, 2nd Edition*, (pp. 361-391). Toronto: Canadian Scholars' Press Inc.

Clarke, P. (2005). Frontpiece: A Matter of Definition. In C. Paul (Ed.), *Improving Schools in Difficulty* (pp. 1-4). London: Continuum.

Clarke, P., Reynolds, D., & Harris, A. (2005). Challenging the Challenged: Developing and Improvement Programme for Schools Facing Extremely Challenging Circumstances. In C. Paul (Ed.), *Improving Schools in Difficulty* (pp. 7-21). London: Continuum.

Coe, R., & Fitz-Gibbon, C. T (1998). School Effectiveness Research: Criticisms and Recommendations. *Oxford Review of Education, 24*(4), 421-38.

Coe, R. (2009). School improvement: Reality and illusion. *British Journal of Education Studies, 57*(4), 363-379.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). New York, NY: Routledge.

Comer, J. P., & Emmons, C. (2006). The research program of the Yale Child Study Center School Development Program. *The Journal of Negro Education, 75*(3), 353-372

Cook, T. D., & Hirschfield, P. J. (2008). Comer's School Development Program in Chicago: Effects on involvement with the juvenile justice system from the late elementary through the high school years. *American Educational Research Journal, 45*(1), 38-67

Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks: SAGE Publications, Inc.

Craig, W., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. *School Psychology International, 21*(1), 22-36.

Cramer, D. (2003). *Advanced quantitative data analysis*. New York: Open University Press.

Crawford, D. L., Johnson, A. W., & Summers, A. A. (1997). Schools and Labor Market Outcomes. *Economics of Education Review 16*(3), 255-69.

Creemers, B. P. M. (1994). *The effective classroom*. London: Cassell.

Creemers, B. P. M. (1997*). Effective schools and effective teachers: An International*

perspective. Warwick, UK: University of Warwick centre for Research in Elementary and Primary Education.

Creemers, B. P. M. (2002). From school effectiveness and school improvement to effective school improvement: Background, theoretical analysis, and outline of the empirical study. *Educational Research and Evaluation, 8*(4), 343-362.

Creemers, B. P. M., & Kyriakides, L. (2006). Critical analysis of the current approaches to modelling educational effectiveness: The importance of establishing a dynamic model. *School Effectiveness and School Improvement, 17*(3), 347-366.

Creemers, B. P. M., & Kyriakides, L. (2008). *The dynamics of educational effectiveness: A contribution to policy, practice, and theory in contemporary schools*. London: Routeledge.

Creemers, B. P. M., & Kyriakides, L. (2010a). School factors explaining achievement on cognitive and affective outcomes: Establishing a dynamic model of educational effectiveness. *Scandinavian Journal of Educational Research, 54*(3), 263-294.

Creemers, B. P. M., & Kyriakides, L. (2010b). Using the dynamic model to develop an evidence-based and theory-driven approach to school improvement. *Irish Educational Studies, 29*, 5-23.

Creemers, B. P. M., Kyriakides, L., & Sammons, P. (2010). *Methodological advances in educational effectiveness research*. London and New York: Taylor & Francis.

Creemers, B. P. M., & Kyriakides, L. (2012). *Improving quality in education: Dynamic approaches to school improvement*. Abingdon, Oxon: Routledge.

Creemers, B. P. M., Kyriakides, L. & Antoniou, P. (2013a). *Teacher professional development for improving quality of teaching*. London: Springer.

Creemers, B. P. M., Kyriakides, L. & Antoniou, P. (2013b). A dynamic approach to school improvement: Main features and impact. *School Leadership & Management, 33*(2), 114-132.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among the five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Boston, Mass.: Pearson.

Creswell, J. W., & Plano Clark, V. K. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, California: Sage Publications Inc.

Crissey, S. R. (2009). *Educational Attainment in the United States, 2007.* Current Population Reports. Washington DC: US Census Bureau, US Department of Commerce.

Crissman, C., Spires, H. A., Pope, C. & Beal, C. (2000). Creating pathways of change: One school begins the journey. *Urban Education, 35*(1), 104-120

Dahlberg, L. & McCaig, C. (2010). *Practical research and evaluation: A start-to-finish guide for practitioners*. London: SAGE Publications Ltd.

Dannels, D. (2014). Teacher communication concerns revisited: Calling into question the gnawing pull towards equilibrium. *Communication Education, 64*(1), 1-24.

Datnow, A., & Castellano, M. (2000). Teachers' responses to Success for All: How beliefs, experiences, and adaptations shape implementation. *American Educational Research Journal, 37*(3), 775-799.

Datnow, A., Hubbard, L., & Mehan, B. (2002). *Extending educational reform*. London: Falmer Press.

Datnow, A., Hubbard, L., & Mehan, H. (2005). Extending educational reform: From one school to many. London: Routledge.

Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on student outcomes. *Educational Administration Quarterly, 52*(2), 221-258.

Day, C., & Sammons, P. (2013). *Successful leadership: A review of the international literature*. Reading: CfBT Education Trust.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. (2001). The job demands-resource model of burnout. *Journal of Applied Psychology, 86*, 499-512.

Demetriou, D. & Kyriakides, L. (2012). The impact of school self-evaluation upon student achievement: A group randomisation study. *Oxford Review of Education, 38*(2), 149-170.

Demetriou, H. (2012). The case study. In Wilson, E. (Ed.). *School-based research: A guide for education students* (pp. 124-138). London: Sage Publications Ltd.

De Fraine, B., Landeghem, G., Van Damme, J., & Onghena, P. (2005). An Analysis of Well Being in Secondary School with Multilevel Growth Curve Models and Multilevel Multivariate Models. *Quality and Quantity 39*(3), 297-316.

De Nobile, J. (2017). Organisational communication and its relationships with job satisfaction and organisational commitment of primary school staff in Western Australia. *Educational Psychology, 37*(3), 380-398.

Department of Education and Science. (1989). *Discipline in schools:*

Report of the committee of enquiry chaired by Lord Elton. London: HMSO.

Deppeler, J. (2006). Improving inclusive practices in Australian schools: Creating conditions for university-school collaboration in inquiry. *European Journal of Psychology of Education, 21*(3), 347-360.

Dewey, J. (1933). *How we think*. Boston: Raytheon Education Co.

Diamond, J., Randolph, A., & Spillane, J. (2004). Teachers' expectations and sense of responsibility for student learning: The importance of race, class, and organizational habitus. *Anthropology & Education Quarterly, 35*(1), 75-98.

Dolph, D. (2017). Challenges and opportunities for school improvement: Recommendations for urban school principals. *Education and Urban Society, 49*(4), 363-387.

Donahoe, T. (1997). Finding the way: structure, time, and culture in school improvement. In M. Fullan (Ed.) *The challenge of school change*. Illinois: Skylight Training and Publishing.

Dunaway, D. M., Do-Hong, K. & Szad, E. R. (2012). Perceptions of the Purpose and Value of the School Improvement Plan Process. *Educational Forum, 76*(2), 158-173.

Edmonds, R. R. (1979). Effective schools for the urban poor. *Educational Leadership, 37*(1), 15-27.

Egodawatte, G., McDougall, D., & Stoilescu, D. (2011). The effects of teacher collaboration in grade 9 applied mathematics. *Educational Research for Policy and Practice, 10*(3), 189-209.

Eisenhart, M., & Howe, K. (1992). Validity in educational research. In M. LeCompte, W. Millroy & J. Preissle (Eds.). *The handbook of qualitative research in education* (pp. 642-680). San Diego: Academic Press.

Elbe, A. M., Wikman, J. M., Zheng, M., Larsen, M. N., Nielsen, G., & Krustrup P (2017). The importance of cohesion and enjoyment for the fitness improvement of 8-10-year-old children participating in a team and individual sport school-based physical activity intervention. *European Journal of Sport Science* 17(3), 343-350.

Elmore, R. F, & City, E. (2007). The road to school improvement: It's hard, it's bumpy, and it takes as long as it takes. *Harvard Education Letter, 23*(3).

Engle, S. (2015). *The End of the Rainbow: How Education for Happiness (Not Money) Would Transform Our Schools*. New York, NY: The New Press.

Evans, M. (2012a). Analysing qualitative data. In Wilson, E. (Ed.). *School-based*

research: A guide for education students (pp. 260-273). London: Sage Publications Ltd.

Evans, M. (2012b). Reliability and validity in qualitative research by teacher researchers. In Wilson, E. (Ed.). *School-based research: A guide for education students* (pp. 202-216). London: Sage Publications Ltd.

Feldhoff, T., Radisch, F., & Bischof, L. M. (2016). Designs and Methods in School Improvement Research: A Systematic Review. *Journal of Educational Administration, 54*(2) 209-40.

Fernandez, K. E. (2011). Evaluating school improvement plans and their effect on academic performance. *Education Policy, 25*, 338-367.

Feuerborn, L., & Chinn, D. (2012). Teacher perceptions of student needs and implications for positive behavior supports. *Behavioral Disorders, 37*(4), 219-231.

Fidler, B. (2001). A structural critique of school effectiveness and school improvement. In A. Harris, & N. Bennett, (Eds.), *School effectiveness and school improvement: Alternative perspectives* (pp. 48-74). London: Continuum.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics: (and sex and drugs and rock 'n' roll)* (4th ed.). London: SAGE.

Finnan, C. (2000). *Implementing school reform models: Why is it so hard for some schools and easy for others?* Paper presented at the meeting of the American Educational Research Association, New Orleans. (ERIC Document Reproduction Service No. ED446356).

Fitz-Gibbon, C. T. (1992). School effects at A level: Genesis of an information system? In D. Reynolds, & P. Cuttance, (Eds.), *School effectiveness: Research, policy, and practice.* (pp. 26-43). London: Cassell.

Fox, A., & Wilson, E. (2009). 'Support our networking and help us belong!': Listening to beginning secondary school science teachers. *Teachers and Teaching, 15*(6), 701-718.

Fox, A., Deaney, R., & Wilson, E. (2010). Examining beginning teachers' perceptions of workplace support. *Journal of Workplace Learning*, 22(4), 212-227.

Freiberg, H., J., & Stein, T. A. (1999). Measuring, Improving and Sustaining Healthy Learning Environments. In H. J. Freidberg (Ed.), *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments* (pp. 11-29). London: Falmer Press.

French, M. T., Homer, J. F., Popovici, I., & Robins, P. K. (2014). What You Do in High

School Matters: High School GPA, Educational Attainment, and Labor Market Earnings as a Young Adult. *Eastern Economic Journal 41*(3), 370-386.

Fricke, S., Burgoyne, K., Bowyer-Crane, C., Kyriacou, M., Zosimidou, A., Maxwell, L. Lervåg, A., Snowling, M. J., & Hulme, C. (2017). The efficacy of early language intervention in mainstream school settings: A randomized controlled trial. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 58*(10), 1141-1151.

Friend, M., & Cook, L. (1990). Collaboration as a predictor for success in school reform. *Journal of Educational and Psychological Consultation, 1*(1), 69-86.

Friend, S., Flattum, C. F., Simpson, D., Nederhoff, D. M., & Neumark-Sztainer, D. (2014). The researchers have left the building: What contributes to sustaining school-based interventions following the conclusion of formal research support? *Journal of School Health, 84*(5), 326-333.

Fullan, M. (1999). On effecting change in arts education. *Arts Education Policy Review, 100*(3), 17-18.

Fullan, M. (2001). *The new meaning of educational change* (3rd ed.). New York: Teachers College.

Fullan, M. (2002). The role of leadership in the promotion of knowledge management in schools. *Teachers and Teaching, 8*(3), 409-419.

Fullan, M. (2007). Change the terms for teacher learning. *Journal of Staff Development, 28*(3), 35-36.

Fullan, M. (2016). The elusive nature of whole system improvement in education. *Journal of Educational Change, 17*(4), 539-544.

Fullan, M., Miles, M. B., & Taylor, G. (1980). Organization Development in Schools: The State of the Art. *Review of Educational Research*, *50*(1), 121–183.

Gable, R., & Manning, M. (1997). In the midst of reform: The changing structure and practice of middle school education. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 71*(1), 58-62.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-82.

Goddard, Y. L., Goddard, R. D., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record, 109*(4), 877-896.

Gordon, J., & Patterson, J. (2008). “It’s what we’ve always been doing.” Exploring

tensions between school culture and change. *Journal of Educational Change, 9*(1), 17-35.

Grace, G. (1998). Scholarship and Ideology in Education Policy Studies. *International Studies in Sociology of Education, 8*(1), 135-40.

Gray, J. (2001). Building for improvement and sustaining change in schools serving disadvantaged communities. In M. Maden, (Ed), *Success against the odds - five years on*, (pp1-39). London: Routledge Falmer.

Greene, J. C., & Caracelli, V. J. (2003). Making paradigmatic sense of mixed methods practice. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research*, (pp. 91-110). Thousand Oaks, California: SAGE Publications, Inc.

Green, J. L., Camilli, G. & Elmore, P. B. (2006). *Handbook of complementary methods in education research*. Washington, DC: American Educational Research Association.

Grigg, J., Kelly, K., Gamoran, A., & Borman, G. (2013). Effects of two scientific inquiry professional development interventions on teaching practice. *Educational Evaluation and Policy Analysis, 35*(1), 38-56.

Groundwater-Smith, S., & Dadds, M. (2004). Critical practitioner inquiry: Towards responsible professional communities of practice. In Sachs J., & Day C., (Ed.*), International handbook for continuing professional development of teachers* (pp. 238–263). Maidenhead New York: Iranian Centre for Archaeology Research.

Gu, Q., & Day, C. (2013). Challenges to teacher resilience: Conditions count. *British Educational Research Journal 39*(1), 22-44.

Hall, J. (2018). Processes of reforming: The case of the Norwegian state school inspection policy frameworks. *Education Inquiry, 8*, 1-18.

Hall, G., & Hord, S. (1987). *Change in schools: Facilitating the process*. Albany, NY: State University of New York Press.

Hargreaves, A. (1997). Cultures of teaching and educational change. In M. Fullan (Ed.), *The challenge of school change*. Illinois: Skylight Training and Publishing

Hargreaves, A. (2003). *Teaching in the Knowledge Society: Education in the Age of Insecurity*. Maidenhead: Open University Press.

Hargreaves, A., & Fullan, M. (1998). *What's worth fighting for in education?* Buckingham: Open University Press in association with the Ontario Public School Teachers' Federation.

Hargreaves, D. H. (1995) School Culture, School Effectiveness and School Improvement. *School Effectiveness and School Improvement, 6*(1), 23-46, DOI: 10.1080/0924345950060102

Hargreaves, E. (2013). Assessment for learning and teacher learning communities: UK teachers' experiences. *Teaching Education, 24*(3), 327-344.

Hargreaves, L., Cunningham, M., Everton, T., Hansen, A., Hopper, B., McIntyre, D., Maddock, M., Mukherjee, J., Pell, T., Rouse, M., & Turner, P. (2006). *The status of teachers and the teaching profession: Views from inside and outside the profession. Interim findings from the teacher status project*. Research report, 755. Great Britain: Department for Education Skills.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495–513. doi:10.1016/j.jsp.2005.11.001.

Halbesleben, J. (2010). A meta-analysis of work engagement: Relationships with burnout, demands, resources, and consequences. In A. B. Bakker, & M. P. Leiter (Eds.), *Work engagement. A handbook of essential theory and research* (pp. 102–117). New York: Psychology Press.

Hall, G. E., & George, A. A. (1999). The Impact of Principal Change Facilitator Style on School and Classroom Culture. In H. J. Freidberg (Ed.), *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments* (pp. 165-185). London: Falmer Press.

Hallinger, P. & Heck, R. H. (2011). Conceptual and methodological issues in studying school leadership effects as a reciprocal process. *School Effectiveness and School Improvement, 22*(2), 1-27.

Hanushek, E. A., & Rivkin, S. G. (2007). Pay, working conditions and teacher quality. *The Future of Children, 17*(1), 69–86.

Harris, A., Jamieson, I., & Russ, J. (1996). *School Effectiveness and School Improvement: A Practical Guide*. London: Pitman Publishing.

Harris, A. (2001). Contemporary perspectives on school effectiveness and school improvement. In A. Harris, & N. Bennett, (Eds.), *School effectiveness and school improvement: Alternative perspectives*, (pp. 7-21). London: Continuum.

Harris, A. (2002). *School Improvement: What's in it for schools?* London: Routledge Falmer.

Harris, A., Day, C., Hopkins, D., Hadfield, M., Hargreaves, A., & Chapman, C. (2003).

Effective leadership for school improvement. New York: Routledge Falmer.

Harris, A., Chapman C., Muijs, D., Russ, J. & Stoll, L. (2006). Improving schools in challenging contexts: exploring the possible. *School Effectiveness and School Improvement 17*, 409–424.

Harris, A., James, S., Gunraj, J., Clarke, P., & Harris, B. (2006). *Improving schools in exceptionally challenging circumstances: Tales from the frontline*. London: Continuum International Publishing Group.

Harris, A., & Chrispeels, J. H. (2006). Introduction. In A. Harris, & J. H. Chrispeels, (Eds.) *Improving schools and educational systems,* (pp. 3-22). New York: Routledge.

Harris, A., Chapman, C., Muijs, D., Reynolds, D., Campbell, C., Creemers, B., Earl, L., Kyriakides, L., Munoz, G., Stoll, L., Stringfield, S., Van Velzen, B., & Weinstein, J. (2013). Getting lost in translation? An analysis of the international engagement of practitioners and policy-makers with the educational effectiveness research base. *School Leadership & Management, 33*(1), 3-19.

Harris, A., & Young, J. (2000). Comparing School Improvement Programmes in England and Canada. *School Leadership & Management, 20*(1), 31-42, DOI: 10.1080/13632430068860

Haynes, N. M. (1996). Creating safe and caring school communities: Comer School Development Program Schools. *The Journal of Negro Education, 65*(3), 308-314

Heck, R. H., Larsen, T. J., & Marcoulides, G. A. (1990). Instructional leadership and school achievement: Validation of a causal model. *Educational Administration Quarterly, 26*(2), 94-125.

Heck, R. H., & Moriyama, K. (2010). Examining relationships among elementary schools' contexts, leadership, instructional practices, and added-year outcomes: a regression discontinuity approach. *School Effectiveness and School Improvement, 21*(4), 377-408.

Herold, D., & Fedor, D. (2008). *Leading change management: Leadership strategies that really work*. London: Stanford Business Books.

Hiebert, J., Gallimore, R., & Stigler, J. (2002). A knowledge base for the teaching profession: What would it look like and how can we get one? *Educational Researcher, 31*(5), 3-15.

Hinde, E. R. (2004). School culture and change: An examination of the effects of school culture on the process of change. *Essays in Education 12*, 61–72.

Hitchcock, G., & Hughes, D. (1995). *Research and the teacher: A qualitative introduction to school-based research* (2nd edn.). London: Routledge.

Hollingworth, L., Olsen, D., Asikin-Garmager, A., & Winn, K. (2018). Initiating conversations and opening doors: How principals establish a positive building culture to sustain school improvement efforts. *Educational Management Administration & Leadership, 46*(6), 1014-1034.

Holt, M. (2000). The new structure of school improvement: Inquiring schools and achieving students. *Teacher Development, 4*(3), 437-454.

Hopkins, D., Ainscow, M., & West, M. (1994). *School improvement in an era of change*. London: Cassell.

Hopkins, D., Beresford, J., & West, M. (1998). Creating the Conditions for Classroom and Teacher Development. *Teachers and Teaching, 4*(1), 115-141, DOI: 10.1080/1354060980040108

Hopkins, D. (1995). Towards effective school improvement. *School Effectiveness and School Improvement, 6*(3), 265-274.

Hopkins, D. (1996). Towards a theory for school improvement. In J. Gray, D. Reynolds, C. Fitz-Gibbon, & D. Jesson (Eds.), *Merging traditions: The future of research and school effectiveness and school improvement*, (pp. 30-50). London: Cassell.

Hopkins, D. (2001). *School improvement for real*. London: Routledge Falmer.

Hopkins, D., & Reynolds, D. (2001). The past, present and future of school improvement: towards the third age. *British Educational Research Journal, 27*(4), 459-475.

Hopkins, D., Stringfield, S., Harris, A., Stoll, L., & Mackay, T. (2014). School and system improvement: a narrative state of the art review. *School Effectiveness and School Improvement, 25*(2), 257-281. DOI: 10.1080/09243453.2014.885452

Horn, I. S., & Little, J. W. (2010). Attending to problems of practice: routines and resources for professional learning in teachers' workplace interactions. *American Educational Research Journal, 47*(1), 181-217.

Houtveen, T., & Van de Grift, W. (2001). Inclusion and adaptive instruction in elementary education. *Journal of Education for Students Placed at Risk, 6*(4), 389-409.

Houtveen, T., & Van de Grift, W. (2012). Improving reading achievements of struggling learners. *School Effectiveness and School Improvement, 23*(1), 71-93.

Houtveen, A., Van De Grift, W., & Brokamp, S. (2013). Fluent reading in special primary education. *School Effectiveness and School Improvement, 25*(4), 1-15.

Hoy, W. K., & Feldman, J. A. (1999). Organizational Health Profiles for High Schools. In H. J. Freidberg (Ed.), *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments* (pp. 84-102). London: Falmer Press.

Hoy, W. K., & Hannum, J. W. (1997). Middle school climate: An empirical assessment of organizational health and student achievement. *Educational Administration Quarterly, 33*, 290-311.

Howie, S., & Pietersen, J. (2001) Mathematics literacy of final year students: South African realities. *Studies in Educational Evaluation, 27*, 7-25.

Hummel-Rossi, B., & Ashdown, R. (2002). The state of cost-benefit and cost-effectiveness analyses in education. *Review of Educational Research, 72*(1), 1-30.

Israel, M., & Hay, I. (2006). *Research ethics for social scientists*. London: SAGE Publications Ltd.

Jackson, C. & Bedford, D. (2005). Unlocking the potential: The enhanced role of support staff for schools in England. Paper presented at the British Educational Research Association Annual Conference, University of Glamorgan.

Jackson, D. (2000). The school improvement journey: Perspectives on leadership. *School Leadership and Management, 20*(1), 61-79.

Janosz, M., Archambault, I., & Kyriakides, L. (2011). *The cross-cultural validity of the dynamic model of educational effectiveness: A Canadian study*. Paper presented at the 24th International Congress for School Effectiveness and Improvement (ICSEI). Limassol, Cyprus, January 4-7, 2011.

Johnson, B. (2003). Teacher collaboration: Good for some, not so good for others. *Educational Studies, 29*(4), 337-350.

Johnson, B., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches*. Boston: Allyn and Bacon.

Jones, R. A. (1996). *Research methods in the social and behavioural sciences* (2nd ed.). Sunderland, MA: Sinauer Associates, Inc.

Jošić, S., Džinović, V., & Ćirović, I. (2014). Teachers' perceptions of factors impeding school improvement in Serbia. *Psihologija, 47*(2), 231-247.

Joyce, B., Showers, B. & Weil, M. (1992). *Models of Teaching* (4th ed.). Engle-Wood Cliffs, NJ: Prentice-Hall.

Joyce, B., Calhoun, E., & Hopkins, D. (1997). *Models of learning: Tools for teaching.* Buckingham: Open University Press.

Joyce, B., Calhoun, E., & Hopkins, D. (1999). *The new structure of school improvement:*

Inquiring schools and achieving students. Buckingham: Open University Press.

Kalin, J., Čepić, R., & Šteh, B. (2017). Status of teachers and the teaching Profession: A study of elementary school teachers' perspectives. *BCES Conference Books, 15*, 59-65.

Kelly, A., & Clarke, P. (2016). The challenges of globalisation and the new policy paradigms for educational effectiveness and improvement research. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice (pp. 365-380). New York: Routledge.

Kelly, S. (2004). An event history analysis of teacher attrition: Salary, teacher tracking, and socially disadvantaged schools. *The Journal of Experimental Education, 72*(3), 195-220.

Kennedy, A. (2011). Collaborative continuing professional development (CPD) for teachers in Scotland: Aspirations, opportunities and barriers. *European Journal of Teacher Education, 34*(1), 25-41.

Kerr, K., Marsh, J., Ikemoto, G., Darilek, H., & Barney, H. (2006). Strategies to promote data use for instructional improvement: Actions, outcomes, and lessons from three urban districts. *American Journal of Education, 112*(4), 496-520.

Kettley, N. (2010). *Theory building in educational research*. London: Continuum International Publishing Group.

Kidron, Y., & Darwin, M. J. (2007). A Systematic Review of Whole School Improvement Models. *Journal of Education for Students Placed at Risk, 12*(1), 9-35, DOI: 10.1080/10824660701247226

Klassen, R., Wilson, E., Siu, A., Hannok, F., Wong, Y., Wongsri, W., Sonthisap, P., Pibulchol, C., Buranachaitavee, Y., & Jansem, P. (2013). Preservice teachers' work stress, self-efficacy, and occupational commitment in four countries. *European Journal of Psychology of Education, 28*(4), 1289-1309.

Knight, J. (2009). What can we do about teacher resistance? *Phi Delta Kappan, 90*, 508-513.

Kidron, Y., & Darwin, M., J. (2007). A Systematic Review of Whole School Improvement Models. *Journal of Education for Students Placed at Risk (JESPAR)*, *12*(1), 9-35.

Kirkpatrick, C. L., & Johnson, S. M. (2014). Ensuring the ongoing engagement of second-stage teachers. *Journal of Educational Change, 15,* 231-252.

Kochenderfer, B., & Ladd, G. (1996). Peer victimization: Cause or consequence of school maladjustment? *Child Development, 67*(4), 1305-1317.

Kolokitha, M. (2016). Globalisation, Education Policy and the Bologna Process: Interlocking and Dependency Discourses. *Journal of the University of Patras UNESCO Chair 3*(1), 108-122.

Kuijpers, J., Houtveen, T., & Grift, van de, W. (2018). Effects of professional support in school improvement. *Educational Studies*, 1-18. DOI: 10.1080/03055698.2018.1443798

Kvale, S. & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing* (2nd ed.). Thousand Oaks, California: SAGE Publications, Inc.

Kyriakides, L. (2008). Testing the validity of the comprehensive model of educational effectiveness: A step towards the development of a dynamic model of effectiveness. *School Effectiveness and School Improvement*, *19*(4), 429-446.

Kyriakides, L., Bosker, R., Muijs, D., Papadatos, Y., & Van Petegem, P. (2011). Designing evidence-based strategies and actions to face bullying by considering socio-ethnic diversities in school populations and evaluating their effects. Nicosia, Cyprus: University of Cyprus, Retrieved from http://www.ucy.ac.cy/data/jls/publications/FINAL%20REPORT.pdf

Kyriakides, L., & Charalambous, C. (2005). Using educational effectiveness research to design international comparative studies: Turning limitation into new perspectives. *Research Papers in Education, 20*(4), 391-412.

Kyriakides, L. & Creemers, B. P. M. (2008). Using a multidimensional approach to measure the impact of classroom-level factors upon student achievement: A study testing the validity of the dynamic model. *School Effectiveness and School Improvement, 19*(2), 183-205.

Kyriakides, L., Creemers, B. P. M., & Antoniou, P. (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *Teaching and Teacher Education, 25*(1), 12-23.

Kyriakides, L., Creemers, B., Antoniou, P., & Demetriou, D. (2010). A synthesis of studies searching for school factors: Implications for theory and research. *British Educational Research Journal, 36*(5), 807-830.

Kyriakides, L., Creemers, B.P.M., Muijs, D., Rekers-Mombarg, L., Papastylianou, D.,

Van Petegem, P., & Pearson, D. (2014). Using the dynamic model of educational effectiveness to design strategies and actions to face bullying. *School Effectiveness and School Improvement, 25*(1), 83-104.

Lazear, E. P. (2000). The future of personnel economics. *The Economic Journal, 110*(467), 611– 639.

Lee, J. C., & Lo, L. N. (2007). The Accelerated Schools for Quality Education Project: experiences of school change in Hong Kong. *Improving Schools*, *10*(2), 180–198

Leithwood, K., Steinbach, R., & Jantzi, D. (2002). School leadership and teachers' motivation to implement accountability policies. *Educational Administration Quarterly, 38*(1), 94–119. DOI:10.1177/0013161X02381005

Levin, H. (1993). Learning from accelerated schools. In H. J. Block, S. T. Everson, & T. R. Guskey, (Eds.), *Selecting and integrating school improvement programs* (pp. 45-62). New York: Scholastic Books.

Little, J. W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers College Record, 91*(4), 509-536.

Louis, K. S. (2007). Changing the culture of schools: Professional community, organizational learning, and trust. *Journal of School Leadership*, 16, 477–487.

Luyten, H., Visscher, A., & Witziers, B. (2005). School Effectiveness Research: From a Review of the Criticism to Recommendations for Further Development. *School Effectiveness and School Improvement 16*(3), 249-79.

Ma, X., & Willms, J. D. (1999). Dropping out of advanced mathematics: How much do students and schools contribute to the problem? *Educational Evaluation and Policy Analysis, 21*(4), 365-383.

MacBeath, J. & Mortimore, P. (2001). School effectiveness and improvement: The story so far. In J. MacBeath, & P. Mortimore, (Eds.), *Improving School Effectiveness* (pp. 1-20). Buckingham: Open University Press.

MacBeath, J., Gray, J., Cullen, J., Cunningham, H., Ebbutt, D., Frost, D., Steward, S. & Swaffield, S. (2005). *Schools facing exceptionally challenging circumstances: Final report.* Cambridge: University of Cambridge Faculty of Education.

Macey, W. H., Schneider, B., Barbara, K. M., & Young, S. A. (2009). *Employee engagement: Tools for analysis, practice and competitive advantage*. Malden, MA: Wiley.

Machin, S., & Vignoles, A. (2005). *What's the good of education?: The economics of education in the UK*. Oxford: Princeton University Press.

Macneil, A., Prater, D., & Busch, S. (2009). The effects of school culture and climate on student achievement. *International Journal of Leadership in Education, 12*(1), 73-84.

Martorell, P., Heaton P., Gates, S. M., & Hamilton, L. S. (2010). *Preliminary findings from the new leaders for new schools evaluation*. Santa Monica, CA: RAND Corporation. Retrieved from https://www.rand.org/pubs/working_papers/WR739.html.

Maxcy, S. J. (2003). Pragmatic threads in mixed methods research in the social sciences: The search for multiple modes of inquiry and the end of the philosophy of formalism. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research*, (pp. 51-90). Thousand Oaks, California: SAGE Publications, Inc.

Maxwell, G., M., Huggins, K., & Scheurich, S. (2010). How one historically underperforming diverse rural high school achieved a successful turnaround. *Planning and Changing, 41*(3), 161-186

McLaughlin, M. (1993). What matters most in teachers' workplace context, in J. Warren Little & M. McLaughlin (Eds.), *Teachers' work: Individuals, colleagues, and contexts*. New York: Teachers College Press.

McCulloch, G. (2004). *Documentary Research: In education, history and the social sciences.* London: Routledge Falmer.

Mendenhall, A. N., Iachini, A., & Anderson-Butcher, D. (2013). Exploring stakeholder perceptions of facilitators and barriers to implementation of an expanded school improvement model. *Children & School, 35*(4), 225-234.

Miles, M., Huberman, A., & Saldaña, J. (2013). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks: SAGE Publications, Inc.

Mintrop, H., & MacLellan, A. M. (2002). School improvement plans in elementary and middle schools on probation. *Elementary School Journal, 102*, 275-300.

Mitchell, C., & Sackney, L. (2000). *Profound improvement: Building capacity for a learning community*. The Netherlands: Swets & Zeitlinger.

Modin, B., & Östberg, V. (2009). School climate and psychosomatic health: A multilevel analysis. *School Effectiveness and School Improvement, 20*(4), 433-455.

Moore, S. N, Murphy, S., Tapper, K., & Moore, L. (2010). The social, physical and temporal characteristics of primary school dining halls and their implications for children's eating behaviours. *Health Education, 110*(5), 399-411.

Moore, T. S., Lapan, S. D., & Quartaroli, M. T. (2012). Case study research. In S. D. Lapan, M. T. Quartaroli & Riemer, F. J. (Eds.), *Qualitative research: An introduction to methods and designs* (pp. 41-68). San Francisco, CA: Jossey-Bass.

Moorcroft, R., & Caton, G. (2009). *School management and multi-professional partnerships*. London: Continuum.

Mortimore, P. (2001). Globalisation, Effectiveness and Improvement, *School Effectiveness and School Improvement, 12*(2), 229-249.

Moskowitz, G. B. (2005). *Social cognition.* New York, NY: Guilford Press.

Mourshed, M., Chijioke, C., & Barber, M. (2010). *How the world's most improved school systems keep getting better*. London: McKinsey & Company.

Muijs, D. (2010). A Fourth Phase of School Improvement? Introduction to the Special Issue on Networking and Collaboration for School Improvement. *School Effectiveness and School Improvement* , *21*(1), 1-3.

Muijs, D., & Harris, A. (2003). Teacher leadership-improvement through empowerment? An overview of the literature. *Educational Management & Administration, 31*(4), 437-48.

Muijs, D., & Harris, A. (2006). Teacher led school improvement: Teacher leadership in the UK. *Teaching & Teacher Education: An International Journal of Research and Studies, 22*(8), 961-972.

Muijs, D., Harris, A., Chapman, C., Stoll, L., & Russ, J. (2005). Improving Schools in Socio-Economically Disadvantaged Areas: A Review of Research Evidence. In C. Paul (Ed.), *Improving Schools in Difficulty* (pp. 94-114). London: Continuum.

Muijs, D., West, M., & Ainscow, M. (2010). Why network? Theoretical perspectives on networking. *School Effectiveness and School Improvement, 21*(1), 5-26. DOI: 10.1080/09243450903569692

Mulryan-Kyne, C. (2014). The school playground experience: Opportunities and challenges for children and school staff. *Educational Studies, 40*(4), 377-395.

Murphy, D. (2012). How should we measure improvement in the future? *The Times Educational Supplement Scotland*, 2257, 35.

National Center on Effective Secondary Schools. (1992). In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools* [microform]. Washington, DC: ERIC Clearinghouse. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED371047.

National College for Leadership of Schools and Children's Services. (2002). *Making the*

difference: Successful leadership in challenging circumstances: A practical guide to what school leaders can do to improve and energise their schools. Retrieved from http://dera.ioe.ac.uk/17415/

Nicolaidou, M. (2005). What is Special about Special Measures? Perspectives from the Inside. In C. Paul (Ed.), *Improving Schools in Difficulty* (pp. 56-80). London: Continuum.

Nuttall, D. L., Goldstein, H., Prosser, R., & Rabash, J. (1989). Differential school effectiveness. *International Journal of Educational Research, 13*(7). 769-76.

OECD. (2017). *PISA 2015 Results: Collaborative Problem Solving (Volume V)*. Paris: OECD Publishing.

Opdenakker, M., & Van Damme, J. (2000). Effects of schools, teaching staff and classes on achievement and well-being in secondary education: Similarities and differences between school outcomes. *School effectiveness and school improvement, 11*(2), 165-196.

Opdenakker, M. C., Van Damme, J., De Fraine, B., Van Landeghem, G., & Onghena, P. (2002). The effects of schools and classes upon mathematics achievement. *School Effectiveness and School Improvement, 13*(4), 399-427.

Orange, A. (2014). What they left behind: A case study of teachers' experiences with school improvement at Evergreen elementary school. *The Qualitative Report, 19*(37), 1-16.

Panayiotou, A., Kyriakides, L., & Creemers, B. (2015). Testing the validity of the dynamic model at school level: A European study. *School Leadership & Management, 36*(1), 1-20.

Papanastasiou, C. (2000). Effects of attitudes and beliefs on mathematics achievement. *Studies in Educational Evaluation, 26*, 27-42.

Pas, E. T., Bradshaw, C. P., & Hershfeldt, P. A. (2012). Teacher- and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of School Psychology, 50*, 129-145.

Pellegrini, A., Kato, K., Blatchford, P., & Baines, E. (2002). A short-term longitudinal study of children's playground games across the first year of school: Implications for social competence and adjustment to school. *American Educational Research Journal, 39*(4), 991-1015.

Pellegrini, A. D., & Bohn, C. M. (2005). The role of recess in children's cognitive performance and school adjustment. *Educational Researcher 34*(1), 13–19.

Pellegrini, A., Kato, K., Blatchford, P., & Baines, E. (2002). A short-term longitudinal study of children's playground games across the first year of school: Implications for social competence and adjustment to school. *American Educational Research Journal, 39*(4), 991-1015.

Peterson, R. (2000). *Constructing effective questionnaires*. Thousand Oaks: SAGE Publications.

Peterson, K., & Deal, T. (1998). How leaders influence the culture of schools. *Educational Leadership 56*(1), 28-30.

Pounder, D. (1999). Teacher teams: Exploring job characteristics and work-related outcomes of work group enhancement. *Educational Administration Quarterly, 35*(3), 317-348.

Pring, R. (2000). *Philosophy of educational research*. London, UK: Continuum.

Prior, L. (2003). *Using Documents in Social Research*. London: Sage Publications.

Razzak, N. A., (2016). Teachers' experiences with school improvement projects: The case of Bahraini public schools. *Cogent Education, 3*(1), 27-53.

Reeves, D. B. (2009). *Leading change in your school: How to conquer myths, build commitment, and get results*. Alexandria, VA: Association for Supervision & Curriculum Development

Reynolds, A. J., & Walberg, H. J. (1990). *A structural model of educational productivity*. Illinois: Northern Illinois University.

Reynolds, D. (2001). Beyond school effectiveness and school improvement. In A. Harris, & N. Bennett, (Eds.), *School effectiveness and school improvement: Alternative perspectives*. (pp. 26-43) London: Continuum.

Reynolds, D., Chapman, C., Clarke, P., Muijs, D., Sammons, P., & Teddlie, C. (2016). Conclusions: The future of educational effectiveness and improvement research and some suggestions and speculations. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 408-440). New York: Routledge.

Reynolds, A., Hayakawa, M., Ou, S., Mondi, C., Englund, M., Candee, A., & Smerillo, N. (2017). Scaling and sustaining effective early childhood programs through school–family–university collaboration. *Child Development, 88*(5), 1453-1465.

Reynolds, D., Hopkins, D., & Stoll, L. (1993). Linking school effectiveness and school

improvement practice: Towards a synergy. *School Effectiveness and School Improvement, 4*(1), 37-58.

Reynolds, D., Kelly, A., & Chapman, C. (2016). Educational effectiveness and improvement research and educational policy. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 283-310). New York: Routledge.

Reynolds, D., Sammons, P., De Fraine, B., Van Damme, J., Townsend, T., Teddlie, C., & Stringfield, S. (2014). Educational effectiveness research (EER): A state-of-the-art review. *School Effectiveness and School Improvement, 25*(2), 197-230.

Reynolds, D., Stringfield, S. & Schaffer, E. C. (2006). The High Reliability Schools Project. In A. Harris, & J. H. Chrispeels, (Eds), *Improving schools and educational systems*, (pp. 56-76). New York: Routledge.

Reynolds, D., Teddlie, C., Chapman, C., & Stringfield, S. (2016). Effective school processes. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 77-100). New York: Routledge.

Rhodes, C., & Houghton-Hill, S. (2000). The linkage of continuing professional development and the classroom experience of pupils: Barriers perceived by senior managers in some secondary schools. *Journal of In-Service Education, 26*(3), 423-435.

Ribbins, P., & Burridge, E. (1994). *Improving education: Promoting quality in schools*. London: Cassell.

Ribbins, P. (2007). Interviews in educational research: Conversations with a purpose. In A. R. J. Briggs & M. Coleman (Eds.), *Research methods in educational leadership and management,* (2nd ed., pp. 207-223). Thousand Oaks, California: Sage Publications, Inc.

Rice, E. (2002). The collaboration process in professional development schools: Results of a meta-ethnography, 1990-1998. *Journal of Teacher Education, 53*(1), 55-67.

Rockoff, J. E. (2004). The impact of individual teachers on student achievement: Evidence from panel data. *American Economic Review, 94*(2), 247–252.

Roderick, C., Pitchford, M., & Miller, A. (1997). Reducing aggressive playground behaviour by means of a school-wide 'raffle'. *Educational Psychology in Practice, 13*(1), 57-63.

Rose, S. (1999). *No such thing as a stress free lunch*. Retrieved from https://www.tes.com/news/no-such-thing-stress-free-lunchbriefingschool-management

Ross, S. M., Tabachnick, S., & Sterbinsky, A. (2002). *Using comprehensive school reform models to raise student achievement: Factors associated with success in Memphis schools*. Memphis, TN: University of Memphis, Center for Research in Educational Policy

Rowan, B., & Miller, R. J. (2007). Organizational strategies for promoting instructional change: Implementation dynamics in schools working with comprehensive school reform providers. *American Educational Research Journal, 44*(2), 252-297, DOI: 10.3102/0002831207302498

Rubinson, F. (2002). Lessons learned from implementing problem-solving teams in urban high schools. *Journal of Educational and Psychological Consultation, 13*, 185–217.

Rutter, M., Maughan, B., Mortimore, P., & Ouston, J. (1979). *Fifteen thousand hours*. London: Open Books.

Sammons, P. (1995). *Understanding school and departmental differences in academic effectiveness: Findings from case studies of selected outlier secondary schools in inner London*. London: University of London. International School Effectiveness & Improvement Centre.

Sammons, P., Hillman, J., & Mortimore, P., (1995). *Key characteristics of effective schools: A review of school effectiveness research.* London: University of London, Institute of Education. Office for Standards in Education.

Sammons, P. (1996). Complexities in the judgement of school effectiveness. *Educational Research and Evaluation, 2*(2) 113 – 149.

Sammons, P. (1999). School effectiveness: Coming of age in the 21st century. *Management in Education, 13*(5), 10-13.

Sammons, P. (2007). *School effectiveness and equity: Making connections. A review of school effectiveness and improvement research – its implications for practitioners and policy makers*. CfBT Education Trust. Retrieved from http://cdn.cfbt.com/~/media/cfbtcorporate/files/research/2007/r-school-effectiveness-and-equity-full-2007.pdf

Sammons, P., Davis, S., Day, C., & Gu, Q. (2014). Using mixed methods to investigate

school improvement and the role of leadership. *Journal of Educational Administration, 52*(5), 565-589.

Sarason, S. B. (1982). *Psychology and social action: Selected papers*. New York; Praeger.

Sarason, S. (1996). *Revisiting the culture of the school and the problem of change.* New York: Teachers College Press.

Schaffer, E., Reynolds, D., & Stringfield, S. (2012). Sustaining turnaround at the school and district levels: The High Reliability Schools Project at Sandfields Secondary School. *Journal of Education for Students Placed at Risk, 17*(1-2), p.108-127.

Scheerens, J., Bosker, R. J., & Creemers, B. P. M. (2001). Time for self-criticism: On the viability of school effectiveness research. *School Effectiveness and School Improvement, 12*(1), 131–157.

Scheerens, J. & Bosker, R. J. (1997). *The foundations of educational effectiveness*. Oxford: Pergamon.

Scheerens, J., Bosker, R. J., & Creemers, B. P. M. (2001). Time for Self-Criticism: On the Viability of School Effectiveness Research. *School Effectiveness and School Improvement,* 12(1), 131-57.

Schreiber, J. B. & Asner-Self, K. (2011). *Educational research: The interrelationship of questions, sampling, design and analysis*. Hoboken, N.J.: Wiley.

Scott, J. (1990). *A matter of record: Documentary sources in social research*. Cambridge: Policy Press.

Seidman, I. (2008). *Interviewing as qualitative research*. (3rd ed.). New York, NY: Teachers College Press.

Shachar, H., & Shmuelevitz, H. (1997). Implementing cooperative learning, teacher collaboration and teachers' sense of efficacy in heterogeneous junior high schools. *Contemporary Educational Psychology, 22*(1), 53-72.

Sheng, W., Ng, T., & Wilson, E. (2017). A perspective of teachers' appropriation of educational innovations. *International Journal for Lesson and Learning Studies*, *6*(3), 202-215. https://doi.org/10.1108/IJLLS-12-2016-0052

Siddiqui, N., & Ventista, O. M. (2018). A review of school-based interventions for the improvement of social emotional skills and wider outcomes of education. *International Journal of Educational Research, 90,* 117-32.

Silin, J., & Schwartz, F. (2003). Staying close to the teacher. *Teachers College Record,*

105(8), 1586-1605.

Sikes, P. (2010). The ethics of writing life histories and narratives in educational research. In A. Bathmaker & P. Harnett (Eds.), *Exploring learning, identity and power through life history and narrative research* (pp. 11-24). London: Routledge.

Silverman, D. (2005). *Doing qualitative research.* (2nd ed.). Thousand Oaks, California: Sage Publications, Inc.

Silverman, D. (1993). *Interpreting qualitative data*. London: Sage Publications.

Sirin, S. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research, 75*(3), 417-453.

Slavin, R. E., Madden, N. A., Karweit, N. L., Dolan, L., & Wasik, B. A. (1992). *Success for All: A relentless approach to prevention and early intervention in elementary schools*. Arlington VA: Educational Research Service.

Slavin, R., Madden, N., Dolan, L., Wasik, B., Ross, S., Smith, L., & Dianda, M. (1996). Success for All: A Summary of Research. *Journal of Education for Students, 1*(1), 41-76.

Slee, R. & Weiner, G. (2001). Education reform and reconstruction as a challenge to research genres: Reconsidering school effectiveness research and inclusive schooling. *School Effectiveness and School Improvement* 12(1) 83-98.

Slee, R., Weiner, G., & Tomlinson, S. (1998). *School Effectiveness for Whom? Challenges to the School Effectiveness and School Improvement Movements*. Abingdon: Routledge Falmer.

Slonski-Fowler, K. E., & Truscott, S. D. (2004). General education teachers' perceptions of the pre-referral intervention team process. *Journal of Educational and Psychological Consultation, 15,* 1–39.

Smith, D. J., & Tomlinson, S. (1989). *The school effect: A study of multi-racial comprehensives*. London: Policy Studies Institute.

Songer, N. B., Lee, H. S., & Kam, R. (2002). Technology-rich inquiry science in urban classrooms: What are the barriers to inquiry pedagogy? *Journal of Research in Science Teaching, 39*(2), 128-50.

Spillane, J., Halverson, R., & Diamond, J. (2004). Towards a theory of leadership practice: A distributed perspective. *Journal of Curriculum Studies, 36*(1), 3-34.

Spratt, J., Shucksmith, J., Philip, K., & Watson, C. (2006). Interprofessional support of mental well-being in schools: A Bourdieuan perspective. *Journal of Interprofessional Care, 20,* 391–402.

Steele, F., Vignoles, A., & Jenkins, A. (2007). The effect of school resources on pupil attainment: A multilevel simultaneous equation modelling approach. *Journal of the Royal Statistical Society: Series A (Statistics in Society), 170*(3), 801-824.

Stephens, L., & Byker Shanks, C. (2015). K-12 school food service staff training interventions: A review of the literature. *Journal of School Health, 85*(12), 825-832.

Stevens, C. J., & Sanchez, K. S. (1999). Perceptions of parents and community members as a measure of school climate. In H. J. Freidberg (Ed.), *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments* (pp. 124-147). London: Falmer Press.

Stinson, M. (2009). "Drama is like reversing everything": Intervention research as teacher professional development. *Research in Drama Education, 14*(2), 225-243.

Stoll, L., Earl, L., Anderson, S., & Schildkamp, K. (2016). Educational effectiveness and improvement research and teachers and teaching. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 348-365). New York: Routledge.

Stoll, L., & Fink, D. (1994). Views from the field: Linking school effectiveness and school improvement. *School Effectiveness and School Improvement, 5*(2), 149-77.

Stoll, L. (1996). Linking school effectiveness and school improvement: Issues and possibilities. In J. Gray, D. Reynolds, C. Fitz-Gibbon, & D. Jesson (Eds.), *Merging traditions: The future of research and school effectiveness and school improvement*. (pp. 51-73). London: Cassell.

Stoll L., Wikeley, F., & Reezigt, G. (2002). Developing a common model? Comparing effective school improvement across European countries. *Educational Research and Evaluation, 8*(4), 455-475, DOI: 10.1076/edre.8.4.455.8819

Stringfield, S. (1995). Attempting to enhance students' learning through innovative programs: The case for schools evolving into high reliability organizations. *School Effectiveness and School Improvement, 6*(1), 67-96.

Strunk, K., Marsh, J., Bush-Mecenas, S., & Duque, M. (2016). The best laid plans: An examination of school plan quality and implementation in a school improvement initiative. *Educational Administration Quarterly, 52*(2), 259-309.

Stutchbury, K. (2012). Ethics in educational research. In Wilson, E. (Ed.). *School-based*

research: A guide for education students (pp. 82-95). London: Sage Publications Ltd.

Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary-grade reading instruction in low-income schools. *Elementary School Journal, 101*(2), 121-65.

Taylor, B., Pearson, P., Peterson, D., & Rodriguez, M. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *The Elementary School Journal, 104*(1), 3-28.

Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, California: SAGE Publications Ltd.

Teaching and Learning International Survey (2008). *Technical report.* OECD: http://www.oecd.org/education/school/44978960.pdf

Teddlie, C., & Reynolds, D. (2000). *The international handbook of school effectiveness research*. London: Falmer Press.

Teddlie, C., & Stringfield, S. (1993). *Schools make a difference: Lessons learned from a 10-year study of school effects*. New York; London: Teachers College Press.

Teddlie, C., & Stringfield, S. (2006). A brief history of school improvement research in the USA. In A. Harris, & J. H. Chrispeels, (Eds), *Improving schools and educational systems,* (pp. 23-38). New York: Routledge.

Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioural sciences. In A. Tashakkori, & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioural research*. (pp. 3-50). Thousand Oaks, California: SAGE Publications, Inc.

Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative techniques in the social and behavioral sciences*. London: SAGE.

ten Have, P. (2004). *Understanding Qualitative Research and Ethnomethodology*. London: Sage Publications.

Terhart, E. (2013). Teacher resistance against school reform: Reflecting an inconvenient truth. *School Leadership & Management, 33*(5), 486-500.

Thornberg, R. (2012). A grounded theory of collaborative synchronizing in relation to challenging students. *Urban Education, 47*(1), 312-342.

Thornberg, R. (2014). Consultation barriers between teachers and external consultants: A

grounded theory of change resistance in school consultation. *Journal of Educational and Psychological Consolation,* 24, 183-210.

Thrupp, M. (1999). *Schools Making a Difference: Let's be Realistic*. Buckingham: Open University Press.

Thrupp, M. (2001). Recent school effectiveness counter-critiques: Problems and possibilities. *British Educational Research Journal, 27*(4), 443-57.

Townsend, T. (1994). *Effective Schooling for the Community*. London and New York: Routledge.

Townsend, T., MacBeath, J., & Bogotch, I. (2016). Critical and alternative perspectives on educational effectiveness and improvement research. In C. Chapman, D. Muijs, D. Reynolds, P. Sammons, C. Teddlie (Eds.), *The Routledge International Handbook of Educational Effectiveness and Improvement: Research, Policy, and Practice* (pp. 380-408). New York: Routledge.

Travers, C. J., & Cooper, C. L. (1996). *Teachers under pressure: Stress in the teaching profession.* London: Routledge.

Tschannen-Moran, & Hoy. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805.

Turnbull, B. (2002). Teacher participation and buy-in: Implications for school reform initiatives. *Learning Environments Research, 5*(3), 235-52.

Unger, R. M. (2019). *The knowledge economy*. London: Verso.

Vancil-Leap, A. (2017). Resistance and adherence to the gendered representations of school lunch ladies. *Gender Issues, 34*(1), 67-85.

Van De Gaer, E., Pustjens, H., Van Damme, J., & De Munter, A. (2009). School engagement and language achievement: A longitudinal study of gender differences across secondary school. *Merrill-Palmer Quarterly, 55*(4), 373-405.

Van Landeghem, G., Van Damme, J., Opdenakker, M. C., De Fraine, B., & Onghena, P. (2002). The effect of schools and classes on noncognitive outcomes. *School Effectiveness and School Improvement* 13(4), 429-451.

Vaughn, S., Schumm, J. S., & Sinagub, J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, California: Sage Publications, Inc.

Verma, G. K., & Mallick, K. (1999). *Researching education: Perspectives and techniques*. Philadelphia, PA: Falmer Press.

Weingarten, R. (2012). The role of teachers in school improvement: Lessons from the field. *Harvard Law & Policy Review, 6*(1), 9.

Wilcox, B. & Grey, J. (1996). *Inspecting Schools: Holding Schools to Account and Helping Schools to Improve*. Bristol: Open University Press.

Woodland, R., Lee, M., & Randall, J. (2013). A validation study of the teacher collaboration assessment survey. *Educational Research and Evaluation, 19*(5), 442-460.

World Bank Institute (2007). *Building Knowledge Economies Advanced Strategies for Development*. Washington, D. C.: The World Bank.

Wrigley, T. (2005). The politics of improvement: What hope now for working-class kids? In C. Paul (Ed.), *Improving Schools in Difficulty* (pp 22-42). London: Continuum.

Yin, R. (2013). *Case study research: Design and metho*ds. Thousand Oaks: SAGE Publications, Inc.

Yin, R. (2017). *Case study research and applications: Design and methods*. Los Angeles: SAGE

Yoon, S. (2016). Principals' data-driven practice and its influences on teacher buy-in and student achievement in comprehensive school reform models. *Leadership and Policy in Schools, 15*(4), 500-523.

Appendices

Appendix A: Student, Classroom and System Levels of Influence

Student Level Factors

Although schools may not able to influence many of the factors that reside on the student level, the DASI model incorporates these factors into the framework because their impact on student outcomes must be acknowledged (Creemers, & Kyriakides, 2008). Factors included at the student level emerged from socio-cultural and psychological spheres of educational effectiveness research (see Figure 3). Socio-cultural characteristics such as gender, ethnic background and SES have been found to explain differences in student outcomes to a significant degree (Sirin, 2005). Similarly, studies influenced by psychological perspectives have found factors of aptitude, motivation and personality to explain variance in student achievement (Bandura, 1996).

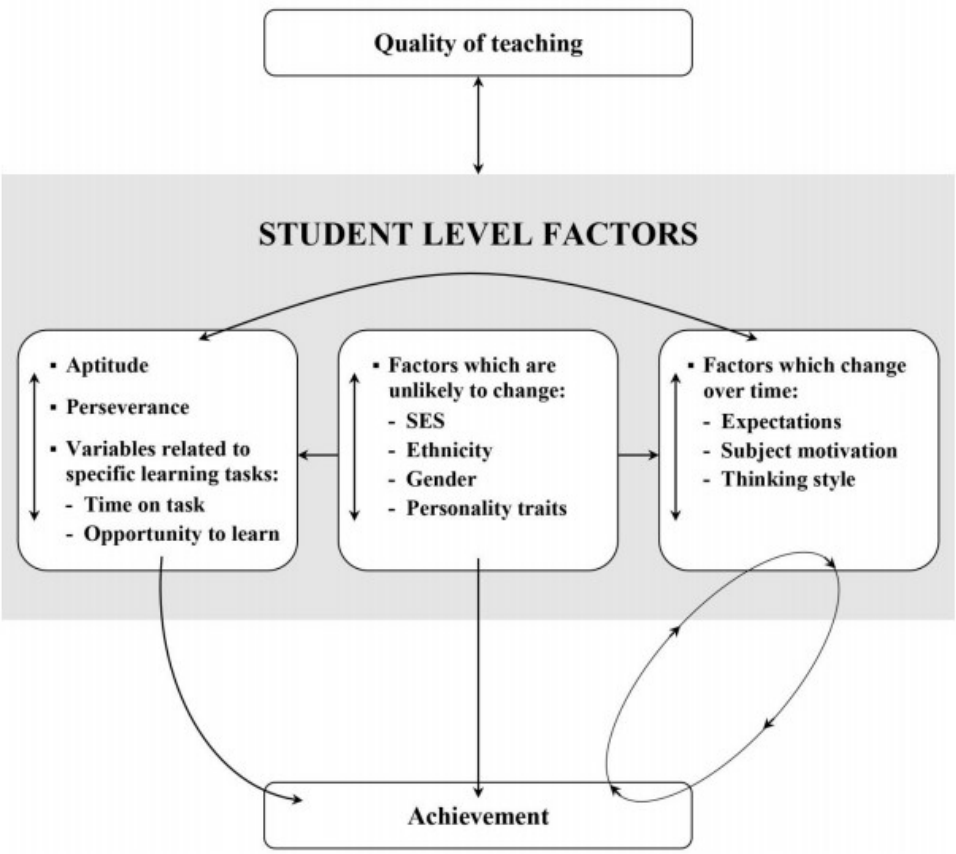

Figure 3. Student level factors (Creemers, & Kyriakides, 2012, p. 29)

Additionally, DASI separates factors on the student level by identifying those that have the capacity to change over the course of a student's time in school, versus ones that are less likely to alter within that period (Creemers, & Kyriakides, 2012). Though some factors are outside of school influence, the dynamic model advises teachers to be aware of these factors, their functioning and their influence on student outcomes. This knowledge will support teachers in developing differentiated teaching strategies, so as to better support and serve pupils.

Classroom Level Factors

The factors incorporated at the classroom level of DASI focus on teacher behaviour and the learning environment (see Figure 4). Multiple research studies across a wide range of countries have shown that the influence of teachers on student achievement should not be underestimated (Antoniou, & Kyriakides, 2011; Demetriou, & Kyriakides, 2012; Teddlie, & Reynolds, 2000).

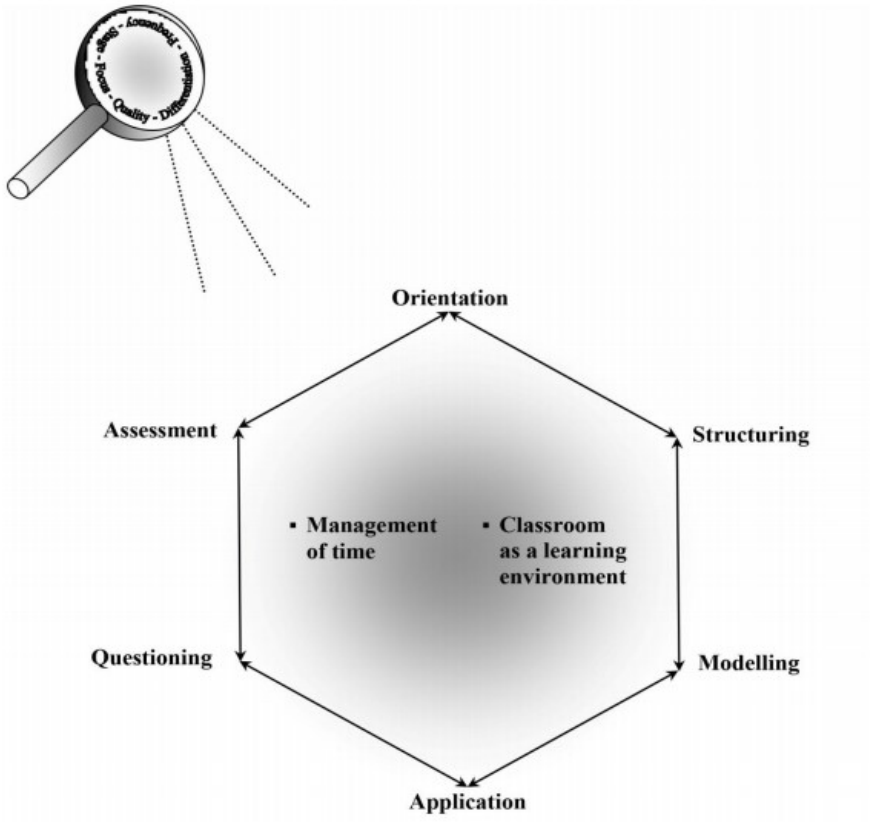

Figure 4. Classroom level factors (Creemers, & Kyriakides, 2012, p. 34)

In the process of detailing the classroom level of DASI, Creemers, and Kyriakides (2010a), relied on evidence from teacher effectiveness research studies to select factors related to teachers' instructional roles that have been shown to impact student achievement. The classroom level of DASI incorporates the following eight factors: structuring, modeling, orientation, questioning, application, assessment, time management, and the classroom as a learning environment (Creemers, & Kyriakides, 2008). In testing the validity of these factors, Antoniou (2013) discovered that it is possible to group the aforementioned factors into five progressively increasing levels of teaching skill. Teachers that exhibit more advance teaching skills, thereby residing in the top category, achieve better student outcomes.

System Level Factors

The last level of the dynamic model addresses factors that operate at the system dimension (see Figure 5). System level factors may have both direct and indirect influence on student achievement; additionally the system level is expected to affect factors that reside on the school and classroom levels (Creemers, & Kyriakides, 2012). The system level accounts for three overarching factors: national policy for education, evaluation of national policy and the general educational environment.

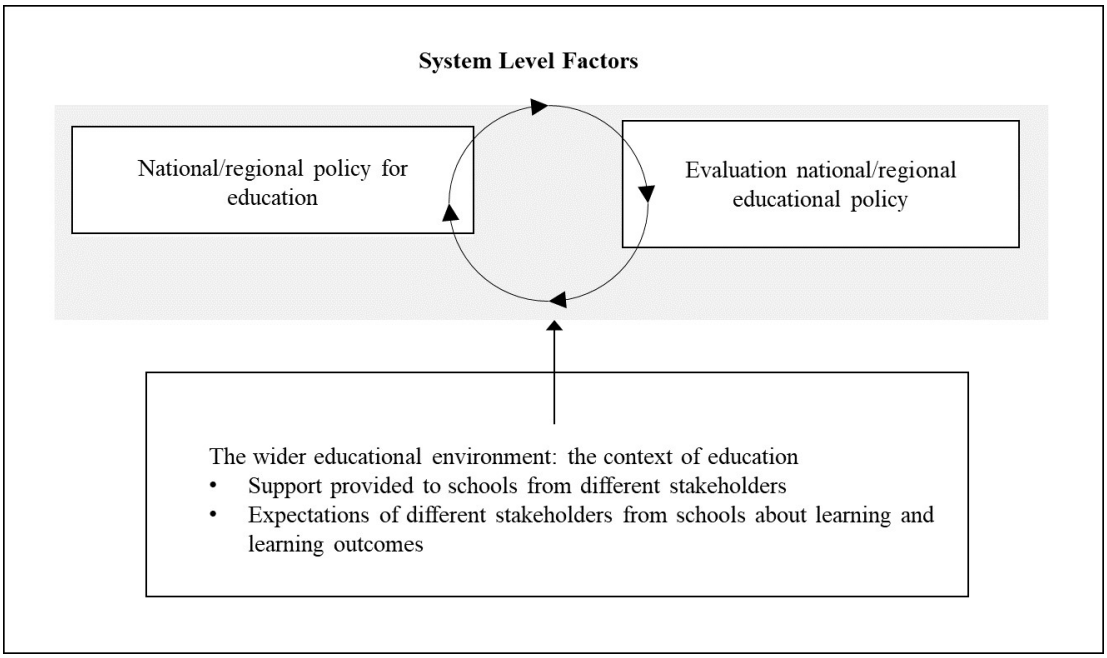

Figure 5. System level factors (Creemers, & Kyriakides, 2012, p.43)

The national educational policy of a country directly connects to teacher practice and the school learning environment of individual schools, especially with regards to quantity and quality of teaching (Creemers, Kyriakides, & Antoniou, 2013b). Policy regarding the school timetable, textbooks, teacher professional development and even school improvement are often developed at the national level and impact how schools operate day to day (Creemers, & Kyriakides, 2008). Similarly to the classroom and school level, the DASI model establishes the importance of evaluating the national policy. Education systems need to regularly assess the effectiveness and appropriateness of national policy, so as to ensure that it serves the schools as intended (Creemers, & Kyriakides, 2012). Lastly, the system level of the dynamic model also refers to the wider educational environment. In many countries schools are supported by the local community as well as by public organizations, such as the libraries, religious institutions, and universities. This support may be enacted through provision of resources or training, and may also take the form of expectations placed on the school with regards to performance by stakeholders inhabiting the community. Schools are seen to be more effective when the broader community values and supports education and academic excellence (Creemers, Kyriakides, & Antoniou, 2013b).

Appendix B: The Five Measurement Dimensions of DASI

The Five Measurement Dimensions

One of the key aspects of DASI which distinguishes it from other frameworks is the inclusion of a measurement instrument (see Figure 6). The classroom, school and system level factors are measured through the five measurement dimensions: frequency, focus, stage, quality and differentiation (Creemers & Kyriakides, 2008). Four of the measurement dimensions provide qualitative data about the aforementioned classroom and school level factors, while the fifth, frequency provides a quantitative measure. The frequency dimension measures how often the behaviour or action associated with the factors at the classroom, school and system level occur over a period of time (Creemers, & Kyriakides, 2010a). The dimension of focus examines the purpose behind the activity or behaviour, and is measured through the identification of the number of purposes and the specificity of the purposes (Creemers, & Kyriakides, 2010b). Stage is the third measurement dimension included in the DASI model; this dimension refers to the period or stage during which an activity or behaviour occurs. The quality dimension makes connections between practice and academic literature. In evaluating the quality dimension of the factor, it is vital to consider the properties of the activities and the factor in terms of the existing literature on the topic (Creemers, & Kyriakides, 2012). Differentiation is the last measurement dimension included in the DASI model. Differentiation refers to the practice of acknowledging and accounting for the strengths and needs of the students (Creemers, & Kyriakides, 2015).

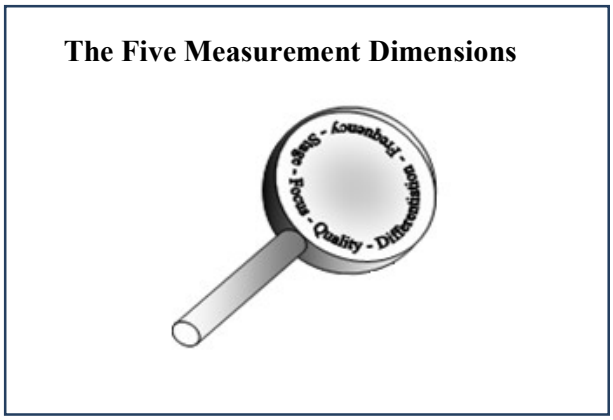

Figure 6. The five measurement dimensions (Creemers, & Kyriakides, 2012, p. 23)

Appendix C: Implementing the Dynamic Model in Practice

The DASI framework is implemented in practice by school stakeholders working in partnership with a research and advisory team. School stakeholders that take part in the improvement initiative could include any combination of students, teachers, headteachers, support staff, and parents (Creemers, & Kyriakides, 2012). The advisory and research team supporting the effort is typically headed by university based researchers, though unaffiliated specialist consultants may be included on the team as well. External support is an integral part of DASI, as it is the advisory and research team that guides the school through the steps of implementation and offers their knowledge and resources in the process of strategy development (Creemers, & Kyriakides, 2010b). The major steps of DASI (see Figure 7, overleaf) are the same for change being implemented at the classroom and school levels. While the overarching steps of DASI are the same school to school, the specific strategies for change may differ significantly depending on the school in question. DASI does not insist upon prescribed actions for change because the model recognizes that schools do not all begin at the same level of effectiveness (Creemers, & Kyriakides, 2008).

The first step of the dynamic model involves the development of consensus regarding the general aims of improvement. The DASI model establishes student learning, and the improvement of student learning and outcomes to be the overarching goal of schooling and subsequently of the reform efforts (Creemers, Kyriakides, & Antoniou, 2013b). Teacher agreement with this concept and willing commitment to participation in the project must be established prior to commencement of the initiative. The dynamic model is a whole-school approach to reform, and encourages the engagement of the entire school community in the improvement project. However, the model also recognizes that not all staff members will desire to participate in the initiative, and emphasises the recruitment of willing volunteers over the conscription of a large number of staff (Creemers, & Kyriakides, 2012). The second step of the model is a continuation of the first, wherein the advisory and research team seek to develop consensus regarding the factors of the school functioning that impact student outcomes. Particularly, the goal of this step is to establish that the factors included in the dynamic model are ones that must be address in the course of improvement, as school effectiveness hinges on the improvement of these particular factors (Creemers, & Kyriakides, 2015). These first two steps of the dynamic model usually take the form of group discourse with the school stakeholders, led by the advisory and research team.

Consensus may be reached over the course of one meeting, or several, but it must be established before the project is underway.

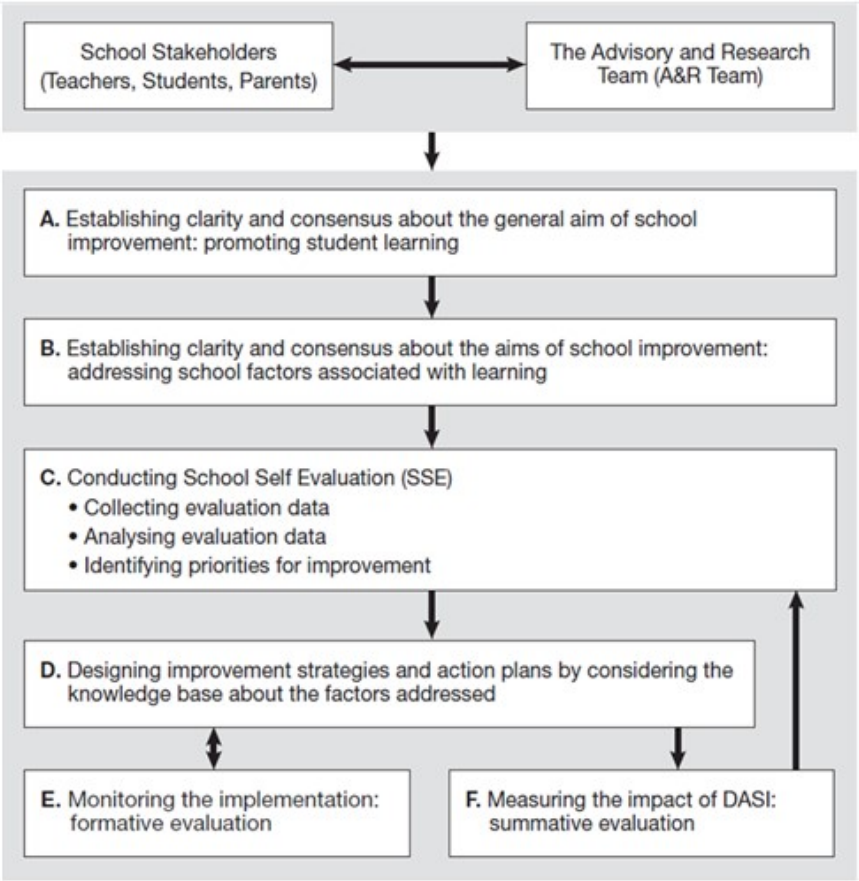

Figure 7. Major Steps of DASI (Creemers, & Kyriakides, 2012, p. 64)

The subsequent step of the dynamic model involves the identification of school priorities for improvement. This is done through collection of data at either the school or classroom level, for which Creemers and Kyriakides (2012) provide a number of different research instruments. Analysis of this data provides information on the strengths and weaknesses of the school in relation to the key factors. Through this process, the advisory and research team counsels the stakeholders on the areas of the school functioning and the specific factors that could be made a focus of improvement (Kyriakides, Bosker, Muijs, Papadatos, & Van Petegem, 2011). However, school staff members are not restricted or beholden to pursue improvement in the recommended area; the choice of factor is left up to the stakeholders, who may decide to focus on any of the factors presented in the DASI model (Creemers, & Kyriakides, 2008).

Once the area of improvement has been selected, school stakeholders continue on to design strategies for improvement. For this purpose the schools are provided with a handbook that contains examples of strategies that could be implemented towards improvement of key factors of the school functioning (Creemers, & Kyriakides, 2012). The actions set out in the handbook will likely not be applicable to all schools, but these examples may still be used as a guide by school staff members seeking to formulate their own strategies for reform (Kyriakides, et. al., 2014). The advisory and research team supports the school staff members in this process, by sharing their knowledge of literature and suggesting resources. However, once again, it is the school stakeholders that decide on the exact composition of their action plans and strategies to be undertaken towards improvement; the role of the advisory and research team is not to dictate the development of strategies but rather to guide the practitioners by offering advice, and expertise (Kyriakides, et. al., 2014).

The penultimate step of the dynamic model involves the development of structures to monitor the implementation of the project. This is done through the development of formative evaluation procedures to be implemented by the school stakeholders at a number of points throughout the initiative (Creemers, & Kyriakides, 2008). It is important to collect data during the implementation process so as to maintain track of progress and make adjustments to the action plan. This approach reflects the dynamic nature of the DASI model, in that changes to strategies incorporated in the improvement project are made continuously by the school staff, so that the effort accounts for and addresses any changes in the school context (Creemers, Kyriakides, & Antoniou, 2013b).

Summative evaluation of the improvement initiative is the final step of the dynamic model. DASI accentuates the importance of conducting a summative evaluation of the improvement project because it is necessary to measure the extent of impact produced by the reform effort (Kyriakides, et. al., 2014). To conduct evaluation at this stage, the advisory and research team collect similar type of data to the one that was collected in the third step, so as to enable value-added assessment (Creemers, & Kyriakides, 2012). The results of this evaluation are announced to the school staff members to assist them in deciding their next steps with regards to the initiative. Stakeholders may decide to alter their strategies or select another factor of the school functioning to direct their attention to, if desired improvement has been achieved in the initial focus of the project.

Appendix D: Email Recruiting Participants

Dear…

I am a PhD student from the Faculty of Education, at the University of Cambridge, undertaking research in the field of school improvement.

I am looking for schools to participate in a yearlong study wherein they implement the dynamic approach to school improvement (DASI). It is a proven and validated framework developed by Creemers and Kyriakides (2012). I have attached a brief document describing the particulars of the dynamic approach. In my research I would like to focus on the experience of the participants, and learn about the challenges and supports teacher experience over the course of the project.

If you would like to learn more, I would be happy to meet with you and provide greater detail about what to expect, and what the research will entail without any obligation to commit. I may also call you after this email as a follow up, to speak with you personally on this matter.

Thank you for your time,

Kind regards,
Julia Griaznova
PhD Candidate
jag210@cam.ac.uk
07746733514
Faculty of Education
184 Hills Road
Cambridge
CB2 8PQ
United Kingdom

Appendix E: Questionnaire for Measuring School Factors

SURVEY FOR PRIMARY SCHOOLS

Dear Colleagues,

I am carrying out a study investigating school improvement. I would appreciate it if you could find the time to complete this questionnaire. All the information you give will be strictly **confidential** and will be used for research purposes only. Your replies will provide information about your schools and how different areas of the school function.

Many thanks for taking the time to fill in this questionnaire.

PART A: THE FORMATION OF SCHOOL POLICY AND THE LEARNING ENVIRONMENT OF THE SCHOOL

Part A is comprised of statements concerned with practices that may occur in your school. After reading each statement carefully, circle the appropriate number:

1: if you strongly disagree with the statement

2: if you disagree with the statement

3: if you agree with the statement

4: if you strongly agree with the statement

		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q1.	Our school keeps records concerned with:				
	a. Student absenteeism	1	2	3	4
	b. Teacher absenteeism	1	2	3	4
	c. The different educational needs of individual students	1	2	3	4
	d. Long-term planning by teachers	1	2	3	4
	e. Organization of trips, visits and other extra-curricular activities not included in the formal curriculum	1	2	3	4

	f. Problems that arise among students during break time	1	2	3	4
	g. The use of educational resources for teaching supplied by the school (e.g. maps, software, internet etc.).	1	2	3	4
Q2.	Our school participates in programmes / projects (e.g., action research projects, collaboration with other schools, pilot initiatives) that focus on:				
	a. Making good use of teaching time	1	2	3	4
	b. Providing learning opportunities beyond those offered by the formal curriculum	1	2	3	4
	c. Improving the quality of teaching	1	2	3	4
	d. Student well-being (e.g. resilience, mindfulness)	1	2	3	4
Q3.	Our school takes into consideration the professional experience, skills and aptitudes of each individual teacher in designing and implementing **school policy for teaching.**	1	2	3	4
Q4.	The school management team acknowledges (formally/informally) teachers who make extra efforts in implementing **policy on teaching** (e.g. making good use of time)	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q5.	At staff meetings we discuss and take decisions on issues concerned with:				
	a. Making good use of teaching time	1	2	3	4
	b. Provision of extra learning opportunities in addition to those offered by the formal curriculum (e.g. extra-curricular activities, festivals, fairs, school trips, clubs)	1	2	3	4
	c. Methods to teach students effectively (e.g. structuring lessons, questioning, application, student assessment etc.)	1	2	3	4
	d. Teacher's role during break time	1	2	3	4
	e. Developing positive relationships between teachers and children	1	2	3	4
	f. Promoting positive behaviour among students inside and outside the classroom	1	2	3	4
	g. How we can connect with the local community in order to enrich teaching and extracurricular activities	1	2	3	4

	h. Ways in which parents can be involved in promoting learning at school and home.	1	2	3	4
Q6.	Our school encourages teachers to increase collaboration with parents/guardians of children who require additional educational support.	1	2	3	4
Q7.	Teacher engagement in implementing **policy on improving the school learning environment** (e.g. running the library, teaching choir) is acknowledged (formally/informally) by the school management team.	1	2	3	4
Q8.	Our school takes into consideration the professional skills of each individual teacher in designing and implementing school policy for the **school learning environment**.	1	2	3	4
Q9.	The teachers in our school cooperate with each other by exchanging ideas and materials when teaching specific units or series of lessons.	1	2	3	4
Q10.	Teachers observe each other teaching as a way to discuss and share opinions on effective teaching.	1	2	3	4
Q11.	When supervising students on playground, teachers are encouraged to interact with children who may require support (e.g. children who are upset, isolated or display challenging behaviour).	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q12.	I feel that I am positively influenced by staff meetings/planning days in relation to:				
	a. Management of teaching time	1	2	3	4
	b. Dealing with student absenteeism	1	2	3	4
	c. Planning, assigning and evaluating homework	1	2	3	4
	d. Making good use of teaching time spent on activities outside of the formal curriculum (e.g. rehearsals)	1	2	3	4
	e. Using of visual aids and technology in teaching (e.g. iPads, computers/laptops, interactive whiteboard)	1	2	3	4
	f. Working with students who have been identified as having special educational needs (e.g. gifted and talented children, children	1	2	3	4

	with learning difficulties)				
	g. Implementing approaches to effective long-term planning	1	2	3	4
	h. Increasing teacher interaction with students during break time	1	2	3	4
	i. Evaluating student performance	1	2	3	4
	j. Structuring of lessons during teaching (e.g. calling attention to main points, linking a lesson with previous or next lessons etc.)	1	2	3	4
	k. Emphasizing learning orientation (i.e., exploring why a lesson/unit is being taught with the students)	1	2	3	4
	l. Using tasks/activities to help students apply their learning (i.e., giving them tasks which apply the concepts taught to a situation in everyday life)	1	2	3	4
	m. Using effective questioning techniques	1	2	3	4
	n. Encouraging the use of learning strategies (e.g. mind mapping, brainstorming, etc.)	1	2	3	4
	o. Improving the learning environment of the classroom (e.g. promoting interaction among students, dealing with misbehaviour).	1	2	3	4
Q13.	Our school has formed a **specific** policy for promoting positive student behaviour during break time.	1	2	3	4
Q14.	In our school, we organize fun activities during break time that may help students to achieve specific learning goals (e.g. games, dance, sports).	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q15.	We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to:				
	a. Making good use of teaching time	1	2	3	4
	b. Provision of learning opportunities	1	2	3	4
	c. Quality of teaching	1	2	3	4
	d. Parental involvement	1	2	3	4
	e. Teacher collaboration	1	2	3	4

	f. Use of resources for teaching	1	2	3	4
	g. Student behaviour outside the classroom.	1	2	3	4
Q16.	Discussions at staff meetings/planning days help me to improve my practice in:				
	a. Making effective use of teaching time	1	2	3	4
	b. Providing learning opportunities to students beyond those offered by the formal curriculum	1	2	3	4
	c. Classroom teaching	1	2	3	4
	d. Supervising students during break time	1	2	3	4
	e. Using a variety of educational resources	1	2	3	4
	f. Collaborating with parents/guardians to improve teaching and learning.	1	2	3	4
Q17.	At staff meetings we make decisions on how parents/guardians can be involved in learning activities.	1	2	3	4
Q18.	Our school encourages students to develop conflict resolution skills through peer mentoring activities.	1	2	3	4
Q19.	During break time, teachers spend more time with students who face learning difficulties than with other students.	1	2	3	4
Q20.	Parents/guardians are informed about the teaching practices adopted by their child's teacher.	1	2	3	4
Q21.	Discussions at staff meetings lead to an improvement in the way in which the school facilitates teachers for professional development and training.	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q22.	Teachers in our school are encouraged to participate in training (e.g. workshops, seminars, mentoring programmes) that:				
	a. Aim to improve specific teaching skills	1	2	3	4
	b. Is cumulative (e.g. involves multiple sessions over a period of time).	1	2	3	4
Q23.	Parental/guardian role in relation to the following is discussed in parent/guardian-teacher meetings:				
	a. Reducing student absenteeism	1	2	3	4

	b. Supervising homework	1	2	3	4
	c. Supporting the needs of pupils with special educational needs (e.g. gifted children, children with learning difficulties, children with special interests).	1	2	3	4
Q24.	There is material on notice-boards in the school relevant to:				
	a. Effective use of teaching time (e.g. reminders regarding punctuality for teachers and students)	1	2	3	4
	b. Provision of learning opportunities beyond those provided by the formal curriculum	1	2	3	4
	c. Characteristics of effective teaching	1	2	3	4
	d. The effective use of a range of educational resources for teaching.	1	2	3	4
Q25.	In our school, there is opportunity for different groups/people outside the school to become involved with, and cooperate in, the **learning process** (e.g. collaboration between a local basketball player and teachers).	1	2	3	4
Q26.	Our school invites specialists in to conduct in-service training for teachers (e.g. a workshop supporting development of an anti-bullying policy).	1	2	3	4
Q27.	The management team in our school (principal and deputy heads) organizes in-service seminars or workshops to address needs of ***specific groups of teachers*** (e.g. newly qualified teachers, learning support teachers) as required.	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q28.	Student performance results are used to develop the school's educational goals.	1	2	3	4
Q29.	Our school designs effective forms of school-to-home and home-to-school communications about school programmes and children's progress.	1	2	3	4
Q30.	The management team in our school makes sure that the professional development activities of teachers are in accordance with the teaching goals of the school.	1	2	3	4

Q31.	In our school we provide a replacement for the absent teacher on time.	1	2	3	4
Q32.	In our school we take care that new technologies that are available to us are used to satisfy our educational goals.	1	2	3	4
Q33.	In our school, we additionally analyse the aspects of the school in which we encounter problems.	1	2	3	4
Q34.	In our school there is a practice for teachers who attend a seminar to transfer their knowledge to other teachers	1	2	3	4

PART B: EVALUATION OF SCHOOL POLICY

Section B is comprised of statements concerned with the evaluation of school policy. After reading each statement carefully, circle the appropriate number:

1: if you strongly disagree with the statement

2: if you disagree with the statement

3: if you agree with the statement

4: if you strongly agree with the statement

		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q35.	The way the **teaching policy** is put into practice is monitored.	1	2	3	4
Q36.	Information collected during evaluation of school policy on **teaching** is used in improving existing policy.	1	2	3	4
Q37.	Our school regularly reviews and revises **school policy on teaching**.	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q38.	Teachers' capacity to implement **school policy on teaching** (e.g. quantity of education, quality of education, provision of learning opportunities for students) is evaluated within the school.	1	2	3	4
Q39.	To evaluate the implementation of the				

	school **policy on teaching**, we collect information from:				
	a. Teachers	1	2	3	4
	b. Students	1	2	3	4
	c. Parents/guardians.	1	2	3	4
Q40.	The monitoring of the implementation of the **teaching policy**:				
	a. Is focused on specific aspects requiring special attention	1	2	3	4
	b. Involves presentation of findings to staff.	1	2	3	4
Q41.	School policy evaluation results are used to pinpoint areas in **teaching** for which we need support and/or further training.	1	2	3	4
Q42.	Staff are presented with the findings from the monitoring of how policies concerned with **teaching** are implemented.	1	2	3	4
Q43.	The principal and/or other members of the school staff monitor the way the policy concerned with the broader school learning environment is put into practice.	1	2	3	4
Q44.	To evaluate the implementation of the **policy on school learning environment**, we collect information from:				
	a. Teachers	1	2	3	4
	b. Students	1	2	3	4
	c. Parents/guardians.	1	2	3	4
Q45.	Teachers' capacity to implement **policy on school learning environment** (e.g. student behaviour outside the classroom, collaboration and interaction between teachers) is evaluated within the school.	1	2	3	4
Q46.	To evaluate **school policy** we examine the extent to which student behaviour during break time has improved.	1	2	3	4
Q47.	Staff are presented with the findings from the monitoring of how policies concerned with the **broader school learning environment** are implemented.	1	2	3	4
Q48.	Our school regularly reviews and revises policies concerned with the **broader learning environment of school**.	1	2	3	4
Q49.	Our school identifies the professional development/further education needs of	1	2	3	4

	its teachers.				
Q50.	Information collected during evaluation of school policy on the **broader learning environment** is used in improving existing policy.	1	2	3	4
Q51.	School policy evaluation results are used to pinpoint areas in **school learning environment** for which we need support and/or further training.	1	2	3	4
		Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
Q52.	The monitoring of the implementation of the **school learning environment policy**:				
	a. Is focused on specific aspect requiring special attention	1	2	3	4
	b. Involves presentation of findings to staff.	1	2	3	4

PART C: ABOUT YOU

Put a √ in the appropriate box or fill where necessary:

Q53. Are you male or female?

Male……. ☐ Female……. ☐

Q54. What is your teaching position in this school?

Deputy Head Teacher ……. ☐

Head Teacher/Principal ……. ☐

Teacher……. ☐

Other……. ☐

Q55. How many years have you been teaching at primary school level? (Please count this school year and exclude career breaks)

(a) in this school…….._____years

(b) in other primary schools……_____years

(c) Total……_____years

In the space provided below, please feel free to report anything you consider important for the development and the evaluation of a school policy concerned with teaching and the learning environment of your school.

_____

_____

_____

_____

Thank you very much for your cooperation.

(Creemers, & Kyriakides, 2012, p. 278-287)

Appendix F: Interview Protocol for Teachers

Topic	Questions for Teachers
Opening Questions	• How long have you been teaching? • Have you ever participated in any improvement projects before this one? • Was the decision to participate in the project made by the whole school or the leadership team?
Questions about the process of implementation	• Please describe your role in this improvement project. • Please describe your experience as a teacher in this improvement project • How involved would you say you were in this improvement project? • Do you feel that you have a good understanding of the DASI framework at this point in time? • Do you feel that DASI matches your personal and professional beliefs about teaching? • Do you feel that this improvement project is applicable to your day to day work? • Do you feel that the knowledge of the DASI framework is useful to you as a teacher? • Do you think that students will benefit from this improvement project? • Do you believe that student outcomes across subjects will improve as the result of your school's engagement with this improvement project? • Do you feel that this improvement project is school owned? • Have you noticed any changes at the school level since the start of this improvement project? • From your perspective, what is the school wide attitude towards this improvement project?
Questions about challenges	• What types of challenges did you encounter in this school improvement project? • How did these barriers impact your ability to implement the DASI approach? • Do you feel you have been provided with sufficient resources to fulfill your role in the project?
Questions about facilitators	• What kinds of things supported your participation in the improvement project over the year? • How did these supports impact your ability to implement the DASI approach? • How could you and other teachers have been supported

	better?
Concluding Questions	• Thinking of your entire experience with the DASI initiative this year, what would you have liked to be done differently? • Would you participate in this improvement project again?

Appendix G: Interview Protocol for Headteachers

Topic	Questions for Headteachers and Deputy Headteachers
Opening Questions	• How long have you been a headteacher? • Have you ever participated in any improvement projects before this one? • Was the decision to participate in the project a whole school decision or a decision taken by the leadership team? • Why have you chosen to participate in this improvement project? • Did you have any doubts about participating in this improvement project?
Questions about the process of implementation	• Please describe your role in this improvement project • Please describe your experience as a headteacher participating in this improvement project • How involved would you say you were in this improvement project? • Do you feel that you have a good understanding of the DASI framework at this point in time? • Do you feel that DASI matches your personal and professional beliefs about teaching and schools? • Do you feel that this improvement project is applicable to your day to day work? • Do you feel that the knowledge of the DASI framework is useful to you as a headteacher? • Do you think that students will benefit from this improvement project? • Do you believe that student outcomes across subjects will improve as the result of your school's engagement with this improvement project? • Do you feel that this improvement project is school owned? • Have you noticed any changes at the school level since the start of this improvement project? • From your perspective, what is the school wide attitude towards this improvement project?

Questions about challenges	• What types of challenges did you encounter in this school improvement project? • What types of challenges did the teachers encounter in the duration of this project? • Do you feel you have been provided with sufficient resources to fulfill your role in the project?
Questions about facilitators	• What kinds of things supported you in the duration of this project? • What kind of things supported the teachers in the duration of this project? • How could the school have been supported better?
Concluding Questions	• Thinking of your experience with the project this year, what would you have liked to be done differently? • Would you participate in this improvement project again?

Appendix H: Action Plan Template

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT:	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general):
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? **c) What is the outcome you wish to see by the end of the school year?** **d) What actions will you take to achieve this outcome?** **e) Who will be involved?** ***In your school (besides yourself):*** ***From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):*** **f) What is your time frame?**

CHECK	**EVALUATE THE EFFECT OF THE PLAN**
	g) When and how will you evaluate your priority/strategy? ***Periodically (i.e. once a month):*** ***At the end of the project/school year:***
IMPROVE	**CONTINUE OR ADJUST THE PLAN**
	f) As a result of the evaluation, what needs to be adjusted?

Appendix I: Action Plan for Hawthorn Primary School 1

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT: STUDENT BEHAVIOUR OUTSIDE THE CLASSROOM	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general): • Our school will work to improve student behaviour outside the classroom during lunch time • We have found that incidents frequently occur during lunch time • Students come in from lunch time upset and ask their class teachers to resolve the problem • Teaching time is lost • We will create lunch time zones, and develop a school wide policy on student behaviour during lunch
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? • Lunch times are handled by MDSA • There are 5 major lunch time incidents and 10 minor lunch time incidents over the course of the week • The current policy on student behaviour needs to be updated to include expectations for student behaviour during lunch time • Teachers/TAs spend up to 30 minutes of class time resolving lunch time conflicts **c) What is the outcome you wish to see by the end of the school year?** • We want to reduce the number of incidents at lunch time to 1 major and 3 minor in a week or less • We want teachers to spend less than 5 minutes of teaching time dealing with lunch time conflict • We want the lunch time student behaviour policy to support MDSAs and teachers and outline clear strategies for dealing with lunch time incidents **d) What actions will you take to achieve this outcome?** • We will work together with students to establish a school lunch time behaviour code during an assembly so that it is a whole

school effort and children feel ownership of the rules

- All teachers, TAs and MDSAs will consistently enforce these rules
- We will develop a policy regarding student lunch time behaviour which outlines expectations and consequences
- We will establish a system of rewards and consequences for behaviours happening during lunch time
- We will develop a policy regarding responsibilities of MDSAs on duty during lunch
- Consideration as to when the whistle blows needs to be discussed and implemented
- Y6 children will be timetabled on specific days to give stickers to those children who are following the rules, these children will be trained to identify these
- We will implement an internal lunchtime book to enable teachers and MDSAs to communicate and identify children needing support or children who have had poor behaviour at lunch time
- We will monitor the school log book and track repeating negative behaviour and the children involved. This will allow us to identify patterns and specific children and work on a plan to prevent these situations from re-occurring
- We will develop a bank of games for teachers on duty to organize during lunch (eg. Statues, What time is it Mr. Wolf, skipping games, hopscotch, hula hoops, board games)
- We will develop a lunch time routine with children and enforce it daily
- We will develop a monitoring plan for MDSAs and the Play Leader doing lunch time duty to look out for isolated students, and engage with children informally

e) Who will be involved?

In your school (besides yourself):

From the **leadership team**:

- [redacted] will develop a draft of the policy regarding student lunch time behaviour which outlines expectations and consequences by December 2015
- SLT will develop and implement student problem sheets by January 2016

From the **school staff**:

- [redacted] and [redacted] will work together to organize different activity areas during lunch time play by November 2015
- [redacted] will develop a bank of games for students to

	engage in during lunch keeping in mind the resources available in the school by November 2015 • All teachers will work together to implement the new lunch time student behaviour policy starting January 2016 ***From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):*** • All parents will be asked to remind their children about the new lunch time behaviour rules **f) What is your time frame?** • November 2015-July 2016
CHECK	**EVALUATE THE EFFECT OF THE PLAN**
	g) When and how will you evaluate your priority/strategy? ***Periodically (i.e. once a month):*** • During the staff meeting every two weeks we will take 5-10 minutes to discuss the progress of our action plan. Teachers will share what has worked and what has not. • We will start/keep a record of situations that occur during lunch time and compare it every month ***At the end of the project/school year:*** • We will compare the number of situations happening at the beginning of the intervention with the number of situations happening at the end of the year • Staff will write anonymous comments
IMPROVE	**CONTINUE OR ADJUST THE PLAN**
	f) As a result of the evaluation, what needs to be adjusted?

Appendix J: Action Plan for Hawthorn Primary School 2

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT: COLLABORATION AND INTERACTION BETWEEN TEACHERS	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general): • Our school will develop good practice in collaboration between teachers • We have teachers at different stages of their career who have different needs in development of their teaching skills • We would like every teacher to develop professionally in the coming year • We would like teachers to develop closer professional relationships and learn from each other
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? • As a school we do not have a policy on collaboration but informally a number of teachers are working together • We are all looking to learn new techniques • The is no formal policy on teacher collaboration and teacher mentoring **c) What is the outcome you wish to see by the end of the school year?** • At the end of the year we would like every teacher to be a part of either a mentoring scheme or a part of a collaborative team • We would like the experienced teachers to have tried new approaches in their classrooms • We would like to have developed/reviewed/renewed our policy on teacher collaboration and mentoring **d) What actions will you take to achieve this outcome?** • We will devote 10 minutes at each staff meeting to discuss and formatively assess our progress with regards to teacher

	collaboration • We will develop a time table that will provide teachers who are part of collaborative/mentoring/co-teaching scheme with common non-teaching time • We will organize observation days throughout the year where teachers can observe each other teach to learn from each other (in a non-evaluative setting) • We will organize a mentoring scheme in the school • We will organize a number of peer-teaching/co-teaching classes to help teachers learn from other • We will pair teachers across the school with the goal of engaging in short/long term planning **e) Who will be involved?** ***In your school (besides yourself):*** From the **leadership team**: • [redacted] will develop a draft of a policy on teacher collaboration by December 2015 • [redacted] will organize teacher collaboration/mentoring/co-teaching pairs in the new year From the **school staff**: • [redacted] [redacted] [redacted] and [redacted] will take turns watching each other teach, and provide feedback for improvement • All teachers will take part in a series of themed enterprise days between January 2016 and July 2016 ***From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):*** • This part of the project is limited to in-school staff **f) What is your time frame?** • November 2015-July 2016
CHECK	**EVALUATE THE EFFECT OF THE PLAN**
	g) When and how will you evaluate your priority/strategy?

	Periodically (i.e. once a month): • During the staff meeting every two weeks we will take 5-10 minutes to discuss the progress of our action plan. Teachers will share what has worked and what has not. ***At the end of the project/school year:*** • Teachers will share feedback during a staff meeting near the end of the year.
IMPROVE	**CONTINUE OR ADJUST THE PLAN**
	f) As a result of the evaluation, what needs to be adjusted?

Appendix K: Action Plan for Mulberry Primary School

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT: STUDENT BEHAVIOUR OUTSIDE THE CLASSROOM	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general): Improving outcomes for all pupil groups during the following specified times of the day • Morning Playtime • Lunchtime Improving the embedding of our values throughout times above Providing appropriate opportunities for pupils to take responsibility
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? Enhanced midday supervisor team: • Acquired support from [redacted] • Resources identified to improve provision **c) What is the outcome you wish to see by the end of the school year?** • Pupils engaging in learning quicker post unstructured times (playtime and lunchtime) • Pupils walking around the school calmly and purposefully • Roles and responsibilities for staff and pupils clear and acted upon • Systems embedded for sustaining practice • Restoration of relationships by pupils • All pupils clear of expectations for movement at lunchtime • Clear sanctions - reflection time / parents / carer meetings • Updated behaviour policy adopted by all staff / volunteers • Pupils intrinsically behaving as expected (values embedded) • Pupils more independent in their use of resources at lunchtime • Sustained and agreed behaviour expectations for all provision providers (school, external coaches, club leaders) **d) What actions will you take to achieve this outcome?** • Update behaviour policy

- Develop MDS team / meeting structure
- Include project update during staff meeting time (where possible)
- Communicate to parents / carers
- Communication on vulnerable pupils to all staff
- Review systems at lunchtime – staggered lunch?
- Review provision at playtime – implement zones?
- Plan zones against roles and responsibilities for lunchtime staff
- Training for new lunchtime staff
- Training for student lunch time mentors
- Signage / communication in the lunch hall
- 12:50 first whistle
- 12:55 Tai Chi and touchpoint for vulnerable pupils
- 13:00 second whistle
- Health and Safety sweeper
- Monitor systems to check for patterns
- Pupil independence - identification system for those that can come in for learning / structured activities

e) Who will be involved?

In your school (besides yourself):

Teaching and leadership staff:

- [redacted]

Support staff:

- [redacted]

From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):

- Governors
- Parent group via newsletter / termly briefing / Feb parents meeting
- [redacted]

f) What is your time frame?

September 2015 through to July 2016

	Pupil impact / outcomes evaluated by July 2016
CHECK	**EVALUATE THE EFFECT OF THE PLAN**
	g) When and how will you evaluate your priority/strategy? ***Periodically (i.e. once a month):*** • Fortnightly at staff meetings • Monthly with SLT member(s) • Half termly at full Governing Body meetings ***At the end of the project/school year:*** • Learning walk with SSP consultant • Learning walk with cluster / triad headteachers • Learning walk with [redacted]
IMPROVE	**CONTINUE OR ADJUST THE PLAN**
	f) As a result of the evaluation, what needs to be adjusted?

Appendix L: Action Plan for Primrose Primary School

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT: STUDENT BEHAVIOUR OUTSIDE THE CLASSROOM	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general): • Our school is concerned with student behaviour outside the classroom, in movement between activities and times when pupils need to self-regulate their behaviour, e.g. queuing for dinner • We would like students to develop self-regulation, make right choices, recognize empathy and behave in an empathetic manner. • We would like students to behave well without supervision of adults
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? • Students behave well in the presence of adults, but do not always continue this behaviour outside of adult supervision • Movement of students around the school during lunch and breaks could be streamlined **c) What is the outcome you wish to see by the end of the school year?** • We would like students to learn and display self-regulation, responsibility and empathy • We would like students to behave consistently outside of teacher supervision • We would like student movement during lunch and breaks to be calmer and self-regulatory **d) What actions will you take to achieve this outcome?** • We will work together with student to establish a school focus on self-regulation/ responsibility and empathy. This will be introduced through an assembly. • We will implement a student mentor scheme in the school.

Students from the student council will identify students who display good behaviours that relate to self-regulation, responsibility and empathy and reward these students with "Ask me why I got this sticker" stickers

- To celebrate good behaviour the staff will create a notice/picture board with students who received the stickers every week, and also discuss the students' actions during weekly Friday assemblies.

Participating Staff: all staff

Time frame: Beginning in January 2016

Actions:

1. From Monday Jan. 4th all assemblies to have the theme of self-regulation, for 2 weeks
2. From Monday 11th January school councillors can give out self-regulation stickers
3. From Friday 15th children awarded stickers to be celebrated in assembly
4. From Monday 1st Feb. all assemblies to have empathy theme for **2 weeks**
5. From Monday 8th Feb. school councillors to award empathy stickers
6. From Friday 12th celebrate those awarded empathy stickers in assembly
7. Children awarded stickers to be displayed on school councillors board – laminated list of weeks and space for names

e) Who will be involved?

In your school (besides yourself):

All staff.

From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):

All parents will be informed of the project and welcomed to support the school

f) What is your time frame?

Time Period: 1st half Spring term 2016

CHECK	EVALUATE THE EFFECT OF THE PLAN
	g) When and how will you evaluate your priority/strategy? ***Periodically (i.e. once a month):*** • We will discuss the progress of our action plan in a monthly staff meeting. • At the end of February teachers will write anonymous comments and state if they wish to continue with the current action plan ***At the end of the project/school year:*** • I will collect anecdotal evidence from teachers as well as generate feedback from the students regarding their perception of the initiative at the end of the year
IMPROVE	**CONTINUE OR ADJUST THE PLAN**
	f) As a result of the evaluation, what needs to be adjusted?

Appendix M: Action Plan for Foxglove Primary School

ACTION PLAN TO DEVELOP STRATEGIES	
AREA SELECTED FOR IMPROVEMENT: STUDENT BEHAVIOUR OUTSIDE THE CLASSROOM	
PLAN	**DEVELOP A PLAN**
	a) Briefly describe the priority your school has chosen/strategy your school is developing or will develop (in general): • Our school is concerned with student behaviour during lunch times • Teachers frequently spend class time dealing with incidents that happen at lunch • We want to reduce the number of incidents that occur and improve the overall lunch time experience for children
ACT	**IMPLEMENT THE PLAN**
	b) Specifically, at what stage is your school at, as of now, with regards to your strategy/priority? • Students could get more out of their lunch times than they currently do • Minor incidents are reported after every lunch period • Lunch times and break times are supervised solely by middays and TAs **c) What is the outcome you wish to see by the end of the school year?** • We want lunch time incidents to be handled by middays during the lunch period • We want to reduce the amount of teaching time spent on resolving student conflicts • We want children to enjoy their lunch times and have access to a wider range of play experiences **d) What actions will you take to achieve this outcome?** • Class teachers will work together with students to come up with a set of rules and expectations for behaviour during lunch • We will introduce this new code of behaviour during a school wide assembly • All teachers will consistently enforce the rules of the school behaviour code

	• We will implement problem sheets for students to fill out if they come in upset over what happened at lunch • We will organize different zones during lunch time play (eg. Quiet area/low movement area for board games, high activity area for movement games such as skipping and hula hoops) and enforce the areas daily • Teachers will spend fifteen minutes supervising student lunch times to help students transition into the new system • We will develop a notice board with lunch time information for each day/week (what areas are open and closed, what games are to be set up, etc.) • We will develop a system of post-it notes to be used by lunch time monitors to notify teachers of student misbehaviour at lunch time **e) Who will be involved?** ***In your school (besides yourself):*** • All teachers will take part in the project **From outside/from the community (e.g., parents, in-service trainers, counsellors etc.):** • All parents will be informed of the new lunch time rules **f) What is your time frame?** We expect to start the project in October
CHECK	**EVALUATE THE EFFECT OF THE PLAN**
	g) When and how will you evaluate your priority/strategy? ***Periodically (i.e. once a month):*** • We will allocate time to discuss the improvement project during our weekly staff meetings. ***At the end of the project/school year:*** • We will compare the number of incident reports written about lunch time behaviour at the start and end of the year • We will have a vote to decide if we want to continue with the project in the following year

IMPROVE	CONTINUE OR ADJUST THE PLAN
	f) As a result of the evaluation, what needs to be adjusted?

Appendix N: Results of the Questionnaire Measuring School Factors

In this appendix, the descriptive analysis from the questionnaire is presented for all four schools. The questionnaire was based on the eight factors of educational effectiveness identified by the dynamic framework at the school level. Schools that implement the dynamic model with the focus on the school level factors, locate their improvement effort in one or more of the following areas of the school functioning: quantity of teaching, provision of learning opportunities, quality of teaching, student behaviour outside the classroom, collaboration and interaction between teachers, partnership policy, provision of sufficient learning resources to students and teachers, and evaluation of school policy. Each item in the questionnaire was relevant to one of these eight factors. Teachers scored each item on the questionnaire from one to four, with 1 being the lowest score, indicating disagreement with the statement or question, and 4 indicating full agreement. As such, the lower scores indicate items that, from the perspective of the school staff, are not fully realized in the school and may require attention. Once analysed, data from the questionnaires was organized into eight tables which provide descriptive statistics for the eight factors of educational effectiveness. Each of the eight tables lists the mean and standard deviation for every item in the questionnaire. This data was provided to schools so as to enable teachers to identify specific areas of need in their school, as well as to note which items demonstrate a higher than average discrepancy in opinion between members of the school staff. Although the table for each factor collates the scores of all schools, the means and standard deviations are organized separately for each case. Data is organised in the same table strictly for ease of viewing; individual item scores are neither combined nor compared across schools. I provide a brief overview of each table for each school, and discuss any trends or outliers.

Quantity of Teaching

Table 12. Mean and standard deviation for items measuring quantity of teaching

Quantity of Teaching								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Q24a. There is material on notice-boards in the school relevant to: Effective use of teaching time (e.g. reminders regarding punctuality for teachers and students)	3.00	0.816	2.17	0.408	2.43	0.976	2.25	0.866
Q15a. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Making good use of teaching time	3.29	0.756	2.80	0.447	2.71	0.756	2.75	0.754
Q12a. I feel that I am positively influenced by staff meetings/planning days in relation to: Management of teaching time	3.57	0.535	3.00	0.894	2.43	0.976	2.92	0.289
Q5a. At staff meetings we discuss and take decisions on issues concerned with: Making good use of teaching time	3.43	0.787	2.83	0.753	2.71	0.951	2.92	0.289
Q16a. Discussions at staff meetings/planning days help me to improve my practice in: Making effective use of teaching time	3.43	0.787	2.83	0.753	2.57	0.787	3.00	0.426
Q2a. Our school participates in programmes / projects (e.g. action research projects, collaboration with other schools, pilot initiatives) that focus on: Making good use of teaching time	3.86	0.378	3.40	0.894	2.71	1.113	3.08	0.515
Q12c. I feel that I am positively influenced by staff meetings/planning days in relation to: Planning, assigning and	3.43	0.535	2.83	0.983	2.57	1.134	2.50	0.674

evaluating homework								
Q31. In our school we provide a replacement for the absent teacher on time.	3.57	0.535	3.50	0.548	3.57	0.535	3.58	0.515
Q1b. Our school keeps records concerned with: Teacher absenteeism	4.00	0.000	3.50	0.548	3.57	0.535	3.58	0.515
Q1a. Our school keeps records concerned with: Student absenteeism	4.00	0.000	3.67	0.516	3.86	0.378	4.00	0.000
Q12b. I feel that I am positively influenced by staff meetings/planning days in relation to: Dealing with student absenteeism	3.43	0.535	2.83	0.753	2.71	1.113	2.67	0.651

Hawthorn Primary

On the whole the mean scores for the items are quite high, with all items scoring on the confirmatory side of the scale. However, over half of the items on this table exhibit a high standard deviation, meaning that despite an overall positive showing, there was a significant range in teacher perspectives. Therefore, at the time of presentation, school members were advised to discuss items Q24a, Q15a, Q16a, and Q5a individually, so as to establish a consensus on policy and practice. The aforementioned items did prove to be a point of contention for some of the staff members, however this incongruence was resolved quickly and amicably during the staff meeting. Following this discussion, the teachers and leadership team of Hawthorn Primary jointly concluded that quantity of teaching was not a priority for the school, and thus decided against pursuing improvement in this area.

Mulberry Primary

Overall, the mean scores for most of the items are high, generally over the mid of the scale. Yet quite a few items exhibit a high standard deviation; the discrepancy in opinion for items Q12a, Q12c and Q2a is concerning. At the time of presentation, school members were advised to discuss these items individually so as to establish a consensus on policy and practice. Staff at Mulberry Primary were somewhat surprised by these results, as they did not feel quantity of teaching was an area of their school that required additional attention. Teachers took a minute to discuss some of the items individually, but little time was spent on this factor during the staff meeting as everyone present felt there was no need to pursue improvement in quantity of teaching.

Primrose Primary

Generally, the mean scores for the table are quite low, and the standard deviation is high for several items, even accounting for the sample size. Thus, at the time of presentation, school members were advised to consider items Q24a, Q12a, Q12b, Q12c, Q2a, and Q5a independently of others. In comparison with other factors, quantity of teaching demonstrated average performance, ranking in the middle. Quantity of teaching was not specifically recommended as an area for improvement for Primrose Primary. In considering the results of the questionnaire, teachers briefly looked over the data for this table, but did not judge this area to be a contender for improvement.

Foxglove Primary

The mean scores for the items are quite high, and the standard deviation acceptable for the sample size. A trend evident in this table is that the items with the lowest mean scores have the highest percentage of standard deviation, meaning that these items had high inter-rater discrepancy. Thus, at the time of presentation, school members were advised to discuss these items individually, so as to establish a consensus on the existing policies. Kyriakides and Creemers (2015) note that in some cases, high discrepancy may be due not to lack of policies, but a lack of awareness by the individual staff. In such cases, even though policies related to the item in question may exist, they are either not implemented, or practiced haphazardly. Staff members at Foxglove Primary had a chance to clarify existing policies with regards to these items during the meeting, and chose not to pursue improvement in this area, electing rather to focus on the realization of existing procedures.

Provision of Learning Opportunities

Table 13. Mean and standard deviation for items measuring provision of learning opportunities

Provision of Learning Opportunities								
	Hawthorn Primary		**Mulberry Primary**		**Primrose Primary**		**Foxglove Primary**	
Item	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
Q12g. I feel that I am positively influenced by staff meetings/planning days in relation to: Implementing approaches to effective long-term planning	3.43	0.535	2.83	0.753	2.86	0.378	2.42	0.515
Q12d. I feel that I am positively influenced by staff meetings/planning days in relation to: Making good use of teaching time spent on activities outside of the formal curriculum (e.g. rehearsals)	3.00	0.577	3.00	0.632	2.57	0.976	2.64	0.505
Q18. Our school encourages students to develop conflict resolution skills through peer mentoring activities	3.14	0.900	2.60	0.548	3.00	0.816	3.58	0.669
Q2d. Our school participates in programmes / projects (e.g. action research projects, collaboration with other schools, pilot initiatives) that focus on: Student well-being (e.g. resilience, mindfulness)	3.71	0.488	3.20	0.837	3.14	0.900	3.45	0.522
Q24b. There is material on notice-boards in the school relevant to: Provision of learning opportunities beyond those provided by the formal curriculum	3.29	0.756	3.00	0.00	2.43	0.787	2.82	0.603
Q16b. Discussions at staff meetings/planning days help me to improve my practice in: Providing learning opportunities to students beyond those offered by the formal curriculum	3.29	0.488	3.00	0.632	3.00	0.816	2.83	0.577
Q1d. Our school keeps records concerned with: Long-term planning by teachers	3.71	0.488	3.00	0.632	3.43	0.535	2.83	0.835

Q5d. At staff meetings we discuss and take decisions on issues concerned with: Teacher's role during break time	3.29	0.488	2.83	0.408	1.86	0.690	2.75	0.622
Q15b. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Provision of learning opportunities	3.57	0.535	2.80	0.447	3.00	0.577	3.00	0.739
Q5e. At staff meetings we discuss and take decisions on issues concerned with: Developing positive relationships between teachers and children	3.71	0.488	3.00	0.894	2.57	0.535	3.42	0.669
Q12f. I feel that I am positively influenced by staff meetings/planning days in relation to: Working with students who have been identified as having special educational needs (e.g. gifted and talented children, children with learning difficulties)	3.71	0.488	3.00	0.632	3.57	0.535	3.08	0.515
Q2b. Our school participates in programmes / projects (e.g. action research projects, collaboration with other schools, pilot initiatives) that focus on: Providing learning opportunities beyond those offered by the formal curriculum	3.33	0.156	3.17	0.753	3.00	1.00	3.18	0.603
Q5b. At staff meetings we discuss and take decisions on issues concerned with: Provision of extra learning opportunities in addition to those offered by the formal curriculum (e.g. extra-curricular activities, festivals, fairs, school trips, clubs)	3.71	0.488	3.33	0.816	2.57	0.976	3.25	0.622
Q1e. Our school keeps records concerned with: Organization of trips, visits and other extra-curricular activities not included in the formal curriculum	3.86	0.378	3.50	0.548	3.57	0.535	3.25	0.622

Q1c. Our school keeps records concerned with: The different educational needs of individual students	4.00	0.000	3.50	0.548	3.71	0.488	3.75	0.452

Hawthorn Primary

Similarly to the previous factor, the mean scores for this area of school functioning are again quite high across the board. Outside of items Q18 and Q24b, the standard deviations for the items on this table are acceptable for the sample, alluding to staff consensus. While this factor did not score highly on Kendall's W in comparison to the other factors, its overall ranking was average. As such, this factor was not suggested as an area for improvement for Hawthorn Primary, and the school staff did not consider this factor to be a contender for improvement.

Mulberry Primary

Outside of the first three items, the mean scores for this table are at or higher than the mid of the scale. On the other hand, the standard deviation for this table is rather high throughout, and especially so for items Q12g, Q5e, Q2d and Q5b. This factor also did not score particularly well in comparison with others; Kendall's W ranked this factor as the second lowest for this school. As such, this factor was suggested as an area for improvement for Mulberry Primary. The school staff discussed this factor during the dedicated staff meeting, however, most of the teachers did not see cause to focus on this area. As such, provision of learning opportunities was not one of the factors Mulberry Primary selected for improvement.

Primrose Primary

The mean scores for this table are average, however, the standard deviation continues to be high, especially so for items Q12d, Q5b, Q12b, and Q2b. At the time of the presentation, staff members were encouraged to discuss these items so as to establish consensus for how these situations are to be approached in the school. The headteacher of Primrose Primary took time at the staff meeting to clarify existing policies related to this factor and members of staff discussed their concerns as they pertained to these items. The headteacher felt that this area of the school functioning did not need additional support, thus, provision of learning opportunities was not one of the areas considered for improvement at Primrose Primary.

Foxglove Primary

The mean scores for this area vary across the board, and the standard deviation is a somewhat higher than desirable throughout. At the time of the presentation, staff members were advised to focus on items Q1d, and Q15b in particular. Teachers at Foxglove Primary did not feel that provision of learning opportunities was an area of the school functioning that required additional attention, and discussion about the items on this table was brief. Provision of learning opportunities was not selected as an area for improvement by staff at Foxglove Primary

Quality of Teaching

Table 14. Mean and standard deviation for items measuring school policy on quality of teaching

Quality of Teaching								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	Item	Mean	S.D.
Q24c. There is material on notice-boards in the school relevant to: Characteristics of effective teaching	2.86	0.690	2.17	0.408	2.86	0.690	2.75	0.965
Q4. The school management team acknowledges (formally/informally) teachers who make extra efforts in implementing policy on teaching (e.g. making good use of time)	3.43	0.535	3.20	0.447	2.57	0.787	2.83	0.577
Q30. The management team in our school makes sure that the professional development activities of teachers are in accordance with the teaching goals of the school.	3.86	0.378	3.33	0.516	3.43	0.535	3.42	0.515
Q12n. I feel that I am positively influenced by staff meetings/planning days in relation to: Encouraging the use of learning strategies (e.g. mind mapping, brainstorming, etc.)	3.86	0.378	2.83	0.753	3.29	0.756	2.92	0.669
Q3. Our school takes into consideration the professional experience, skills and aptitudes of each individual teacher in designing and implementing	3.57	0.535	2.83	0.983	2.86	0.900	2.92	0.669

school policy for teaching.								
Q12k. I feel that I am positively influenced by staff meetings/planning days in relation to: Emphasizing learning orientation (i.e., exploring why a lesson/unit is being taught with the students)	3.43	0.535	2.83	0.753	2.86	0.900	3.08	0.669
Q16c. Discussions at staff meetings/planning days help me to improve my practice in: Classroom teaching	3.71	0.488	3.00	0.894	3.14	0.378	3.08	0.289
Q12l. I feel that I am positively influenced by staff meetings/planning days in relation to: Using tasks/activities to help students apply their learning (i.e., giving them tasks which apply the concepts taught to a situation in everyday life)	3.57	0.535	3.50	0.548	3.00	0.577	3.17	0.389
Q12o. I feel that I am positively influenced by staff meetings/planning days in relation to: Improving the learning environment of the classroom (e.g. promoting interaction among students, dealing with misbehaviour)	3.86	0.378	3.17	0.753	3.29	0.488	3.25	0.622
Q15c. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Quality of teaching	3.57	0.535	3.00	0.707	3.14	0.690	3.33	0.651
Q12i. I feel that I am positively influenced by staff meetings/planning days in relation to: Evaluating student performance	3.86	0.378	3.60	0.548	3.43	0.535	3.33	0.651
Q12j. I feel that I am positively influenced by staff meetings/planning days in relation to: Structuring of lessons during teaching (e.g. calling attention to main points, linking a lesson with previous or next lessons etc.)	3.71	0.488	2.83	0.753	3.29	0.488	3.33	0.492
Q12m. I feel that I am positively influenced by staff meetings/planning days	3.86	0.378	3.17	0.983	3.29	0.756	3.33	0.492

in relation to: Using effective questioning techniques								
Q5c. At staff meetings we discuss and take decisions on issues concerned with: Methods to teach students effectively (e.g. structuring lessons, questioning, application, student assessment etc.)	3.86	0.378	3.00	0.894	3.29	0.756	3.50	0.522
Q2c. Our school participates in programmes / projects (e.g. action research projects, collaboration with other schools, pilot initiatives) that focus on: Improving the quality of teaching	3.71	0.488	3.33	0.516	3.14	0.900	3.64	0.505

Hawthorn Primary

This factor continues the positive trend evident for other factors under the 'School Policy on Teaching' category. Every item in the table, but one, demonstrates a strong positive mean. The standard deviation is relatively low for most of the factors, although it is necessary to note that a couple of questions did score over 0.5. This factor had also done well on Kendall's W, ranking highest of all factors. Therefore the different aspects of functioning of this factor were considered satisfactory. Teachers at Hawthorn Primary were not surprised by these results, given that quality of teaching was an area of the school functioning routinely targeted in annual seminars and LEA improvement efforts. Thus, the school chose not to pursue improvement in this area, electing to continue the practices that had been established through self-improvement efforts in the last few years.

Mulberry Primary

The means for this table are fairly high for most of the items, although half a dozen items are below the mid of the table. The standard deviation is high for quite a few items; items Q16c, Q3, Q5c and Q12m in particular hint at a divergence in teacher perspective. Nevertheless, this factor did not perform poorly in comparison with others on Kendall's W, ranking in the middle. On the whole, the functioning of this factor was considered satisfactory and it was not suggested as an area of improvement for Mulberry Primary. The staff had few concerns with regards to this area, but did take time to

examine the items with low means and those with a high standard deviation. The school chose not to pursue improvement in this area, citing confidence in existing practices.

Primrose Primary

In comparison with the previous two factors, the average mean of the items on the table above is on the higher end. On the other hand, similarly to the previous two tables some items possess a high standard deviation, specifically items Q12k, Q3 and Q2c. Despite some discrepancy in staff perspective, this factor performed well in comparison to other factors, coming away with the highest overall mean. At the meeting, teachers felt confident about this area of their school functioning, and quickly established that they would not be undertaking improvement targeting quality of teaching.

Foxglove Primary

This is the last factor under the umbrella heading of 'School Policy on Teaching'. Similarly to other factors in the same category, the average mean of the items is on the higher end. This factor performed well on Kendall's W, residing at the upper end of the table. As such, quality of teaching was not recommended as a possible area of improvement for Foxglove Primary. During the staff meeting teachers considered the items on the table that had higher than average standard deviation, such as item Q24c, and discussed whether changes should be made. The topic was resolved to the satisfaction of the teachers during that same meeting. Therefore, Foxglove Primary chose not to undertake quality of teaching as an area of improvement for their project.

Student Behaviour Outside the Classroom

Table 15. Mean and standard deviation for items measuring school policy on student behaviour outside the classroom

Student Behaviour Outside the Classroom								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	Item	Mean	S.D.
Q19. During break time, teachers spend more time with students who face learning difficulties than with other students	2.43	0.976	2.83	0.753	2.14	0.690	2.08	0.793
Q16d. Discussions at staff meetings/planning days help me to improve my practice in: Supervising students during break time	3.29	0.488	2.50	0.837	2.29	0.488	2.42	0.515
Q14. In our school, we organize fun activities during break time that may help students to achieve specific learning goals (e.g. games, dance, sports)	2.57	0.535	3.17	0.408	1.86	0.378	2.58	0.669
Q12h. I feel that I am positively influenced by staff meetings/planning days in relation to: Increasing teacher interaction with students during break time	3.29	0.488	2.67	0.816	2.14	0.690	2.58	0.515
Q15g. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Student behaviour outside the classroom	3.43	0.535	2.80	0.447	2.86	0.378	2.67	0.651
Q13. Our school has formed a specific policy for promoting positive student behaviour during break time	3.43	0.535	2.50	0.548	2.29	0.756	2.75	0.866
Q11. When supervising students on playground, teachers are encouraged to interact with children who may require support (e.g. children who are upset, isolated or display	3.71	0.488	3.33	0.816	3.29	1.113	3.17	1.193

challenging behaviour)								
Q5f. At staff meetings we discuss and take decisions on issues concerned with: Promoting positive behaviour among students inside and outside the classroom	3.86	0.378	3.17	0.753	3.14	0.690	3.17	0.577
Q1f. Whole school records are kept concerning: Problems that arise among students during break time	3.71	0.488	3.17	0.408	3.00	0.816	3.33	0.492

Hawthorn Primary

The items on this table have a fairly high mean; however, in comparison to the tables in the previous category, the numbers are lower. Kendall's W test yielded similar findings, ranking this factor second from the bottom. At the time of presentation, teachers were advised of the lower means in this table and encouraged to discuss Q19 individually, due to the high standard deviation identified for this item. Teacher discussion on this area of the school functioning illuminated that it was an area of concern but not all teachers were convinced that actions listed in this table fell under their domain. At the time of the staff meeting teachers came to agree that student behaviour outside the classroom was an area of concern. Therefore, this factor was identified as a contender for the area in which the school could place its efforts for improvement.

Mulberry Primary

Most items on the table have fairly low means, and the standard deviation is rather high throughout. Additionally, Kendall's W ranked this factor last, meaning that on the basis of the questionnaire, it was the worst performer at Mulberry Primary. At the time of presentation, teachers were advised of the low means in this table and encouraged to pay particular attention to items Q16d, Q12h, and Q11. Teachers agreed that student behaviour outside the classroom had been a recurring issue at Mulberry Primary. As such, practitioners came to an easy agreement that this factor was a contender for the area in which the school could place its efforts for improvement.

Primrose Primary

For Primrose Primary, student behaviour outside the classroom was the factor with the lowest overall mean, averaging out at 1.57 on Kendall's W. By looking at the table, it is evident that many of the items possess means in the 1-2 range, which indicates that the staff disagreed with the statements. Moreover, those items that did acquire a higher mean, also carried the highest standard deviation, meaning that there was little agreement with regards to these items. Teachers at Primrose Primary seemed concerned by these results and discussion on this area dominated the conversation throughout the staff meeting. This was also the area that teachers returned to once they completed the overview of the questionnaire results.

Foxglove Primary

This factor falls under the second umbrella heading, focusing on the learning environment, and targets areas of school functioning that are often overlooked in favour of academic priorities. In contrast to the previous tables, this chart demonstrates a greater number of low means. The table also reflects a lack of agreement between teachers on many of the items, as can be observed through the high standard deviation found throughout the table, and especially so for Q19, Q11 and Q13. Additionally, the results of Kendall's W revealed that this factor had the second lowest mean rank out of the nine factors. When these findings were presented at Foxglove Primary, the school staff agreed that this aspect of the school functioning was an area of concern. Therefore, it was recommended that Foxglove Primary consider selecting student behaviour outside the classroom as the focus for their improvement project.

Collaboration and Interaction between Teachers

Table 16. Mean and standard deviation for items measuring school policy on collaboration and interaction between teachers

Collaboration and Interaction between Teachers								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	Item	Mean	S.D.
Q22b. Teachers in our school are encouraged to participate in training (e.g. workshops, seminars, mentoring programmes) that: Is cumulative (e.g. involves multiple sessions over a period of time)	3.71	0.488	3.33	0.516	3.29	0.488	2.83	0.937
Q21. Discussions at staff meetings lead to an improvement in the way in which the school facilitates teachers for professional development and training.	3.57	0.535	3.00	0.632	2.57	0.535	2.83	0.389
Q34. In our school there is a practice for teachers who attend a seminar to transfer their knowledge to other teachers	3.71	0.488	3.40	0.548	3.43	0.535	2.92	0.515
Q15e. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Teacher collaboration	3.43	0.535	2.80	0.447	3.00	0.816	3.00	0.632
Q10. Teachers observe each other teaching as a way to discuss and share opinions on effective teaching.	2.57	0.787	3.00	0.632	2.86	0.900	3.08	0.515
Q22a. Teachers in our school are encouraged to participate in training (e.g. workshops, seminars, mentoring programmes) that: Aim to improve specific teaching skills	3.86	0.378	3.67	0.516	3.14	0.378	2.92	0.900
Q9. The teachers in our school cooperate with each other by exchanging ideas and materials when teaching specific units or series of lessons.	3.57	0.535	3.67	0.516	3.57	0.535	3.42	0.669

Q7. Teacher engagement in implementing policy on improving the school learning environment (e.g. running the library, teaching choir) is acknowledged (formally/informally) by the school management team.	3.20	1.095	3.20	0.447	2.66	0.816	3.00	0.603
Q8. Our school takes into consideration the professional skills of each individual teacher in designing and implementing school policy for the school learning environment.	3.40	0.894	3.00	0.707	2.50	0.836	2.75	0.621

Hawthorn Primary

Higher means appear throughout the table, yet, a fair number of items demonstrate a higher than typical variance in teacher response, especially items Q10, Q8 and Q7. This factor performed adequately on Kendall's W, ranking somewhere in the middle. While this factor did not outperform other factors, the results of the questionnaire indicate that it does not appear to be an area of concern. Although the results for this factor were in no way alarming, the headteacher of Hawthorn Primary admitted to being particularly interested in working on this area. At the staff meeting, teachers at Hawthorn Primary discussed this factor in great depth, and concluded that it was a contender for improvement.

Mulberry Primary

Generally high means prevail throughout the table; almost all items are above the mid of the scale. Several items, such as Q8, do possess a higher than desired standard deviation, and members of staff were advised to consider these individually. This factor performed well on Kendall's W, ranking at the top. On the basis of these results, collaboration was not suggested as an area for improvement at Mulberry Primary. At the time of the staff meeting, teachers confirmed that collaboration was not an area of concern and not a contender for reform.

Primrose Primary

The overall mean score for the items on this table is higher than the mid of the scale which indicates that the teachers agreed with majority of the statements. With regards to standard deviation, items Q7, Q8, Q10 and Q15e reflect quite high numbers, and staff at Primrose Primary was advised to give these statements particular attention. At the time of presentation little was said with regards to this factor, and given its fairly average performance, this area was not suggested as a focus for improvement at Primrose Primary.

Foxglove Primary

The mean scores for the items on this table are high, and low variance is observed in teacher response for most of the questions. In fact, the factor of collaboration and interaction between teachers acquired the highest teacher ratings out of those measured by this questionnaire. Although items Q22b, and Q22a demonstrate a high standard deviation, staff discussion on the topic helped to resolve this difference in perspective. As a result, this area was not suggested as a focus for improvement at Foxglove Primary. This was not an area that received much attention during the staff meeting, and teachers did not consider undertaking improvement in this area of the school functioning.

Partnership Policy

Table 17. Mean and standard deviation for items measuring school policy on community partnership

Partnership Policy								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	Item	Mean	S.D.
Q25. In our school, there is opportunity for different groups/people outside the school to become involved with, and cooperate in, the learning process (e.g. collaboration between a local basketball player and teachers)	3.86	0.378	3.17	0.753	3.29	0.488	2.83	0.835
Q23b. Parental/guardian role in relation to the following is discussed in parent/guardian-teacher meetings: Supervising homework	3.50	0.548	3.50	0.548	2.86	0.690	2.58	0.669
Q6. Our school encourages teachers to increase collaboration with parents/guardians of children who require additional educational support.	4.00	0.000	3.67	0.516	3.43	0.535	3.75	0.452
Q15d. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Parental involvement	3.43	0.535	2.80	0.447	3.00	0.816	2.92	0.669
Q5g. At staff meetings we discuss and take decisions on issues concerned with: How we can connect with the local community in order to enrich teaching and extracurricular activities	3.71	0.488	3.33	0.816	2.14	0.690	3.00	0.739
Q23a. Parental/guardian role in relation to the following is discussed in parent/guardian-teacher meetings: Reducing student absenteeism	3.43	0.787	3.33	0.816	2.86	0.690	2.83	0.577
Q20. Parents/guardians are informed about the teaching practices adopted by their child's teacher	3.29	0.488	2.83	0.408	3.00	0.577	3.00	0.739

Q17. At staff meetings we make decisions on how parents/guardians can be involved in learning activities	3.57	0.535	2.83	0.753	2.86	0.378	3.00	0.426
Q16f. Discussions at staff meetings/planning days help me to improve my practice in: Collaborating with parents/guardians to improve teaching and learning	3.57	0.535	3.00	0.632	2.86	0.690	3.17	0.577
Q5h. At staff meetings we discuss and take decisions on issues concerned with: Ways in which parents can be involved in promoting learning at school and home	4.00	0.000	2.83	0.753	3.29	0.756	3.17	0.577
Q26. Our school invites specialists in to conduct in-service training for teachers (e.g. a workshop supporting development of an anti-bullying policy)	3.86	0.378	3.50	0.548	3.57	0.535	3.25	0.622
Q23c. Parental/guardian role in relation to the following is discussed in parent/guardian-teacher meetings: Supporting the needs of pupils with special educational needs (e.g. gifted children, children with learning difficulties, children with special interests)	3.71	0.756	3.67	0.516	3.57	0.535	3.58	0.515
Q27. The management team in our school (principal and deputy heads) organizes in-service seminars or workshops to address needs of specific groups of teachers (e.g. newly qualified teachers, learning support teachers) as required	3.14	0.690	3.17	0.408	2.71	0.756	3.08	0.669
Q29. Our school designs effective forms of school-to-home and home-to-school communications about school programmes and children's progress	3.86	0.378	3.50	0.548	3.00	0.577	3.25	0.452

Hawthorn Primary

Continuing the general trend, the mean scores for this table are quite high, and the standard deviation was acceptable for the sample. Staff attention was drawn to Q23c and Q23a during the staff meeting, so as to establish consensus on these factors. This factor also performed well on Kendall's W, ranking near the top. Teachers were not surprised by these results, and this factor did not garner much attention at the staff meeting because by

and large no one present felt that the partnership policy at the school required additional scrutiny. Partnership policy was not chosen as a topic of focus for improvement at Hawthorn Primary.

Mulberry Primary

The mean scores for this table are average, falling just under or over the mid of the scale. The standard deviation is somewhat high for items Q5h, Q25, Q23a and Q5g, of which teachers were informed at the time of the meeting. In comparison with other factors, the area of partnership performed well overall, ranking near the top. Noting the high standard deviation of some items, the headteacher at Mulberry Primary took time to clarify existing policies and practices with the staff. Outside of this, the factor did not garner much attention, and was not selected as a topic of focus for improvement.

Primrose Primary

On the whole, the mean scores for this table are quite high, and outside of a few items, the standard deviation is acceptable. The overall ranking of this factor was quite high also. At the staff meeting, teachers touched on items Q15d, Q27 and Q5h, to clarify school policy on partnerships specifically as it pertained to the parents and guardians of their students. Once consensus was reached on existing policies, teachers did not feel the need to explore this area further, and the school chose not to undertake improvement relating to the factor of partnerships.

Foxglove Primary

The mean scores for this table are quite high, indicating that most of the school staff is likely aware of and acts on the existing policies in this area. Standard deviation is somewhat high for several items on this table, especially so for items Q5g, Q20 and Q25. This inconsistency was noted and addressed at the staff meeting when the findings were presented. The staff at Foxglove Primary did not feel that the partnership policy in their school needed additional scrutiny, thus, this factor was not chosen as a topic of focus.

Provision of Resources

Table 18. Mean and standard deviation for items measuring school policy on provision of learning resources to all members of the school

Provision of Sufficient Learning Resources to Students and Teachers								
	Hawthorn Primary		Mulberry Primary		Primrose Primary		Foxglove Primary	
Item	Mean	S.D.	Mean	S.D.	Mean	Item	Mean	S.D.
Q24d. There is material on notice-boards in the school relevant to: The effective use of a range of educational resources for teaching	2.57	0.535	2.50	0.548	2.57	0.535	2.50	0.522
Q15f. We take into account research findings (e.g. recently published articles in education journals, results of research studies, national policy documents) when we (re)formulate school policy related to: Use of resources for teaching	3.00	0.577	2.80	0.447	3.00	0.577	2.64	0.505
Q1g. Whole school records are kept concerning: The use of educational resources for teaching supplied by the school (e.g. maps, software, internet etc.)	3.00	0.000	3.20	0.447	3.00	0.577	2.83	0.577
Q16e. Discussions at staff meetings/planning days help me to improve my practice in: Using a variety of educational resources	3.29	0.488	3.17	0.408	3.00	0.577	2.83	0.718
Q12e. I feel that I am positively influenced by staff meetings/planning days in relation to: Using of visual aids and technology in teaching (e.g. iPads, computers/laptops, interactive whiteboard)	3.14	0.378	3.83	0.408	3.14	0.378	2.92	0.289
Q32. In our school we take care that new technologies that are available to us are used to satisfy our educational goals	3.14	0.690	3.83	0.408	3.00	1.00	2.92	0.669

Hawthorn Primary

This factor underperformed in comparison with others for this school, and although most of the items acquired positive means, they are lower than those observed for other factors. The standard deviation is similar to what was observed in previous tables. The results of Kendall's W revealed that this factor had the lowest mean rank out of all factors. Therefore, Hawthorn Primary was encouraged to consider undertaking improvement in this area of the school functioning. Teachers at Hawthorn found these results to be unexpected, as this was not an area they felt required special attention. Discussion at the staff meeting indicated that teachers had no particular concerns for this area of the school functioning, and staff members came to an easy conclusion that this factor was not in need of improvement at that time.

Mulberry Primary

Most of the items on this table acquired positive means, and the standard deviation is acceptable for all items. The overall mean of this factor, as gauged by Kendall's W, is fairly high in comparison with other factors for this school. Therefore, Mulberry Primary was not encouraged to consider undertaking improvement in this area of the school functioning. Discussion at the staff meeting indicated that teachers had no particular concerns for this area of the school functioning, and saw no reason to undertake improvement targeting this factor.

Primrose Primary

The means for the items on this table are at or below the mid of the table. While the scores do not appear to be particularly low, in comparison with other factors, it lags behind. Kendall's W ranked this factor as the second lowest, and for this reason 'provision of resources' was suggested as an area of improvement for Primrose Primary. The headteacher devoted some time to the discussion of this factor during the staff meeting, but established that she did not feel it required a dedicated improvement project. None of the teachers at Primrose Primary expressed misgivings about this factor and it was not selected as the focus of the improvement project.

Foxglove Primary

In contrast to the previous table, it is evident that the mean averages of this table are fairly low. The standard deviation for items Q16e and Q32 shows high variance in teacher perception. Additionally, the results of the Kendall's W revealed that this factor had the lowest mean rank out of all factors. Therefore, teachers at Hawthorn Primary were strongly encouraged to consider undertaking improvement in this area of the school functioning. Staff members at Foxglove were surprised by the results of this table, and a brief discussion established that teachers did not feel that it was an area that warranted a dedicated improvement initiative.

Evaluation

Table 19. Mean and standard deviation for items measuring evaluation of policy and actions taken to improve teaching and the school learning environment

Evaluation of policy and actions taken to improve teaching and the school learning environment								
	Hawthorn Primary		**Mulberry Primary**		**Primrose Primary**		**Foxglove Primary**	
Item	**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**Item**	**Mean**	**S.D.**
Q46. To evaluate school policy we examine the extent to which student behaviour during break time has improved	3.14	0.378	2.60	0.894	2.40	0.548	2.42	0.793
Q52b. The monitoring of the implementation of the school learning environment policy: Involves presentation of findings to staff	3.71	0.488	3.00	0.816	2.60	0.548	2.45	0.820
Q28. Student performance results are used to develop the school's educational goals.	3.80	0.447	3.75	0.500	3.50	0.547	3.83	3.89
Q48. Our school regularly reviews and revises policies concerned with the broader learning environment of school	3.57	0.535	3.20	0.447	2.60	0.548	2.50	0.798
Q47. Staff are presented with findings from the monitoring of how policies concerned with the broader school learning environment are implemented	3.43	0.787	3.20	0.447	2.60	0.548	2.50	0.674
Q50. Information collected during evaluation of school policy on the broader learning environment is used in improving existing policy	3.57	0.535	3.20	0.447	2.80	0.447	2.50	0.674

Q44c. To evaluate the implementation of the policy on school learning environment, we collect information from: Parents/guardians	3.43	0.787	3.00	0.707	2.60	0.548	2.58	0.900
Q51. School policy evaluation results are used to pinpoint areas in the school learning environment for which we need support and/or further training	3.57	0.535	3.20	0.447	3.00	0.000	2.58	0.669
Q45. Teachers' capacity to implement policy on school learning environment (e.g. student behaviour outside the classroom, collaboration and interaction between teachers) is evaluated within the school	3.43	0.535	3.20	0.447	2.80	0.447	2.60	0.843
Q52a. The monitoring of the implementation of the school learning environment policy: Is focused on specific aspects requiring special attention	3.71	0.488	3.00	0.707	2.80	0.447	2.64	0.809
Q39c. To evaluate the implementation of the school policy on teaching, we collect information from: Parents/guardians	3.29	0.756	3.20	0.447	2.60	0.548	2.67	0.888
Q38. Teachers' capacity to implement school policy on teaching (e.g. quantity of education, quality of education, provision of learning opportunities for students) is evaluated within the school	3.71	0.488	3.20	0.447	3.20	0.447	2.67	0.651
Q42. Staff are presented with the findings from the monitoring of how policies concerned with teaching are implemented	3.86	0.378	3.20	0.447	2.80	0.447	2.75	0.866
Q37. Our school regularly reviews and revises school policy on teaching	3.71	0.488	3.20	0.447	3.00	0.707	2.75	0.754
Q44b. To evaluate the implementation of the policy on the school learning environment, we collect information from: Students	3.86	0.378	3.20	0.447	2.80	0.447	2.83	0.835
Q49. Our school identifies the professional development/further education needs of its teachers	3.57	0.535	3.17	0.408	3.40	0.548	2.83	0.577

Q40b. The monitoring of the implementation of the teaching policy: Involves presentation of findings to staff	3.43	0.535	3.00	0.707	2.80	0.447	2.92	0.900
Q39b. To evaluate the implementation of the school policy on teaching, we collect information from: Students	3.71	0.488	3.20	0.447	2.60	0.547	2.92	0.793
Q33. In our school, we additionally analyse the aspects of the school in which we encounter problems.	3.80	0.447	3.40	0.547	2.66	0.816	3.09	0.700
Q41. School policy evaluation results are used to pinpoint areas in teaching for which we need support and/or further training	3.57	0.535	3.00	0.00	3.00	0.000	2.92	0.793
Q44a. To evaluate the implementation of the policy on school learning environment, we collect information from: Teachers	3.86	0.378	3.20	0.447	2.80	0.447	3.00	0.853
Q39a. To evaluate the implementation of the school policy on teaching, we collect information from: Teachers	3.71	0.488	3.20	0.447	3.00	0.000	3.00	0.739
Q36. Information collected during evaluation of school policy on teaching is used in improving existing policy	3.57	0.535	3.20	0.447	3.20	0.447	3.00	0.426
Q40a. The monitoring of the implementation of the teaching policy: Is focused on specific aspects requiring special attention	3.57	0.535	3.20	0.447	3.00	0.000	3.08	0.793
Q43. The principal and/or other members of the school staff monitor the way the policy concerned with the broader school learning environment is put into practice	3.86	0.378	3.20	0.447	3.00	0.000	3.17	0.389
Q35. The way the teaching policy is put into practice is monitored	3.71	0.488	3.20	0.447	3.00	0.000	3.25	0.452

Hawthorn Primary

The mean scores for these factors are quite high throughout the table. However, standard deviation is also on the higher end, especially for items 39c, 44c, and Q47, indicating that teacher perspectives do not necessarily align with regards to these factors. At the staff meeting, teachers and the leadership team were encouraged to discuss the

items that demonstrated high standard deviation. Staff members discussed the data presented on this table briefly, and reached a consensus regarding existing policies. The factor of 'evaluation' was not selected for improvement at Hawthorn Primary.

Mulberry Primary

The mean scores for this factor are quite high throughout the table, at or above the mid. Standard deviation is acceptable for the majority of the items, although teachers were advised to discuss items Q46, Q44c, Q40b, 52b, and Q52a individually because a large variation was observed in staff answers. At the staff meeting, the headteacher addressed the existing policies with regards to the items in question, but did not devote significant time to this factor. None of the teachers raised any points of concern, and staff members at Mulberry Primary jointly concluded that evaluation was not an area that required improvement at their school.

Primrose Primary

The mean scores for this table are at or just below the mid of the scale. Kendall's W shows that in comparison with other factors for Primrose Primary, the factor of evaluation ranks near the bottom. The standard deviation is average for most of the sample, though Q37 and Q33 were brought to the attention of staff members. At the staff meeting, the factor of 'evaluation' did not receive significant attention, and the headteacher felt that existing policies on evaluation were well defined and not in need of reform. The factor of evaluation was not selected for improvement at Primrose Primary.

Foxglove Primary

The mean scores for this table are lower than average in comparison with other factors for this school. Additionally, high numbers are observed throughout the table with regards to standard deviation. Staff perspectives on evaluation vary on most items included in this table. This trend was explained when teachers were presented with results from the survey. At Foxglove Primary, the leadership team was solely responsible for implementing evaluation policies, meaning the school teaching staff were not aware of many of the existing evaluation policies and did not feel that this area of school functioning applied to them. Although the teachers were advised to consider this area for their improvement project, Foxglove Primary decided that evaluation was not a priority for the school at that time.