Building learning powers: what are the effects of developing a learning powered infant school?

Laura Watson

A Research & Development Project

Submitted for the MSc in Learning & Teaching 2018

DEPOSIT AND CONSULTATION OF THESIS

One copy of your dissertation will be deposited in the Department of Education Library via Oxford Research Archives where it is intended to be available for consultation by all Library users. In order to facilitate this, the following form should be inserted in the library copy of the dissertation.

Note that some graphs/tables may be removed in order to comply with copyright restrictions.

Surname	Watson
First Name	Laura
Faculty Board	Education
Title of Dissertation	Building learning powers: what are the effects of developing a learning powered infant school?

Declaration by the candidate as author of the dissertation

1. I understand that I am the owner of this dissertation and that the copyright rests with me unless I specifically transfer it to another person.

2. I understand that the Department requires that I shall deposit a copy of my dissertation in the Department of Education Library via Oxford Research Archives where it shall be available for consultation, and that reproductions of it may be made for other Libraries so that it can be available to those who to consult it elsewhere. I understand that the Library, before allowing my dissertation to be consulted either in the original or in reproduced form, will require each person wishing to consult it to sign a declaration that he or she recognises that the copyright of this thesis belongs to me. I permit limited copying of my dissertation by individuals (no more than 5% or one chapter) for personal research use. No quotation from it and no information derived from it may be published without my prior written consent and I undertake to supply a current address to the Library so this consent can be sought.

3. I agree that my dissertation shall be available for consultation in accordance with paragraph 2 above.

Abstract.

"Apart from food, shelter and love, more than anything else today's young people need strong learning minds. Today's students will need to be up to living a learning life" (Claxton, 2011: 2).

Education professionals are in prime position to prepare today's young people for their futures, equipping them with the views, visions and values which allow them to flourish and succeed. To thrive in the 21st century, it is not enough to leave school with a clutch of exam certificates (Claxton, 2011: 2). In an increasingly competitive and globalised society, employers from all over the world are crying out for individuals who are not only qualified, but who have the right attitude and a willingness to learn (Claxton, 2011). To navigate their way through their unpredictable future, pupils in today's schools need to be prepared not just for a life of tests, but for the tests of life. A 21st century education should be preparing young people to be effective, powerful, real-life learners to best prepare them for their future (Claxton, 2007).

This practitioner research project, taking place in a South London infant school, aims to help children to become more resourceful, resilient, reflective and reciprocal learners through developing a learning powered approach to learning and teaching, as based on the work of Guy Claxton, and assessing its effects. Although in its infancy, this project suggests that this approach can develop children as better learners, setting them up for a lifetime of learning.

Table of Contents

Acknowledgements……1

Abstract……..2

Chapter 1: Introduction……..6

1.1 Introduction and research context……6

1.2 Introduction to Applebee Infants' School……7

1.3 Purpose and aims of research……8

1.4 Theoretical framework…….....8

1.5 Research questions……9

1.6 Description of project and rationale…….....10

1.7 Summary……11

Chapter 2: Literature Review……...11

2.1 Introduction……11

2.2 Why is there a need for change in the current education system?.....12

2.2.1 Preparation for life after school……12

2.2.2 More than just qualifications……12

2.2.3 Need for change……14

2.2.4 How far have we come?.....15

2.3 Building Learning Power……....18

2.3.1 What are the principles of Claxton's learning power approach?.....18

2.3.2 How can a learning powered school be developed?.....22

2.3.3 What are the potential issues with developing a learning powered school?.....26

2.4 Innovation: What I'm adding to the research……..29

2.5 Summary……30

Chapter 3: Research Methodology……...30

3.1 Introduction……30

3.2 Research questions……..31

3.3 Methodology……...31

3.4 Methods……...32

3.5 Data sources……32
3.5.1 Pupil interviews……32
3.5.2 Staff questionnaires……...34
3.5.3 Staff interviews……35
3.5.4 Parent interviews……...36
3.5.5 Governor interviews……..37
3.5.6 Learning observations……...37
3.6 Ethics……...38
3.6.1 Overview……...38
3.6.2 Informed consent……...38
3.6.3 Anonymity and confidentiality: participants' rights……40
3.6.4 Data protection……..40
3.6.5 Role of the researcher……40
3.6.6 Guidelines followed……..41
3.7 Limitations of the project……41
3.8 Summary……42
Chapter 4: Intervention design and approach……...42
4.1 Introduction……42
4.2 How learning power was introduced at Applebee Infants……..42
4.2.1 Super Learners……...43
4.2.2 Applebee Infants' Learning Mind……44
4.2.3 Language of learning……45
4.2.4 Learning and performance zones……..45
4.2.5 Pupil conferencing……46
4.2.6 Deliberate practice……46
4.3 Summary……46
Chapter 5: Research findings and discussion……...47
5.1 Introduction……47
5.2 Main findings……..47
5.2.1 Pupil's views……47

5.2.2 Staff's views……..49
5.2.3 Parent and governor views……51
5.3 Collaboration……...52
5.4 How do children at Applebee Infants view themselves as learners?.....53
5.5 Can we build an effective whole-school and classroom climate that supports children in becoming more resourceful, resilient, reflective and reciprocal learners?.....56
5.5.1 Resourceful learners (Link Maker, Ideas Agent, The Questioner)……...56
5.5.2 Resilient learners (Platinum Perseverer, Captain Resilience, Fantastic Focus)……59
5.5.3 Reflective learners (Memory Master, Chief Risk Taker, Marvellous Me)……...61
5.5.4 Reciprocal learners (The Collaborator, The Listener, Sergeant Independence)…...63
5.6 Can we help children to better understand how and when they are learning? Can we make learning more visible?.....64
5.7 Is it possible for *all* children to develop their learning power?.....66
5.8 Relationship of findings to literature……...67
5.9 Summary…….68
Chapter 6: Summary, next steps and personal reflection…….68
6.1 Summary of research……...68
6.2 Next steps……69
6.3 Personal reflection……...70
References……72
Appendices……...84

Chapter 1: Introduction

1.1 Introduction and research context.

"*The purpose of education is to prepare young people for the future"* (Claxton, 2013).

For the past three years, I have been a Year 1 teacher at Applebee Infants' School.[1] Since qualifying as a teacher in 2014, I have witnessed many changes to learning and teaching. What hasn't changed is my passion for teaching, and my belief that I am in a privileged position to influence children's learning. Applebee's vision statement states that they '*aim to encourage everyone to develop a growth mindset by taking risks, asking questions, rising to challenges, being resilient and never giving up'*. This appealed to me, as I believe that school is not only a place which should provide children with the knowledge and skills that they need for the future, but which also educates the *whole* child, including their social and emotional intelligence. When I began my Masters in Learning and Teaching, I knew that the staff at Applebee Infants would welcome the opportunity to develop and improve the learning and teaching at our school. After speaking with the Senior Leadership Team (SLT), they agreed that the next step for our school was to implement an approach which not only helped our children to learn curriculum content, but which also helped them to become the confident and resilient learners that we want them to be. I reviewed the relevant literature and decided to design an intervention to develop a learning powered approach, as based on Guy Claxton's theory. This practitioner research project aims to assess the effects of developing a learning powered school at Applebee Infants, in the hope of better preparing our children for their future. I will thus be adding to the current literature, as well as transforming professional practice at Applebee Infants through introducing a whole-school collaborative approach to learning and teaching which places the child at the heart of the study.

[1] Applebee Infants is a pseudonym which has been used to respect the school's anonymity and confidentiality.

1.2 Introduction to Applebee Infants' School.

"At Applebee Infants we follow the Busy Bee Code: Be kind, be helpful, be the best you can be".

Applebee Infants' School is located in the London Borough of Sutton. It has recently joined a multi-academy trust and is a Designated National Support School. It is a three-form mixed school, with pupils ranging from three to seven years old, with 290 pupils on roll. In 2008, it was graded as 'Outstanding' by Ofsted, and an interim assessment in 2011 indicated that performance had been sustained. Twenty pupils (7.4%) are entitled to the Pupil Premium Grant, nearly half of the national average (13.6%) for UK primary schools (DfE, 2018). Applebee Infants opened its Nursery in September 2017 after receiving funding from the local authority. The junior school is located beside the infants, which most of the children go on to attend. Applebee Infants is an accredited 'Advanced Thinking Skills' school, and therefore supports students in 'developing an understanding of how they think'. The 'thinking tools' used at Applebee Infants include thinking maps and De Bono's thinking hats, which are incorporated into the curriculum. Thinking maps (Appendix A) allow children to organise their thinking depending on its purpose. De Bono's thinking hats (Appendix B) allow children to understand different 'types' of thinking, and which thinking process is useful in particular contexts (Hocking & Vernon, 2017). These thinking approaches are implemented alongside a whole-school 'growth mindset', as influenced by the work of Carol Dweck (2006), in which both staff and children are aware that their intelligence can be shaped through sustained effort and learning from mistakes. Applebee Infants welcomes educational innovation and strives to provide a stimulating learning environment which provides the best outcomes for all pupils. Consequently, Applebee Infants is an ideal place for a practitioner research project which aims to help children to take charge of their learning and become better lifelong learners.

1.3 Purpose and aims of the research

The purpose of this practitioner research project is to discover whether the children at Applebee Infants can develop their 'learning power', a concept which aims to develop children's resilience, reflectiveness, resourcefulness and reciprocity in order to become better learners.

After reviewing the literature, my first aim was to create a practical implementation of Claxton's approach as a whole-school collaborative process, before embedding the approach at Applebee Infants. This involved designing the 'Super Learner' characters, as well as planning the intervention and how the approach would be introduced in line with the values of our school. Ultimately, I wanted to make a positive change within the school which would enhance and improve children's learning.

Collaboration with pupils, staff, parents and governors was critical throughout this project, including designing the intervention, having buy-in and support to implement the approach, and evaluating the effects. These views were instrumental in allowing me to collect data and truly understand the effects of developing a learning powered school, thus adding new professional knowledge and insights into this field.

1.4 Theoretical framework

To create a learning powered curriculum at Applebee Infants, I first needed to examine Claxton's approach, which framed my intervention for this project. Much of Claxton's reasoning for his research and beliefs aligned with my own, that today's children need more than just qualifications to live successful, happy, fulfilling learning lives.

"*In a globalised world characterised by rapid change and technological innovation, in which young people have few certainties about their futures, in which most people will have several careers;…it is vital that our young people are equipped with the values, the insights and the*

skills that they will need to navigate their way through the jungle of opportunities and threats" (Claxton, 2011: 1).

Of course we want today's young people to do well in their exams and to gain qualifications that they need to secure the career that they want. But apart from qualifications, we want young people to be able to make successful relationships, to be good parents, to be capable of being loving and kind (Claxton, 2002). Ultimately, we would like them to be happy. Claxton's Building Learning Power approach seeks to develop the dispositions and habits of mind in today's young people that will stand them in good stead outside of school, for the rest of their lives (Claxton, 2002). If education is to be a preparation for dealing with what can be a rich but also confusing future, it is not enough to 'train young people to hoover up pre-determined, bitesize goblets of knowledge' (Claxton: 2002: 89). As Einstein (cited in Claxton, 2013: vii) said: 'education is what remains after one has forgotten what one learned at school'. We must equip young people with more than just the knowledge required to pass an exam, we must equip them with the capacities that they will need to thrive (Claxton, 2013). The theoretical framework for this project is built upon Claxton's (2013) view that young people, indeed all people, can stretch and develop their 'learning muscles' so that they can become confident in their own learning ability and become successful lifelong learners.

1.5 Research questions

In order to analyse how children can best be supported in becoming better learners, the literature review analyses different approaches to teaching and learning, including Gardner's 'multiple intelligences' as well as Claxon's learning powered approach which frames this project. This project provides evidence for a practical implementation of the learning powered approach and the subsequent effects of this.

In order to effectively assess and discuss the impact of developing a learning powered approach, I first needed to understand how children viewed themselves as learners. I then needed to establish whether it was possible to develop positive learning dispositions at Applebee Infants and in doing so, make learning more visible. As a mixed school with learners having different needs, I also needed to establish whether it was possible that *all* learners at Applebee Infants could develop their learning power.

My research questions for this practitioner research project are therefore:

- How do children at Applebee Infants view themselves as learners?
- Can we build an effective whole-school and classroom climate that supports children in becoming more resourceful, resilient, reflective and reciprocal learners?
- Can we help children to better understand how and when they are learning? Can we make learning more visible?
- Is it possible for *all* children to develop their learning power?

1.6 Description of the project and rationale

After discussions with SLT about our school's aims, values and next steps, it was decided that Claxton's learning powered approach would be the basis for my school-based intervention. Comparatively to previous approaches which were introduced and not deemed as successful, SLT were intrigued about the aims of the learning powered approach to develop the whole child as a successful learner. Using Claxton's learning powered approach as a theoretical framework, I worked with the SLT to design the intervention. We discussed which learning dispositions we would like to enhance in our curriculum, which were the result of the skills, habits and attitudes that we value as a school. I then had to decide how to present these to the children, in a way which would be suitable, understandable and relatable.

Over the following weeks, I designed and created the 'Applebee Infants Super Learners' – 12 'superhero' characters representing each of the learning dispositions that we wanted to develop. The following months of carrying out this intervention project involved embedding these Super Learners into our school ethos, in the hope of helping the children in our school to not only learn better, or learn more, but to become *better learners* (Claxton, 2002). Teaching children at the very start of their journey through school places us in a privileged position to help our children to reach their full potential and be the best that they can be.

1.7 Summary

This practitioner research project aims to assess the impact of a practical implantation of a learning powered approach developed at Applebee Infants' School. This will involve stating a theoretical framework, explaining the intervention and the methods used, followed by examining and discussing the research findings.

Chapter 2: Literature review

2.1 Introduction

Before developing a learning powered curriculum, it was first necessary to review the relevant literature so that the intervention for this research project had a strong theoretical framework. The purpose of this literature review was to answer the following questions:

- Why is there a need for change in the current education system?
- What are the principles of Claxton's Building Learning Power approach?
- How can a learning powered infant school be developed?
- What are the potential issues with developing a learning powered school?

2.2 Why is there a need for change in the current education system?

2.2.1 Preparation for life after school

'*It seems that there are countless debates and discussions about what children should learn, but not enough talk about what learning is supposed to be for'* (Biesta, 2016: 127).

Many job descriptions list A levels, degrees and other qualifications as necessary or desirable criteria, but this is not where the list ends. Qualities and skills such as communication, leadership, problem-solving and self-awareness are often listed as necessary prerequisites for successful candidates (McWilliam & Haukka, 2008). Why is this? In 2009, Claxton and Lucas undertook a review of the skills that economies around the world are trying to cultivate to make their citizens more employable (Claxton, 2011: 18). They found that employers are desperate for people who can think for themselves, show initiative and collaborate effectively. In the same year, Edexcel also published research which found that employers are 'crying out for workers who have the right attitude and a willingness to learn' (Claxton, 2011: 18). If this is the case, then young people need to know how to develop these skills. In the UK, a future referred to as 'big school', 'Key Stage 3' or 'GCSEs' is often the limit of what some children are prepared for (Barnes, 2015: 249). Yes, students are motivated by grades, but what happens once they achieve them, or if they don't? Every year children are prepared to transition and move on to the year above at school. At sixth form, they may be provided with information about their educational options. But when are they prepared for the big, wide world? If education is the ticket to the rest of their lives, surely there must be a map for the rest of the journey. To succeed in today's society, education must teach students how to learn and achieve on their own (Saaavedra & Opfer, 2012).

2.2.2 More than just qualifications

"*It is an uncomfortable fact that much of what is learned in school doesn't transfer to real-life situations"* (Claxton, 2002: 28).

It is extremely difficult for schools to break what Claxton (2011: 22) refers to as 'the hypnotic spell of standards'. National and international league tables rank schools dependent upon the grades achieved, with a very strong focus on maths and English. Within the borough that I teach, there is constant comparison of our results to local schools and National averages. Throughout the year we are constantly tracking children's academic attainment and progress, because that is what the government want to know. The problem is, if this is all that we are measuring, this ends up being what we value (Watkins, 2005). If it is the case that we value children's creativity, confidence, independence and other traits, then we need to find a way of measuring this, otherwise we are at risk of only valuing what we can measure (Claxton, 2011). If the ultimate goal of education is academic qualifications awarded only to some at the end of formal education, this acts as a means of excluding those young people for whom this is not a reality (Collins et al, 2002). We cannot only place value on academic 'success' if this means there will be young people who don't feel valued.

If we want young people to prosper and flourish once they leave those school gates, they need to be armed with more than just exam certificates. When 'knowledge doubles every three years and computer technology changes every few months, the need to be a resilient lifelong learner becomes indisputable' (Barth, 2001). Qualifications, then, are not the only means towards the end of preparing young people for their future.

The Department for Education itself recognises the purpose of education beyond academic achievement, stating that 'education should prepare children for adult life, giving them the skills and character traits needed to succeed academically, have a fulfilling career and make a positive contribution to British society' (DfE, 2016). It seems that the government recognises that the purpose of education is not only to succeed academically, but to provide a social, moral and character education in order to best prepare young people for their future (Arthur, 2013).

2.2.3 Need for change

There is evidence which suggests that spoon-feeding young people to pass exams has detrimental effects to their future confidence, self-esteem and wellbeing (Costa & Kallick, 2008). Young people who have been taught to seek the right answer, and never how to flounder intelligently, don't know what to do when they find themselves in a situation where they don't know what to do (Claxton, 2011). Real competence goes beyond comprehension – it involves courage, confidence and adventurousness (TLO). University counsellors speak of a rapid rise in 'imposter syndrome' – the fear among some 'bright' students that they are going to be 'unmasked as unworthy of their place' (Claxton, 2018a: 35). This would suggest that education does not seem to be preparing young people for their complex and uncertain future (Claxton, 2013). The stress that schools are under in order to achieve certain Ofsted ratings, percentages and to look good on league tables, all feeds down and affects the stress of young people. It is young people that are told they need to get the grades, they need achieve - they need to 'succeed'. In a nutshell, young people are stressed; 'a continuing imbalance between demands and resources leads to feelings of being inadequate, anxious and out of control' (Claxton, 2013: 12). This is confirmed by national statistics which show that in the UK over the past 25 years, rates of depression and anxiety among teenagers have increased by an overwhelming 70% (Claxton, 2018a: 82). Surely we want to nurture confident, self-assured young adults, rather than to cause them stress, anxiety and self-doubt?

It seems that change is necessary in order for today's young people to regulate and improve their own learning in order to gain the skills and habits that will prepare them for adult life. Lifelong learning means more than continuing to achieve academically, it means learning how to view yourself as in charge of your own future (Collins et al, 2002).

2.2.4 How far have we come?

As far back as 1904, people have been aware that intelligence is not a 'fixed commodity' (Burden, 2011: 14). Alfred Binet, the father of the IQ test, saw intelligence as 'a complicated mixture of a great many different skills and abilities' (Burden, 2011: 14). For this reason, he did not design the IQ test as a sole indicator of intelligence, but rather meant for it to be one of many measures. Unfortunately this has not always been the case. Looking at the history of educational assessment, it largely concerns the development of instruments to assess either intelligence or educational achievement (Crick et al, 2004). The only regular, formal assessments carried out by teachers track academic attainment. Very little attention has been given to assessing an individual's learning orientation, what Crick et al (2004: 247) describe as 'the complex mixture of experience, motivation, intelligence and dispositions that any particular learning opportunity evokes'. Formative assessment does not adequately capture dispositions such as perseverance, which are important in order to engage productively in society (Kautz et al, 2014).

Howard Gardner's (2017) theory of 'multiple intelligences' aims to address this issue, as it encompasses a range of human cognitive capacities. Gardner recognises that individuals can be talented and skilled in ways which cannot be assessed in a standardised process. In Gardner's eyes, every person is made up of a combination of several 'intelligences' (Kunesh, 2018: Appendix C), and if schools base their practices upon this understanding, they maximise the potential for student learning (Formisano, 2008). He explicitly outlines how schools should organise their curriculum and approach to learning to meet the needs of the individual child. For example, when teaching a concept, Gardner (cited in Lynch, 1995) advocates at least five entry points, such as experiential (hands-on) and narrational (teacher explanation), to allow students to find a route that matches their intellectual strength. This was an approach that was introduced at Applebee Infants some years ago, in which each

teacher and child was individually profiled to determine their preferred method of learning. For each learning objective four different activities were planned to represent four intelligences and therefore entry points to learning. For example, when learning about Florence Nightingale, some children would research her life through reading books, some would act out her life and others would be building a replica of a hospital she worked in. The aim was that children gained the same knowledge from the lesson, but could take part in the learning in a way which best suited their preferred 'intelligence'. Gardner (1993) refers to this as the 'spectrum classroom' – whereby children are surrounded by engaging activities that allow combinations of intelligences to be developed. Learning becomes more project based, which better reflects how people learn in the 'real world', instead of rote-learning information to pass tests.

The issue that was found in using this approach at Applebee Infants was that children adapted their preferred style of learning to that of their teacher. When children were re-tested, they had often changed their strongest 'intelligence' to imitate the learning profile of their teacher. Therefore, it was felt that the approach was not nurturing children's individualistic talents in the way it was hoped. What's more, Gardner advocates that because there are so many types of intelligence (he argues that there are possibly up to 7,000), they cannot be assessed formatively and must be assessed through a portfolio (Reinhard, 2015). This may offer a personalised account of learning, but would have to occur alongside the summative assessment that is required by the government, and would thus become extremely time-consuming. The Headteacher at Applebee Infants stated that the approach took a lot of time and seemingly had little impact on the quality of children's learning. It seems that Gardner falls short in offering a practical approach to learning and teaching which not only educates the whole child, but is easily applicable and relevant in today's classroom. Gardner (cited in Brink, 1985) himself recognises that when shifting our perspective from the individual to the

educational situation as a whole, we move in to largely 'unchartered waters', as his theory becomes largely descriptive and idealistic. However, the appealing premise of his theory is that the most important objective for schools is to teach a 'deep understanding' which allows students to apply the concepts and skills learned in school to solve other unfamiliar problems (Formisano, 2008). This is something which Applebee Infants wanted to develop, and which it was felt was not met by Gardner's approach.

Claxton's approach to learning and teaching, that of 'building learning power' (BLP) aims to develop the skills necessary for lifelong learning, in the same way that Gardner's theory aims to; but the crucial element that distinguishes BLP from other approaches is the way in which it focuses on the cultivation of positive learning dispositions (Carr & Claxton, 2002). Claxton (2002) is aware that there is a lot of talk in the educational field about enhancing students' learning, but that this generally means one of two things. First, some approaches propose to help students to *learn more*, by offering incentives or breaking up the curriculum in to smaller chunks which are easier to process and therefore learn. Other approaches propose to help students to *learn better*, by making sure that they are aware of their preferred learning style. This is the aim of Gardner's multiple intelligences approach. The aim of BLP, however, is that it helps students to become *better learners*, so that they have a positive attitude to learn well whatever the condition and situation (Claxton, 2002: 15).

Claxton is very careful to differentiate between skills and dispositions or habits. David Perkins (cited in Burden, 2011: 43) describes thinking skills as something which can be called to mind when directly prompted, but do not come to mind spontaneously when they might be needed. Skills can be thought of as what you *can* do, whereas a habit or a disposition is what you naturally and spontaneously do (Sommers & Olsen, 2010). BLP develops dispositions to learn, enabling pupils to adopt methods that are conducive to learning (Swann, 2012). It is these learning dispositions that will stand pupils in good stead

for their future, as their approaches to learning become habitual and therefore do not need the time-consuming teacher preparation as can be the case in approaches such as Gardner's. BLP aims to enhance pupil's understanding whilst also developing those dispositions which allow them to approach any new learning situation in an efficient, resilient and confident manner.

2.3 Building Learning Power

2.3.1 What are the principles of Claxton's Building Learning Power approach?

Claxton's Building Learning Power (BLP) approach is heavily influenced by Dweck's (2006) belief that intelligence is learnable. Following Dweck's lead, the whole language of BLP is designed to reinforce this idea that children should think of their brain as like a muscle which can become stronger with exercise (Claxton, 2011). Children who have such a growth mindset believe that they can *improve* their learning. Claxton (2013) argues that children are naturally born with a growth mindset. But, Claxton and Lucas (2015) point out, by the time children start school, this mindset is replaced by the value of 'looking good', and the need to get the 'right' answer replaces the need to inquire and persist in the face of difficulty. The purpose of BLP is to enable children to retain this growth mindset and to go to school to develop their 'learning fitness', in the same way one might exercise in order to develop their physical fitness (Claxton, 2013). The 'learning muscles' which Claxton (2013) believes that teachers and pupils should develop are a set of positive learning dispositions and capabilities. This 'learning fitness' is not the same as teaching a specific set of skills or techniques, but is about helping young children to develop a general, all-round learning fitness and readiness (Claxton, 2002). Claxton (2002: 14) explains this by comparing it to a tennis player getting ready for a match – they would not only practise specific shots but would also work on their general stamina, strength and coordination. They would want to ensure that their mind and body are as fit and sharp as possible. This analogy demonstrates the purpose of BLP –

children of course need to learn specific facts and curriculum content, but in doing so they can also be working on developing their learning power, so that are equipped with the right attitudes and habits to be the best learner that they can be.

Claxton's (2011) BLP approach rests on five core beliefs. The first is that the core purpose of education is to prepare young people for life after school (p2). The second is helping to nurture a spirit of resourceful and resilience in young people, so that even if they don't do well in their exams, they discover what it is that they would like to be great at, and strengthen the will to pursue it. The third belief is that BLP provides young people with confidence in a changing world, which is achieved through Claxton's fourth belief that real-world intelligence is more than a fixed notion of 'ability', and that young people are capable of developing confidence, capability and a passion for learning (p3). The final belief is that BLP is vital, difficult and do-able. That is, the approach may be a slow, gradual process, and there may be difficulties on the way, but just as resilience and perseverance should be encouraged in pupils, teachers and other professionals need to persist in the knowledge that this culture change is a worthwhile process.

The act of developing learner power in schools means working on four aspects of students' learning (Claxton, 2002). First, it aims to help them to become more resilient, so that they are not afraid to make mistakes and learn from them. The second task is to help pupils to become more resourceful, drawing from a range of learning strategies to support them with their learning. The third is developing the ability of being reflective, so that pupils can think of themselves as learners, including their strengths and targets. And the fourth task is helping pupils to be reciprocal learners who are able to work either alone or with others productively when appropriate. Each of these aspects are inter-linked and involve a whole range of examples and possibilities to be developed. Claxton (2002: 43) makes it clear that developing learning power is not about following a list of bullet points, but can be likened to 'a well-

balanced orchestra', in that it is not about following simple tricks or remedies, but rather harmonising and nurturing dispositions in young people which will enable them to become better learners. Claxton demonstrates all of the 'ingredients of learning power' through his creation of the 'learning powered mind' (Figure 1), which includes the key dispositions which aim to be developed through BLP.

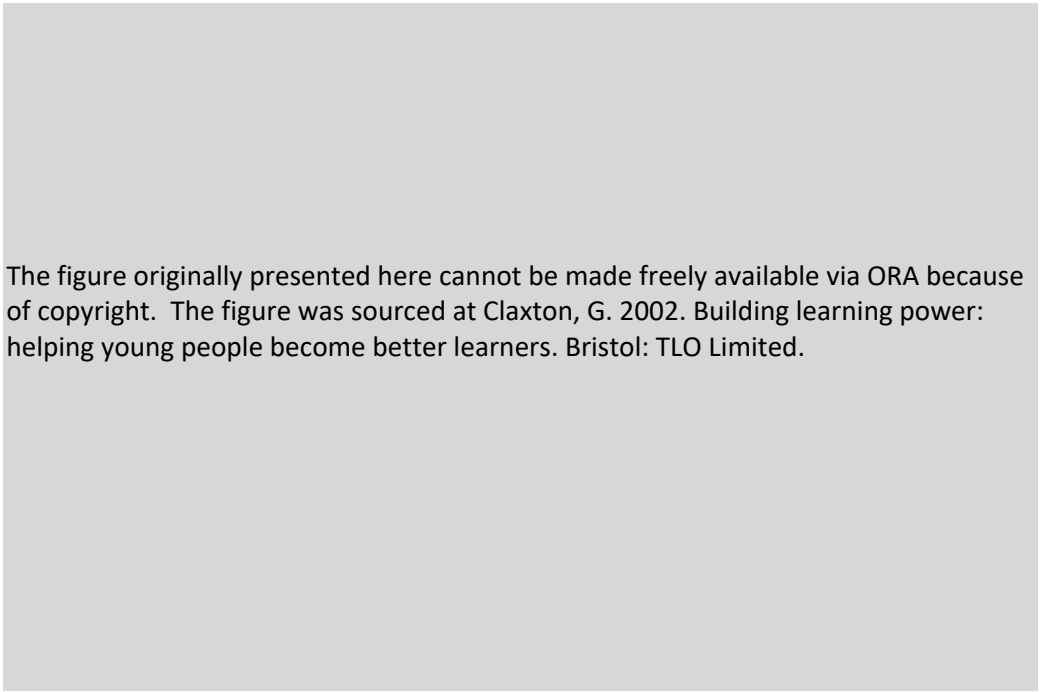


Figure 1:

Claxton's Learning Powered Mind (TLO)

When explaining how learning power works alongside pupils learning subject content, Claxton (2018b: 46) speaks of 'the deep river of learning' (Figure 2). The idea is that within a classroom, there are different layers of learning taking place. The top layer is the subjects and topics being studied. Below the surface are 'all the forms of literacy and expertise that enable students to understand, discuss and use the knowledge' (p45). But down in what Claxton calls 'the darker depths of the river' is where you find the gradual development of learning dispositions which 'determine how students respond to difficulty, complexity and frustration'.

'Just like the banks and bed of the river, every classroom channels and shapes students' development, not just as knowers of facts but as learners' (Claxton, 2018b: 45).

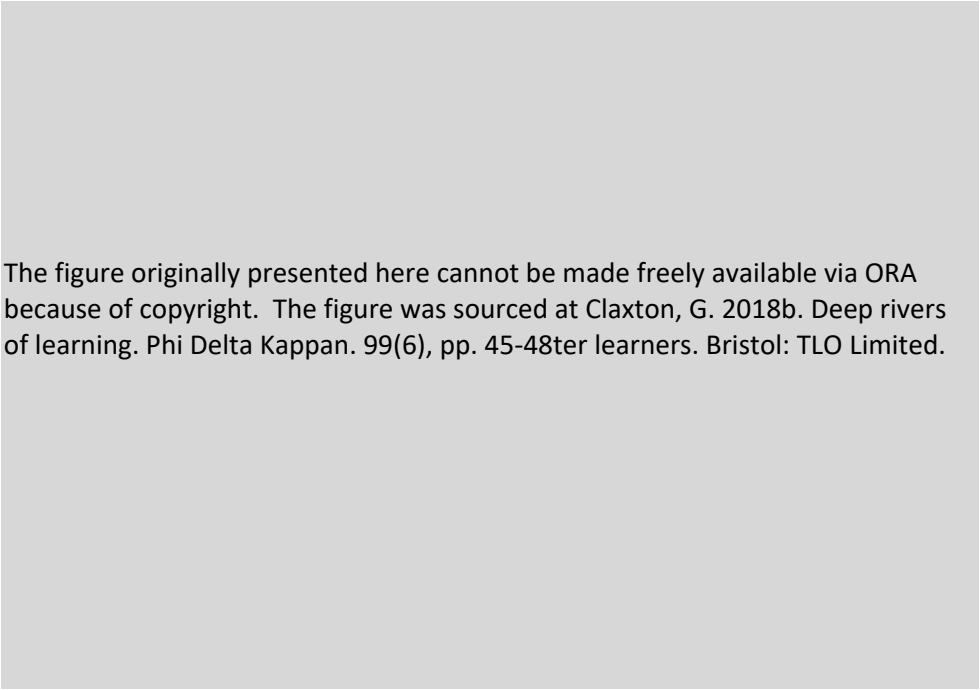


Figure 2:

The learning river

Claxton (2013: ix) argues that we 'cannot ignore the character-forming nature of school'. Developing dispositions such as being resilient will help young people to overcome difficulty and uncertainty in their personal lives as well as their academic careers (Ritchhart & Perkins, 2000). It can also help to develop motivation, facilitating learners' relationship with their learning – which is both an intellectual and an emotional engagement (Collins et al, 2002: 17). If pupils feel motivated and engaged in their learning, they will increasingly feel as though they are in charge of their achievements, resulting in greater self-belief and self-esteem (Edwards, 2013). As Claxton (2011) points out, students who are confident of their own learning ability learn faster and learn better, and they find learning more enjoyable.

The BLP approach is forward-looking, and aims to 'develop qualities and habits of mind in school that will stand them in good stead outside of school, for the rest of their lives' (Claxton, 2002: 55). Claxton (2018a) does recognise, however, that it is of course possible and likely that someone may be a powerful learner in one context and a timid learner in another; no one can be a highly powerful learner *all* of the time. That may mean that a pupil could be a reluctant learner in some subjects, but a very confident and resilient learner in an

extra-curricular club or activity outside of school, but 'that doesn't mean we can't stretch and strengthen our overall adventurousness and determination' (p28).

The BLP approach is not meant to be 'just another initiative' that requires teachers to put in a lot of effort and time for limited results. It is an attempt to synthesise and synergise a variety of approaches that are already well developed and evidenced (Claxton, 2018a). Learning power is not a new 'thing' that has been discovered and is suddenly claiming to solve all of teacher's problems, but it is a 'way of packaging a whole variety of mental habits, beliefs and attitudes that all contribute to the overall sense of being optimistic and resourceful' (Claxton, 2018a: 86). The attractive claim made by Claxton is that BLP rests on the 'and philosophy' – that it can provide pupils with a better preparation for life *and* better attainment (Claxton, 2011: 51). The next step, then, is to see whether such an approach can be successfully implemented within a school.

2.3.2 How can a learning powered school be developed?

As this research project is designed to be implemented in an infant school, from what age can children begin to develop their learning power? Flutter and Rudduck's (2004) research in primary schools across the UK found that pupils of all ages can show 'a remarkable capacity to discuss their learning in a considered and insightful way' (p7), although younger children may not be able to articulate their thoughts using 'formal' language (Chernokova, 2014). In terms of independent learning, Taber (2007) suggests that although it is unrealistic to expect young children to be fully independent learners, they can still be encouraged to take increasing responsibility for monitoring their own learning. Guidance published in 2000 concerning how to implement the Early Years Foundation Stage curriculum suggested that teachers should 'challenge children's thinking' and 'support children in thinking in open-

ended ways' (Taggart, 2005: 1). If they are exposed to using a language for learning, and this is explicitly modelled to them, then young children can develop skills in reasoning and understanding how they learn (Taggart 2005). Although the ability to maintain concentration on long-term goals may not be fully developed until adolescence, we can still have realistic expectations of younger children (Claxton, 2002).

At the heart of developing a learning powered school is developing the learning powered classroom. The classroom is seen as the school's microclimate where the approach really takes root and starts to grow (Stolen, 2002). Pupils learn from what teachers do and say, what they notice and commend, and what they don't, and what kind of role model of a learner they offer (TLO). There is a range of literature which stresses the importance of learning environments (Rieser et al, 2016). James et al (2007: 93) suggests that learning is promoted in an environment which has the following characteristics:

- The learner has opportunities to engage in self-directed exploratory activity.
- The learner has opportunities to engage in self-regulation.
- The environment presents opportunities and challenges to which the learner is capable of responding.
- The discovery of error is not penalised.

Hattie (2009) also speaks of a safe learning environment whereby error is welcomed and fostered, as we learn so much from them. This is a pivotal feature of the BLP approach, which differentiates between the 'learning zone' and the 'performance zone' (Claxton, 2013). The learning zone is where our goal is to improve, where we expect to make mistakes and know that we will learn from them. The performance zone is where our goal is to do something as best we can, using what we already know and trying to minimise mistakes (Briceño, 2016). Knowing when they are in the learning zone and when they are in the

performance zone allows pupils to feel safe and enables them to grow and improve (Zimmerman & Schunk, 2011).

The language that is used with pupils is of great significance within the BLP approach. Claxton's research found that pupils do not always understand what teachers mean when they use phrases such as 'you must try harder' or 'this work is not good enough' (Collins et al, 2002). As a consequence, pupils, particularly those that are younger, think that 'working hard is about being quiet, producing a large quantity of work and completing work on time' (Collins et al, 2002: 100). This was confirmed in my own research findings at Applebee Infants, whereby prior to the intervention, children spoke about being quiet and not talking to others as traits of a super learner. Consequently, using the language of learning power is very important for instilling and valuing positive learning dispositions. Explicitly praising attitudes such as perseverance, resilience and collaboration, all seek to reinforce the values and beliefs of BLP (Kirsch, 2012). The purpose of this language is to help children to understand exactly when and how they are learning, enabling them to contextualise concepts such as resilience and perseverance in their own and other's learning experiences (Thomas & Mee, 2005). Claxton believes that it is very important for teachers to model this language, as children are keen to imitate those around them. Children are 'natural and compulsive mimics' (Claxton, 2013: 102), and so if teachers are able to model the language, behaviours and habits of building learning power, then it is likely that pupils will follow suit. Rather than a teacher asking a pupil to 'make more effort', a learning powered classroom will be specific about what kind of effort you want the pupil to make (Claxton, 2011). Claxton is clear that there is no specific or exhaustive list for teacher language, but the key note here is that language is contagious, and the shift from generalised claims to specific comments and discussions about the approach to learning, will enable children to become more knowledgeable, reflective and resourceful about their own learning attitude and disposition.

The view of a teacher in the learning powered classroom is not one of an infallible teacher who 'bestows' or 'delivers' knowledge to their pupils, but rather one in which they are a facilitator of learning. In order to stretch their learning muscles, pupils can feel as though they are taking part in a 'learning gym', a place in which teachers are learning power coaches and help children to help themselves in the development of learning habits (Claxton 2011). In this way, teachers are not viewed as people who 'hand on knowledge', but who encourage, nurture and model positive learning dispositions to help the children in their class to become better, more confident learners. In this way, more control is being handed over to the children, who are ultimately in charge of their own learning. This may seem daunting at first, as teachers are viewed as 'authority figures', but in fact the more control a child has over their learning, the better able they will be to make use of their existing knowledge, skills and experiences to extend their learning (Swann et al, 2012).

"Giving students increasing access to 'the controls' of their learning gets better results, and prepares them better to be responsible and imaginative learners for the rest of their lives" (Claxton, 2011: 137).

Increasing the pupils' control of their learning allows the learning process that they are embarking on to become more visible, as they are able to use the language of learning power to articulate their learning process (Kelly, 2004). Making learning visible, for both the pupils and the teacher, is a key element in developing a learning powered school. This involves 'split-screen teaching' (Claxton, 2011: Appendix D) in which children are aware of both the subject content and the learning muscle that they are stretching within a lesson. As Claxton (2011) argues – you can teach a topic and get good results in a way which makes students more passive, docile and dependent, or you can teach the same topic and get good results in a way which stretches their imagination, cooperation and questioning. This fusion of learning habits and curriculum knowledge is therefore the ultimate aim of a learning powered school,

in which pupils are knowledgeable about both subject content as well as exercising their learning muscles, with the aim that they eventually make more and better use of these tools independently and spontaneously, so that they become habitual.

2.3.3 What are the potential issues with developing a learning powered school?

There are many proposed benefits of developing a learning powered school which have been explored in the analysis of the approach. However, as with any new approach or initiative, there is always the risk that it will not have the desired impact. In taking more time to focus on learning power, surely this would mean less time spent on the curriculum, which could be detrimental to results? Claxton (2011: 50) responds to such criticism by arguing that pupils who are more confident and independent learners are less likely to 'go to pieces' under test conditions, as they are more resilient in the face of difficulty, and because they are able to understand the process of their learning, their results go up, not down. However, a school may find that they have already developed a successful learning and teaching approach, which they are seeing positive results from and which BLP may not complement, or become too much of a cognitive overload for children. Claxton (2011: 51) does himself recognise that 'there may be a results wobble' whilst BLP is implemented, as this it takes time, effort and explicit teaching, which is something that some schools just might not want to risk. Schools with high attainment levels may not want to risk losing their status, while schools with low attainment levels may want to prevent worsening outcomes for children and therefore their school's reputation.

Results and attainment aside, it is often the case that most educational professionals work above and beyond their contracted hours in order to maintain results, keep on top of admin, maintain a stimulating learning environment and plan effective lessons, amongst other

responsibilities. Their time is limited and precious, and taking time to think about, plan, implement and embed an approach such as BLP could be seen as another pressure, another 'to-do' on their never-ending list (DfE, 2017). Claxton (2011: 53) argues that 'many of the changes that BLP involve are small-scale', and that because it is a gradual change, it is something which can be taken slowly and by degrees. That being said, in my own school it has required meetings, staff training, regular discussions and space in the timetable, all of which require planning, implementation and therefore time. If BLP is something which schools really believe and invest in and there are committed members of staff willing to fully embrace the approach, then timing should not be a major issue. However, schools can be large places with many members of staff, and it only takes a few to not embrace the approach for it to not fully embed and permeate the whole-school culture.

Sadler (2002) draws attention to the fact that an assessment of the teacher's own learning dispositions is not taken in to account by Claxton, and that 'differences in dispositions between successive teachers could give rise to discontinuities for students' (p50). If a teacher does not have a positive learning disposition and does not effectively model this to their pupils, this would be a serious barrier to the development of learning power. This would suggest a need for some sort of monitoring of teacher's own learning dispositions, but this would undoubtedly take more time and cause teacher stress if they feel that their own approach to learning is being put under scrutiny. Of course, if all staff have a growth mindset approach and are open to feedback and reflection on their own pedagogy and approach to learning and teaching, this may be less of an issue or even not an issue at all. However, it may be difficult to ensure that the entire staff cohort are on board and equally value, model and assess the effects of the approach in their classroom. Just as collaboration is an important skill to develop in the pupils of a learning powered school, it is equally important that staff

collaborate to ensure the culture is echoed throughout the school. If this is not the case, then this may pose a problem in developing a truly learning powered school.

A concern about the larger reaching effects of the BLP approach is that it is by no means the only influence on children's learning. It could be argued that a young person's family circumstances, economic background, or experiences at other schools have a greater impact on their learning than attending a learning powered school. Claro et al (2016: 8664) propose that 'socioeconomic background is one of the strongest, best established predictors of academic achievement'. A child's academic achievement can be affected by economic disadvantage in a number of ways, including reduced access to educational resources, higher levels of stress and poor nutrition (Claro et al, 2016). It would seem that BLP would need to have an extremely large influence and a major positive effect in order to negate this disadvantage. A child may be told at school to persevere, to learn from their mistakes, and have the belief instilled in them that they can achieve anything they want to, but may return home and receive a very different message. This can be confusing, and a child may end up being influenced more profoundly by their home background, which will often maintain an influence on their personal belief system for the rest of their lives. Moreover, a child may attend a learning powered school for some portion of their life, but may not do so at every stage of their schooling career. In the borough in which I teach, children often attend separate infant and junior schools which have entirely different senior leadership teams and differing approaches to learning. It therefore seems unlikely that a young person attends a learning powered infant, junior and high school. However, it is clear that students with the same economic background vary in their academic attainment, and researchers have suggested that students' beliefs and attitude towards learning may temper the effects of economic disadvantage (Claro et al, 2016). Students' mindset about intelligence can directly affect their academic attainment, and this *is* something which can be changed, or at least influenced

(Robinson, 2017). A major longitudinal study of young children's development at infant school age found that early years education can ameliorate the effects of social disadvantage (Sylva et al, 2003). Therefore, although young people may be influenced by their family, their friends, or the ethos at other schools, we can at least *try* to instil positive learning dispositions and confidence in young people, even if the ultimate long-term effect of this is somewhat unknown. If no attempt is given to provide children with the best possible educational opportunities despite home circumstances, then we are not fulfilling our role as teaching professionals who put the needs of the child first, allowing them to become the best that they can be. There is enough research and evidence to suggest that BLP is worthwhile, and it is on that ground that I wish to implement a change at Applebee Infants to develop pupil's learning power in the hope of better preparing children for a lifetime of learning. As Claxton (2002: 15) points out:

'*Nobody can be an exemplary learner all of the time. But everyone can learn to be a better learner more of the time*'.

2.4 Innovation: What I'm adding to the research

Through developing the BLP approach at Applebee Infants, I am adding to the literature through transforming professional practice and innovating the approach to learning and teaching, thus offering evidence on whether the practical implementation of the BLP approach has an effect on children's learning at the beginning of their school career. I will consequently be offering research and data into what a practical implementation of the BLP approach would look like within an infant school, displaying a critical analysis of how the approach can be embedded, as well as potential challenges. Therefore, this project will provide useful research findings for other schools who are interesting in implementing this

approach, as the unique implementation of building learning power at Applebee Infants could be embedded at other schools.

2.5 Summary

After reviewing the relevant literature, I have come to the following conclusions. As well as helping children to succeed academically and gain qualifications, schools need to develop learners who are prepared for their future and learning opportunities outside of school (Stoeger et al, 2015). Approaches such as Gardner's theory of multiple intelligences recognises this need and aims to cater to the child as an individual learner. This approach, however, can become time consuming and lead to children imitating the learning approach of their teacher. Claxton's learning powered approach aims to not only help children to learn more or better, but to become better learners. The BLP approach proposes that it can help schools in developing resilient, resourceful, reflective and reciprocal learners who believe that they can improve their intelligence and become a better learner by way of stretching their learning muscles. There are potential issues with developing a learning powered school, and little research concerning the effects of the approach within an infant school. The purpose of this research project is therefore to analyse the effects of a practical implementation and development of a learning powered infant school.

Chapter 3: Research Methodology

3.1 Introduction

This chapter sets out the methodology for this research project, including justification of methods used as well as recognising limitations. It explains data sources and the ethical considerations taken during the research project.

3.2 Research questions

My research questions for this practitioner research project are:

- How do children at Applebee Infants view themselves as learners?
- Can we build an effective whole-school and classroom climate that supports children in becoming more resourceful, resilient, reflective and reciprocal learners?
- Can we help children to better understand how and when they are learning? Can we make learning more visible?
- Is it possible for *all* children to develop their learning power?

My research objectives are:

- To collaboratively design a learning powered approach at Applebee Infants.
- To investigate the opinions of pupils, staff, parents and governors about the new learning powered approach.

3.3 Methodology

A mixed methods approach was used in order to collect insightful, in-depth viewpoints as well as comparable, tangible data, allowing data triangulation and therefore authentic data collection. The collection of quantitative data allowed for objective comparisons to be made, and collection of qualitative data was used to gain a holistic and rich view of perspectives (Punch & Oancea, 2014). Consequently, a mixed methods approach allowed me to increase the scope and depth of my research (Punch & Oancea, 2014).

3.4 Methods

The methods used to collect data involved quantitative methods including questionnaires and ranking scales within interviews, as well as qualitative methods including semi-structured interviews and lesson observations. I decided against using questionnaires with pupils as an adult would need to work 1:1 with children to support their completion of the questions, and this was not possible due to time constraints and would not have provided an opportunity for anonymous data collection of pupil views. All interviews involved a mixture of open-ended and closed questions. Open questions were used to 'invite honest, personal comments from respondents' (Cohen & Manion, 2011: 390) and closed questions were used to 'avoid the collation of irrelevant and redundant information, and produce data conducive to comparisons and classifications' (p377). The use of both forms of questions was chosen to enable a 'report on both proportions of responses in different categories, supported by quotations' (Taber, 2007: 149). Using both forms of data collection allowed me to analyse perceptions and collect tangible data in order to assess and discuss measurable changes.

3.5 Data sources

Data was collected through pupil interviews, staff questionnaires, staff interviews, parent interviews, governor interviews and lesson observations. Data was collected both prior to and post intervention, in order to compare view points and attitudes. Data collection began in November 2017 until July 2018, spanning a total of 9 months.

3.5.1 Pupil interviews

In order to gain an overview of the views of the children at Applebee Infants concerning the learning powered approach, I decided to interview three children from each class, from

Reception to Year 2. As Applebee Infants is a three-form entry school, I therefore interviewed a total of 27 children, ensuring there was a mixture of girls, boys, differing attainment levels and including children that received the Pupil Premium Grant (PPG), spoke English as an additional language (EAL) or received support for special educational needs (SEN). In terms of sampling, I ensured that I spoke with each class teacher about who they felt would be comfortable being interviewed and aimed to represent a range of pupils in doing this. I did not want to choose pupils at random as this would not ensure fair representation of pupil groups and I did not know all of the children well enough to decide whether they were comfortable being interviewed. The same children were interviewed prior to and after the intervention.

The interviews were conducted in a semi-structured way, in that all children were asked the same questions, but sometimes dependent upon what they had said, I asked further questions in order to clarify understanding or to gain further information (Appendix E). Interviews ranged from 20 minutes to half an hour each, and took place during the school day. Teachers knew prior to the interview which children were to be interviewed and on which date and time it would take place, to allow for minimal impact on their timetable.

Due to my dual role as both a teacher and researcher, there was some limitation in the fact that it was myself who carried out the interviews with all pupils. As the designer of this intervention and a teacher at Applebee Infants, my involvement is explicitly value-laden (Burgess, 1989). I needed to recognise that the relationship between myself and the children involved a disparity of power and status, as I hold a position of authority within my school (BSA, 2002: 14). Pupils may have felt as though they had to answer in a certain way in order to tell me what I was 'looking for'. Therefore, there was a risk that the children interviewed relied upon 'cues' from myself, as a teacher and adult that they trust (Tisdall et al, 2009: 3). Also, most children were aware that I had designed the Super Learner characters myself and

so may not have wanted to speak negatively about them. I considered asking other adults to interview pupils, but this was not possible due to time constraints and as the researcher I wanted to ensure that there was continuity across the interviews, and I was able to ask further questions where needed. I ensured that each interview was carried out in the library which was a safe, quiet and familiar environment in order to put the children at ease. The questions were worded so as to seem informal and often the interviews evolved into more of a conversation, so that the children did not feel as though they were being judged and that they could speak freely.

3.5.2 Staff questionnaires

I asked staff to complete an anonymous questionnaire prior to and after the intervention to provide an open forum for them to anonymously share their opinion, with no concern for the implications of their view (Appendix F). There was no sampling required for this data collection as the questionnaire was emailed to all members of staff. It was important to gain anonymous viewpoints from staff through questionnaires, as I would be unable to interview all staff due to time constraints, and those that were interviewed may have felt under pressure to answer in ways which are deemed as 'socially acceptable' (Harris & Brown, 2010). Consequently, staff questionnaires allowed me to gather data which truthfully reflected their views without the influence of interview bias.

Both questionnaires were emailed to staff as a google document via email and they were provided with a two-week window in order to complete each one. The questionnaires used a mixture of closed questions involving tick-boxes and ranking scales, as well as open questions where staff were free to write as much as they wanted to express their view. The closed questions enabled me to catch articulated, visible aspects (Cohen & Manion, 2011: 139) of the views of BLP within my school. The open-ended questions allowed me to catch

those ‘gems’ of information which might have otherwise been missed if only closed questions were used (p392). Response rate was high, with 15 of a possible 20 staff members returning both questionnaires. The small size of the sample enabled me to include less-structured and more word-based questions, gaining a deeper understanding of the views of the teaching staff (Cohen & Manion, 2011: 381).

3.5.3 Staff interviews

The sampling process for staff interviews involved asking staff to approach me if they were willing to participate in an interview. Perhaps individually asking staff if they would consent to an interview would have led to a larger amount of data collection, but I did not want staff to feel under pressure to be interviewed out of obligation to myself as their colleague. Fortunately, seven staff members approached me to be interviewed, and I eventually interviewed six of them, as one member of staff was unable to schedule an interview. These six staff members included a member of the Senior Leadership Team, two members of the Senior Management Team (both of which are teachers), four class teachers, an NQT and a teaching assistant. I felt that although sampling was not random or systematic, it represented the school’s staffing structure well.

Staff interviews were semi structured, and involved asking pre-determined questions (Appendix G), as well as going into more detail about certain comments and views. Interviews ranged from 45 minutes to 90 minutes and all interview sessions were engaging and insightful. Although there would not have been a power disparity as I am not a line manager, there will still have existed some bias or possible influence over answers as I have a good relationship and rapport with all the members of staff interviewed, and they may not have wanted to speak negatively about something which they knew I was involved in.

However, I designed the questionnaire so as to provide such an opportunity to express their views freely if they felt they couldn't do so during interview. I also believe that having a good relationship with colleagues has a positive effect on this project, as it allowed for successful collaboration, and ensured that I collected a wide range of data. As a school with a culture that is feedback driven, staff were open to contributing to the research and providing their view on the approach.

Interviews took place in classrooms at a time which suited the interviewee, and were all quite informal, allowing participants to be at ease and really speak their mind.

3.5.4 Parent interviews

In order to request parent interviews, a note was sent out on the weekly newsletter asking parents to inform me if they were willing to be interviewed. This resulted in six parent interviews, all of which were parents of Year 1 children, most likely because I am myself a Year 1 teacher and so they were most familiar with me. This limited the validity of the interviews and the ability to generalise somewhat in that I collected no data from parents of Nursery, Reception or Year 2 children.

Interviews were again, semi-structured (Appendix H), and the structure differed more so than pupil or staff interviews dependent on the knowledge of the BLP approach. Interviews were all conducted in my own classroom, which may have felt intimidating as it was my place of work, but I felt it would feel less intimidating than using one of the offices. Interviews ranged from 30 minutes to an hour. If their child was with them, another teacher looked after them for the duration of the interview so that the parent could speak freely and openly about their child's learning. Ideally, I would have liked to have interviewed a greater number and range of parents, but I understand that due to busy schedules, this was not possible.

3.5.5 Governor interviews

As I do not frequently come in to contact with governors, I asked my Headteacher to request interviews at a governor meeting. This resulted in two governors agreeing and arranging interviews. The interview questions and structure was the same as that of parent interviews as both individuals were parents of children in Year 1 (Appendix H). As stakeholders who are heavily involved in the school, I felt that it was important to understand the views of governors.

3.5.6 Learning observations

For those staff members who agreed for me to observe the learning and teaching in their classroom, I worked with the Headteacher to draw up a timetable. I observed eight of a possible ten classes (including Nursery), allowing me to get a real sense of the language used and the children's use of the learning powers. I observed each class for an hour, undertaking participant observation as I was involved in the children's learning process, asking questions about their learning and helping them where required (as they knew me as a teacher many children spoke to me without prompting). Observations are an important part of data collection, as there is a strong emphasis on the process of learning (Areljung & Kelly-Ware, 2017). Although my somewhat active participation in the observations constitutes subjective involvement, it allowed for 'a deeper insight into understanding student perspectives and great access and opportunity to observe growth in learning' (Bruno, 2009:16).

3.6 Ethics

3.6.1 Overview

To ensure that my research was ethically sound, I gained informed consent where possible from all participants involved, as well as respecting their anonymity, protecting data and considering all ethical limitations and obligations that I had as both a teacher and researcher.

3.6.2 Informed consent

Adults:

When delivering the staff training as part of the intervention, I explained to all staff members that as part of this research project I would be asking them to complete two anonymous questionnaires. I explained that I would like to interview some staff members and observe children's learning, and requested that they let me know if they would be happy to be interviewed and/or observed. I also made it clear that they did not have to complete the questionnaire and could withdraw from the research process at any time without stating a reason.

Prior to every interview with any adult, whether with staff, a parent or a governor, participants were asked to sign a consent form (Appendix I) which included confirmation that they understood the purpose of the research and how their data would be used. It was also stated that their anonymity would be maintained and all collected data would be stored securely and destroyed upon completion of the research project. Participants were also informed of their right to withdraw from the interview at any stage, as well as their right to not answer specific questions. I sought permission to transcribe the data in the consent form, which all participants signed.

As my research did not involve anything outside of standard classroom practice, I did not obtain parental consent to interview children or observe children's learning. As the gatekeeper, I requested informed consent from the Headteacher (Appendix J), who agreed that the school would take part in this research project.

Pupils:

Informed consent is more difficult to obtain from children than it was from the adults involved in the research project. It is difficult to elicit fully informed consent from 3-7 year olds, and I therefore needed to take in to account the ethical complexities of this (BSA, 2002: 29). I did not ask pupils to sign a consent form as permission had already been sought from the Headteacher and it did not seem appropriate. Instead, I took the time at the start of each interview to explain to the children that I wanted to ask them some questions about their learning to help me with my University course, and I explained that they did not have to answer the questions if they didn't want to and that they could stop the interview at any time. Following the British Psychological Society's (2009: 12) code of ethics, I aimed to give the children 'ample opportunity to understand the nature, purpose and anticipated consequences' of my research. Most likely because the children knew who I was as a teacher at their school, they were all happy to speak with me and did not appear to be anxious at any stage. Although it was possible for pupils to opt out of the interview, it was not possible for them to opt out of being observed, or in taking part in the approach, in the same way that the adults involved in the project could. This in some way taints the informed consent gained from pupils, but it was not possible for this to be wholly consensual due to the age of the pupils and the nature of the research project as it took place in a school.

3.6.3 Anonymity and confidentiality: participants' rights

All participants were made aware that they would not be named and neither would the school during the project to uphold their right to anonymity and confidentiality. It would therefore not be possible for anybody reading this research project to identify the school or any individuals involved. When taking notes, initials were used so that individual teachers or pupils could not be identified. I explained to all participants that they would be able to read this research project upon completion if they so wished. This ensured that participants' rights were respected at all times.

3.6.4 Data protection

During interviews and lesson observations, I hand-scribed notes which were then immediately typed up and saved as a password-protected file and the original notes were then shredded. Upon completion of this research project, all data collected will be deleted.

3.6.5 Role of the researcher

There existed a 'power differential' between the children and myself as both an adult and a teacher in their school which therefore presents an ethical limitation of the study (Cohen & Manion, 2011: 78-79). Pupils may have felt that they needed to provide the 'right' answer or could have not spoken freely as they may not have felt to be an equal during the interview. Similarly, apart from the questionnaire answers which were anonymous, during interviews adults may have felt that they had to speak positively about the project or not have provided fully truthful answers as they respect me as a colleague and may not have wanted to appear as 'negative'. It was therefore difficult to make the division between myself as a researcher and as a teacher at Applebee Infants.

3.6.6 Guidelines followed

To ensure that the methods used to collect data for this research project were ethically sound, a CUREC 1A form was submitted, which passed the board meeting of the Central University Research Ethics Committee. The CUREC 1A form complied with the University of Oxford's *Modus Operandi*, which is itself in line with the current British Education Research Association (BERA, 2018) guidelines.

3.7 Limitations of the project

Due to the size of the project, involving specific data collection from only 27 pupils and 15 members of staff, it would therefore be difficult to draw any firm conclusions or generalisations from this research project. Therefore, I am unable to say with certainty that the claims I make are reliable, however what I can say is that based on the educational events observed and the data collected, that my claims made about Applebee Infants are valid (Novak & Gowin, 1984).

Due to limited time, I was unable to carry out action research cycles in order to refine and re-assess the effects of the intervention. As this research project is only in its infancy, it is consequently difficult to analyse its long-term effects on the learning of the pupils involved.

When beginning this research project, the SLT and I aimed for the approach to have a positive impact on pupils. Teachers were also enthusiastic about the approach and wanted it to work. This of course makes this project expectation-laden, and made against a background of values, as there was a vision about where we wanted the project to go and the impact we wanted it to have (James et al, 2007). Research projects such as this one usually stem from an anticipation for positive change. This can therefore be seen as a limitation of the study, due to the fact that it cannot be seen as entirely objective, as that is the nature of practitioner

research, but its rewards can be great in terms of improvements in practice and understanding (James et al, 2007).

3.8 Summary

This chapter has set out the methodology that will be utilised for this study, including the data sources, ethical considerations and limitations, and how these will impact on study findings.

Chapter 4: Intervention design and approach

4.1 Introduction

One of the aims of Applebee Infants' School Development Plan 2017/18 was to 'increase pupil understanding of their learning and how they can get better at their learning'. The learning powered approach was consequently introduced with the hope of meeting this target, and so was beneficial to both this research project and the development of the school. The design and implementation of the approach was a collaborative process with teachers and the SLT, to ensure that as best as possible the approach suited the needs of our learners.

4.2 How Learning Power was introduced at Applebee Infants

After meeting with the SLT at the end of last academic year, we decided that the best approach to introducing learning power at Applebee Infants was to introduce characters which represented each of the learning powers that we wanted our children to develop. Together, we came up with a list of 12 dispositions or 'learning powers', and over the summer I designed the 'Applebee Infants Super Learners' (Appendix K). In October 2017, I was given half of an Inset day to provide training for all staff which consisted of a

presentation (Appendix L) explaining the approach, as well as activities and discussion points. The training aimed to instil the following changes at Applebee Infants:

- To introduce and explicitly teach children about the Applebee Infants Super Learners.
- To use the Super Learner characters in planning, flipcharts, children's learning, reward systems, assemblies as well as modelling a common language to embed the characters and the language of learning power.
- To have a 'Learning Tree' displayed in every classroom in order to praise children for stretching their learning muscles.
- To make explicit reference to when children are in the 'learning zone' or the 'performance zone'.
- To provide opportunities for deliberate practice so that children can consolidate their learning.
- To provide opportunities for pupil conferencing so that children can reflect on their learning.

After the training at the Inset day, a staff meeting was held each term in order to discuss how staff were finding the approach and to share good practice. Ideally, a workshop would have been held for parents so that they could use the same language at home, but it was not possible to timetable this and so this will be held next year.

4.2.1 Super Learners

Myself and the SLT felt that the Super Learner characters were suitable for our school as they would provide a visual representation of each learning power, and as superheroes children could aspire to be like them and display their 'powers'.

Over the course of 12 weeks, a different character was introduced to the children (the school as a whole followed the same order) and a lesson was dedicated to each character, discussing its traits and learning dispositions and completing some activities to stretch that particular learning muscle. The characters were displayed, one at a time, in every classroom and room in the school, including Senior Leadership offices, the library, ICT suite and assembly hall. The character introduced that week would be the focus of the school, and incorporated into learning wherever possible and spoken about in assemblies. The characters were linked to the school's reward system, whereby children receive stamps and certificates for stretching that learning muscle. In class, if a teacher saw a child really stretching their learning muscles, they would write this on a post-it note and display it on their learning tree. This learning tree therefore offers 'a rich source of information to reflect on, explain and reinforces a whole-class learning power discussion' (Claxton, 2011: 160). Once all 12 characters were introduced, they were then used by teachers within their learning dialogue, flipcharts, resources and for praise wherever suitable. The aim was therefore to have dual-purpose lessons, or split-screen teaching, where children are aware of both the curriculum content that they are learning and the learning muscle(s) that they are stretching (Claxton, 2011: 92).

4.2.2 Applebee Infants Learning Mind

Once all 12 characters were introduced, the Applebee Infants Learning Mind (Figure 3) was shared with each class, with teachers explaining how each Super Learner helps them to develop different kinds of learning power by stretching different learning muscles. The existing thinking maps and thinking hats were also used in the learning mind so that children could understand how they help them with their learning. The Learning Mind was displayed in every classroom and referred to in order to allow children to reflect on their learning.

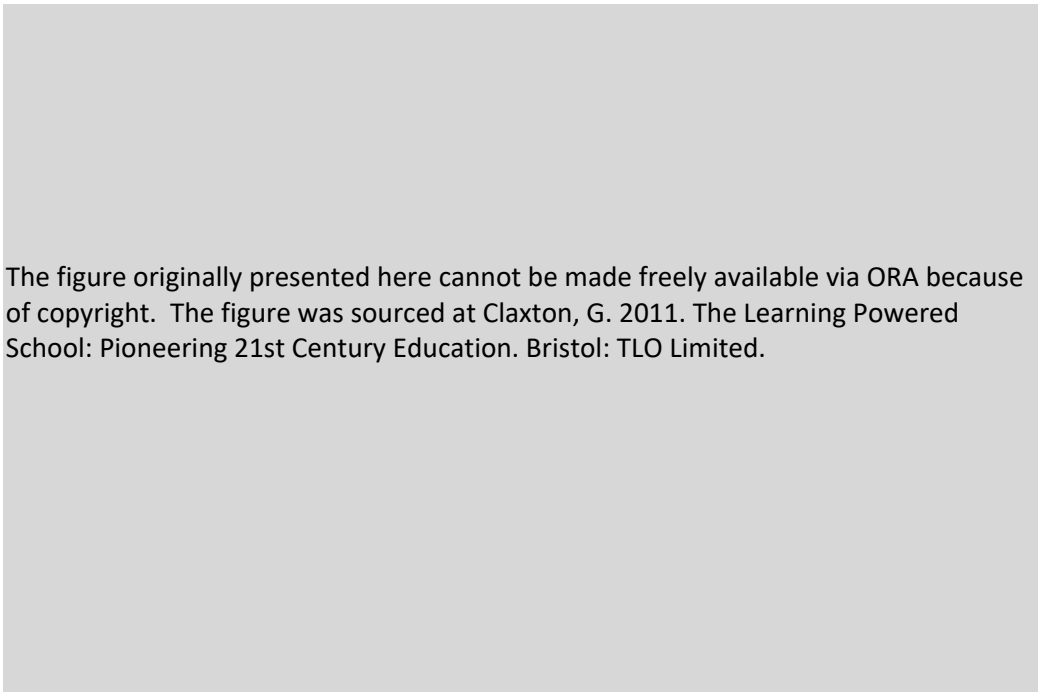


Figure 3:

Applebee Infants' Learning Mind

4.2.3 Language of learning

The aim of the intervention in terms of establishing a common learning language was for all staff and pupils to refer to the Super Learners and the learning powers when commenting on children's learning. For example, "well done for trying hard" would be replaced with "you have really stretched your persevering learning muscle" or "you've been just like Platinum Perseverer". This language of learning power was to be used within lessons, when speaking to children and in assemblies to fully embed a common language for learning.

4.2.4 Learning and performance zones

The language of the 'learning zone' and the 'performance zone' was also introduced so that children could distinguish when they were practising stretching their learning muscles and learning from their mistakes, and when they were putting them to use to be the best they can be. For example, during the planning process for a story, students would be in the 'learning zone', working with others, editing, refining and up-levelling their writing. During their story writing session, children would be in the 'performance zone', using all their learning and preparation to write a high quality piece of writing.

4.2.5 Pupil conferencing

The SLT agreed that for the approach to really take effect, children needed time to reflect on their learning, discussing it with their teacher to make them increasingly aware of their own habits, attitudes and approach to learning. In line with a recently introduced 'no marking policy', it was decided that there would be no formal lessons taught on a Friday, and instead pupils would take part in pupil conferencing, to discuss and reflect on their learning that week with a teacher. The language of learning power would be used in this discussion.

4.2.6 Deliberate Practice

During pupil conferencing sessions, children are provided with activities to allow them to practise and over-learn their learning from that week. This is known as deliberate practice, and it requires 'over-learning…spiralling up and down the knowledge continuum' (Hattie, 2009: 24). The activities would mainly focus on English and maths, but it was the teacher's decision about what learning would be deliberately practiced. It was explained to children that they could learn on their own, with a partner or in a group, but that the teacher would be conferencing with pupils and that they needed to respect that child's learning opportunity. After a few weeks, children became used to this process and were able to independently practise their skills without interrupting pupil conferencing, thus benefitting all learners and stretching their independence and collaboration learning muscles. During these sessions, all learning was recorded in separate 'deliberate practice' books, so that children knew they were in the 'learning zone' where mistakes are welcomed.

4.3 Summary

The intervention introduced at Applebee Infants involved providing staff training, holding staff meetings and introducing the Super Learner characters. Children were exposed to the

Super Learners and learning mind which aimed to establish a common language of learning. Children were also introduced to the idea of the learning and performance zones, and were provided with opportunities to reflect on their learning through pupil conferencing, as well as deliberately practising and over-learning their learning from that week. An explanation of this approach, including images of the Super Learners and the learning mind, were all displayed on the school website and parents were informed of this in school newsletters. These changes aimed to develop Applebee Infants as a learning powered school.

Chapter 5: Research findings and discussion

5.1 Introduction

The data collection methods used in this project aimed to provide answers to my research questions. Consequently, the data collected from questionnaires, interviews and lesson observations provide an insight in to the effects of developing learning power at Applebee Infants.

5.2 Main findings

This section will provide an overview of the views of pupils, staff, parents and governors concerning the new learning powered approach at Applebee Infants.

5.2.1 Pupil's views

When asked to rank how much they like the new Super Learners on a scale of 0 – 5, the response from pupil interviews was overwhelmingly positive with 85.2% of pupils giving them the top rating (Figure 4). Pupils spoke positively about the characters, with most answers referring to the fact that they like the imagery of the characters and aspiring to be

like them. A Reception pupil told me that "*they can help us with our learning because if you act like them then you can sometimes get their powers and be a super learner just like them*".

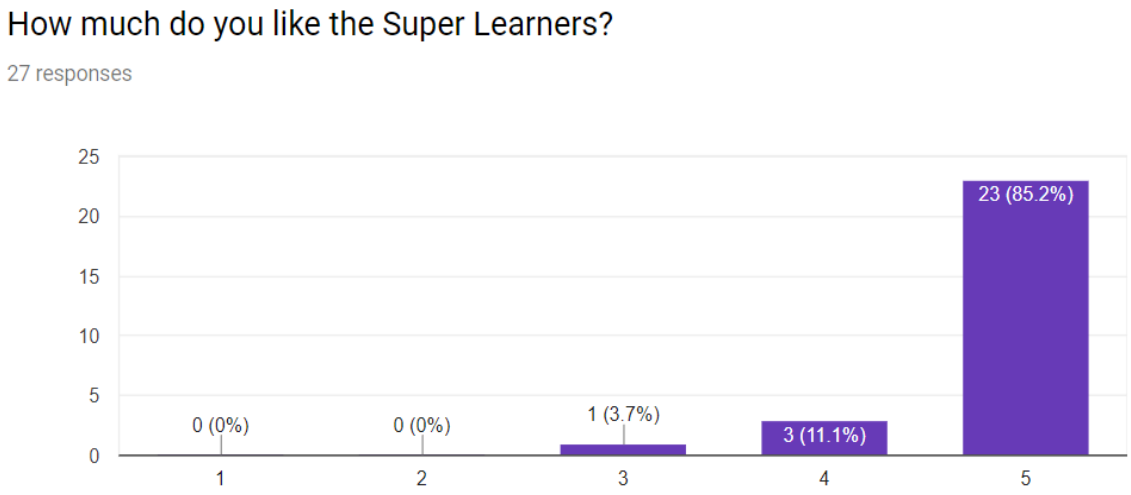


Figure 4:

Pupil interview responses

Nearly every child interviewed spoke about how the Super Learners help themselves and others with their learning. Most children were able to use the language of 'learning muscles', some referred to the learning mind and the majority spoke about the learning tree. Children as young as 4 could speak to me about why it is important to persevere, why mistakes help you to learn, as well as the difference between the learning and performance zones, something which they were unable to do before the intervention. The responses after the intervention were very different to those before, and the approach seemed to equip children with the language to speak about their learning. Rather than speaking about actions that please the teacher such as sitting quietly or not talking, which many spoke about before the intervention, children spoke about how asking questions, being resilient and focussing, among other things, all help them to learn better, and help their 'brains to grow'. Speaking to pupils during interviews as well as observing their learning all suggest that the approach is being used consistently in all classes throughout the school and is having a positive effect on children's learning.

5.2.2. Staff's views

Staff interviews and questionnaires suggested an overall positive response to the learning powered approach. When asked to rank the approach on a scale of 1 – 10 considering how useful they have found it in helping their children to become better learners, 73.4% of staff ranked the approach as a 9 or a 10 (Figure 5). The lowest ranking was a 5, given by one member of staff, which I would interpret as feeling 'neutral' towards the usefulness of the approach. Staff's views on the children's response to the approach also seem to reflect the findings from pupil interviews. Again, using a 0 – 10 ranking scale, 86.7% of staff ranked the positive response from children in their class as a 9 or a 10 (Figure 6).

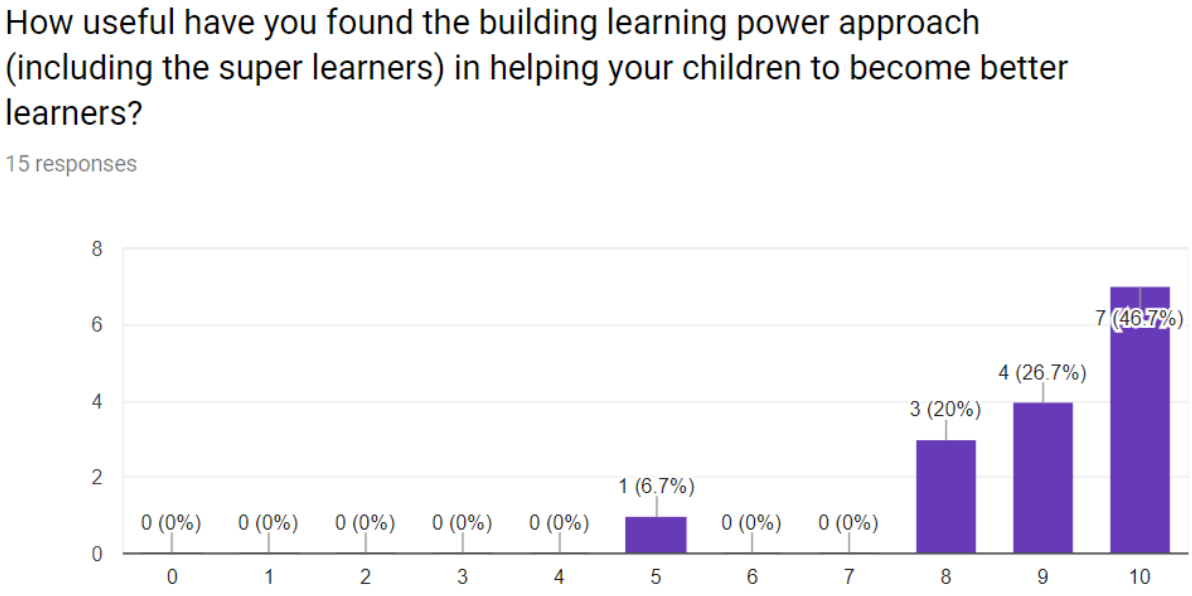


Figure 5:

Staff questionnaire responses

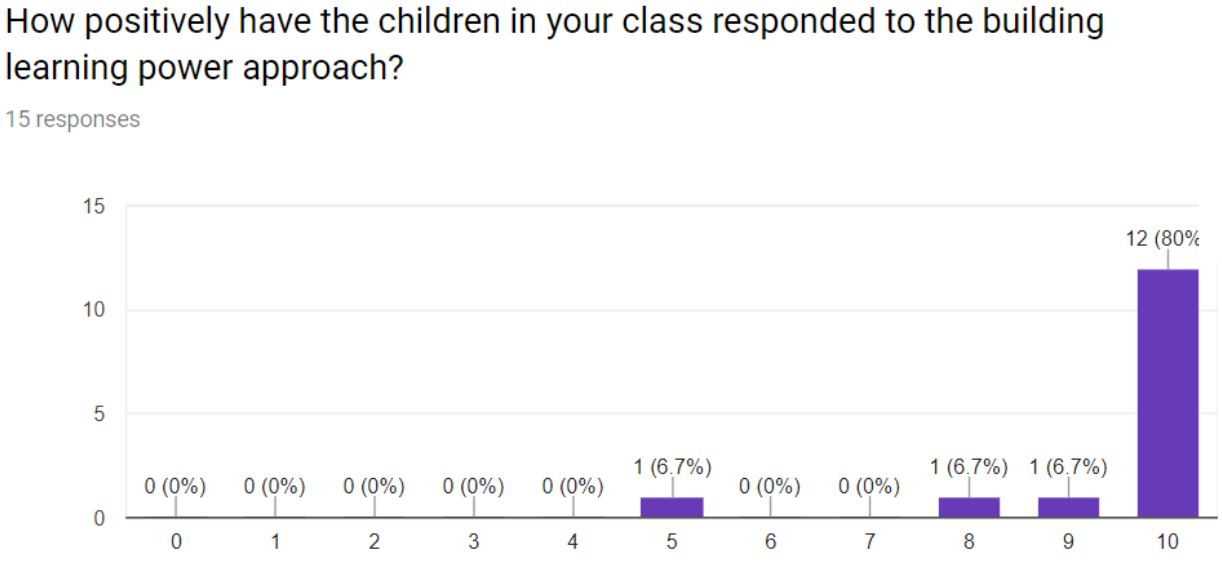


Figure 6:

Staff questionnaire responses

When explaining how children have responded to the approach, many answers provided point towards providing children with a scaffold by which to think about and talk about their learning. A Year 1 teacher commented that:

"Children have a better understanding of what it means to be a super learner, especially as they have a character they can attribute it to. Children are able to articulate what each of the learning powers are and examples of when they demonstrate these".

This suggests that the Super Learner characters and the language of learning power has provided greater opportunities for children to reflect on their learning and deepen their understanding, as they are aware of the process of learning rather than the result.

When asked if they would recommend the learning powered approach to other educational professionals, all 15 staff members said that they would. One such answer was:

"I think it just provides a really positive scaffold for the children's education as a whole. It develops them as a whole person which is what we've always strived to do but haven't always managed. It focuses on skills which aren't just about rote learning and knowing stuff. It helps them to develop as little human beings not just children who know about maths and geography. There is a greater focus on life skills than anything we've used before."

Staff as a whole seemed to really value the ethos of learning power. One concern of introducing the approach was whether it would work alongside existing approaches, such as the thinking maps and hats used at the school. However, within the questionnaire, all staff stated that they think that learning power works only to enhance and complement existing approaches. For example, a Year 2 teacher believes that *"it has linked a lot of our previous concepts, it has almost been the missing part of the puzzle at our school".* Similarly, when asked if the approach works well within all subjects and contexts, only one member of staff said they used it less within PE, but all others believed it could be used at any time and in any context.

Evidence for the usefulness of the approach has been evident in the ways in which staff have used it in their own way. Although I asked all staff to use the language, characters and learning tree, staff have since gone above and beyond and embedded the approach in other ways. Questionnaire and interview responses revealed that staff used the language of learning power in children's reports to *"highlight the children's positive behaviour for learning*". What's more, at the end of each year every Reception class puts on a performance for their parents and the rest of the school. Every class referenced the Super Learners in their performance and one class based their entire show around them, with the children dressing up as the Super Learners. Overall, staff views of the learning powered approach were overwhelmingly positive, suggesting benefits to learning and teaching across the school.

5.2.3 Parent and governor views

Parents that were interviewed had mainly heard about the learning powered approach from the weekly newsletter or the school website. Three parents had printed out the characters and displayed them at home so that they could refer to them with their children. All parents interviewed said that their children spoke about the characters and used the language at home, and consequently they wished to receive further information and training themselves. When I asked parents what skills and dispositions they felt were important for their child to develop by the time they left school, they all spoke about social skills, confidence and the ability to communicate and cooperate with others. One parent put it simply: *"I just want him to be a healthy, happy, nice little boy. I just want him to be a well-rounded human being*". When asked what they thought about the learning powered approach, all parents agreed that it was important to develop the child and not just to learn the curriculum. One parent, who is a secondary teacher, was extremely interested in the approach and requested that I carry out

training for staff at her school. In terms of her own daughter Freya[2] who is in my class, she felt that the language of learning power had really helped her. Freya had recently not scored a 'perfect' score in the phonics screening check, and as one of the highest attaining children in the year, she had really struggled with this. Her mum consequently spoke to her about being Captain Resilience and she felt that this had really helped her tenacity and ability to persevere in the face of difficulty.

Another parent commented that when she first saw the characters and the language, she didn't know how children would understand it, but after referring to the characters and language at home, *"I've found they really do understand. It has been so useful for Ben's confidence and resilience."* Generally, parents felt that their children were being exposed to language that was helping them to express their learning process and their attitude towards it, which is helping them to develop their confidence as a learner.

The two parent governors I spoke to commented that they found they agreed with the ethos of the approach and would be interested to see the long term impact. Although the parents interviewed represent a very small proportion of the parents in the school, they seem to agree with the vision and values of the approach, and further training, information and engagement with parents will be a next step for this project.

5.3 Collaboration

Results from staff questionnaires and interviews show that the staff at Applebee Infants feel as though the school as a whole is embracing and embedding the learning powered approach. One of the questions in the staff questionnaire asked staff how important they felt that the building learning power approach is at Applebee Infants (Figure 7). The response was

[2] This, and any other names used, are pseudonyms.

overwhelming, with 93.4% of staff ranking its importance as an 8 or above. Considering that the approach had only been introduced this academic year, staff clearly view it as an important and integral part of our school, and believe that others do too. These results suggest that Applebee Infants is becoming a learning powered *school*, and that collaboration from staff is a key reason for this. The success of this project depends heavily upon collaboration between pupils and teachers, between staff at the school, as well as buy-in from the SLT to give this approach a platform and the support required for it to be fully embedded. Such positive results from questionnaires and interviews demonstrate successful collaboration at Applebee Infants, and a whole-school belief in the values and ethos of the learning powered approach.

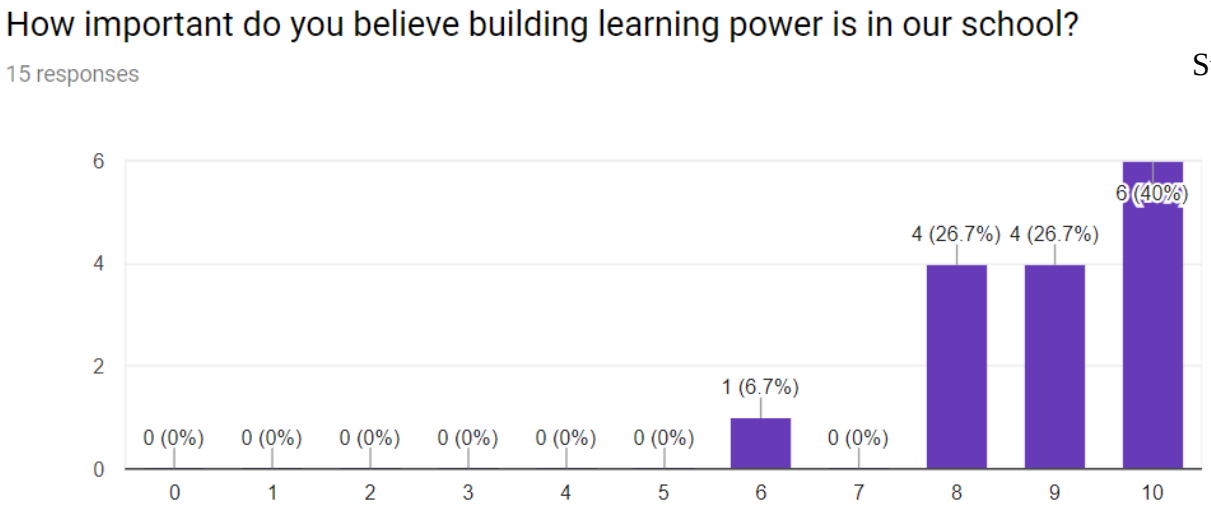


Figure 7: Staff questionnaire responses

5.4 How do children at Applebee Infants view themselves as learners?

Pupil interviews were the clearest indicator of how children's perception of themselves and others as learners had changed since the introduction of the learning powered approach. Prior to the intervention, when asked what makes somebody a 'super learner', most children spoke about being quiet, listening to the teacher and, most alarmingly, not speaking to others. As

children were praised for such behaviour, they were dependent upon this extrinsic motivation and equated this behaviour with successful learning (Weimer, 2013).

Considering that the same 27 pupils were interviewed at both stages, the range and depth of answers clearly developed after the learning powered approach had been in place (Appendices M and N represent the most common words used when speaking about what it means to be a 'super learner' before and after the intervention). The focus moved from listening to the teacher, to the children's learning, suggesting a shift in the perception of what it means to learn. This change alone would suggest that children at Applebee Infants are beginning to understand the importance of ownership of their learning. Prior to the intervention, pupil's comments about what makes somebody a super learner were relatively short, including 'sitting nicely' and 'not talking when the teacher is talking'. A high attaining Year 1 child explained what a super learner does:

"They listen to the teacher and they do what the teacher tells them to do".

After the intervention, children spoke increasingly more about their own learning attitudes and habits. The same Year 1 pupil this time explained the concept eloquently:

"You are a super learner if you remember stuff and make links and sometimes you do your learning independently and sometimes you learn in a group. You also ask lots of questions to help you find out more because questions mean you're learning."

This child, as did many others, referred to *themselves* as a learner rather than speaking about following teacher instructions. In this case, the control of who is in charge of their learning has shifted from the teacher to the learner, a vital attitude to have if they are to become an independent, successful lifelong learner (Dignath & Gerhard, 2008).

Both prior to and after the intervention, I asked children how they know when they are learning. Before the implementation of the learning powered approach, children generally

spoke about the teacher praising them or getting some kind of visual reward. Not one child spoke about the struggle of learning, or knowing something that they did not know before, and no child spoke about making mistakes. After the intervention, children overwhelmingly spoke about knowing that they were learning because they were focussed, or learning from a mistake or learning from others. A Year 1 child explained:

"If someone is talking to me then I'm learning from them. Looking at all the things in my book shows me that I've made progress with my learning. If I make a mistake and I work out why then I learn from that so I don't make the same mistake again".

A Year 2 child had understood the concept of stretching their learning muscles in order to learn, telling me that:

"I know when I'm learning when I'm stretching my learning muscles and I can feel my brain growing and getting stronger. I'm learning when I am trying and making mistakes in the learning zone and then other people help me see what went wrong and then I fix it".

Interestingly, interviews taking place after the intervention provided no reference to the teacher *telling* them that they were learning. Children still spoke about receiving stamps and certificates, but explained that these were linked to stretching a particular learning muscle. Certificates in achievement assembly began to focus on the process of a child's learning rather than just praising a child for the picture they drew or the story they wrote, they were being celebrated because of the learning journey they took to get there.

Changes were also evident during lesson observations. Prior to the intervention, a Year 2 teacher explained to me that they decided on the groups during group work as children would spend the majority of the time trying to be with their friends or arguing about who should be in which group. Two months after the introduction of the learning powered approach, I observed this class during an English lesson in which they had to design a new villain for the story of 'Matilda'. During the lesson input, the flipchart displayed a slide which said 'Calling

all Collaborators – you will need to work as a team and collaborate to design a poster of your new villain'. This time children decided on their own groups, which was a reasonably quick and efficient process, and discussions focussed on who would draw the character, who would think of the descriptive sentences, who had the neatest handwriting and so on. Children were quick to identify strengths and talents in their group and consequently worked together to create a poster which displayed this. Children openly spoke about who had contributed which parts of the poster and why, as well as explaining the learning process. Comments such as *"I practised drawing the character three times, I really focussed and persevered until I was happy with it"* demonstrated that the children in this class view themselves as capable, self-aware learners who are able to draw on their skillset and the skills of others for optimum learning.

Data collected from pupil interviews and lesson observations suggest that there has been a shift in the way in which children at Applebee Infants view themselves as learners. Prior to the intervention children spoke mostly about relying on teacher's comments to know that they are learning and often spoke about being quiet and sitting still as qualities of a super learner. Since the intervention, children have spoken articulately about their learning process, how they work with others and their learning dispositions, and seem to rely less on the confirmation of the teacher in order to know this.

5.5. Can we build an effective whole-school and classroom climate that supports children in becoming more resourceful, resilient, reflective and reciprocal learners?

5.5.1 Resourceful learners (Link Maker, Ideas Agent, The Questioner)

It must be noted that prior to the intervention, children at Applebee Infants were already resourceful learners. This intervention aims to increase the breadth, depth and frequency of

these skills so that they become habitual. For example, prior to this intervention, children were provided with 'Link Maker' stickers in maths if they made a link between their learning – for example if they discovered that you can only halve even numbers – and they recorded this in their books. However, pupil interviews prior to the intervention revealed that pupils thought that links could *only* be made in maths and were unable to give examples for any other subject. 100% of pupils interviewed either cited maths as when they made links with their learning, otherwise they couldn't think of an example.

It wasn't that children *weren't* making links in their learning, it is possibly that they were just not aware of it. In an interview after the intervention, a Year 2 child told me that:

"We never knew who the Link Maker was, and now we know and we are making links and he helps us realise this. Like when we talked about 'The Hunter' story I remembered what I'd learnt about hunting in Africa from Geography and Miss Block told me I was great at making links".

In lesson observations across the school, I observed children making links and teachers commenting on this. Children were using their own prior learning as a resource and were thus making connections rather than seeing topics as 'chunks' of learning which are unrelated.

The Ideas Agent Super Learner was often used as a prompt for an independent morning activity. For example, Year 1 children were asked to design their own Super Learner character one morning. Ideas included: 'The Helper', 'The Designer' and 'The Queen of Kind'. Children, without any input from the teacher, drew their character, gave it a name and wrote about their powers. Afterwards, when children were sat together on the carpet, they discussed how they had been like Ideas Agent, how they had thought of their ideas and where their inspiration came from. During a pupil interview, one child told me that Ideas Agent is her favourite Super Learner because "*I love drawing and writing and having new ideas and she's really good at that. She has this really good brain in her head and it tells her some super ideas."* I don't believe that the learning powered approach has enabled children to

think of *more* ideas, but rather that it has provided further opportunities for children to be imaginative, particularly independently. One staff questionnaire response indicated the usefulness of this character:

"Ideas Agent is really good for all subjects because we always want them to be thinking of new ideas and broadening their learning, not just sticking to what they already know or using our ideas".

Similarly, children, particularly of infant school age, are always asking questions because they are curious about the world around them (Hodgson & Pyle, 2010). Introducing 'The Questioner' didn't suddenly form questions in children's heads, but it did provide opportunities for children to ask questions and to understand that that is a learning resource. For example, across the school each class has a Kindle book which they read as a whole class. An example I gave during the staff training was that children could be encouraged to ask the meaning of an unfamiliar word as they heard it in the story. I observed this happening across the school, with some high quality discussions about word meaning. Words which were questioned by pupils were then seen to be later used in their writing as they would add it to their own dictionaries to reference at a later stage. What's more, activities such as 'this is the answer, what could be the question?' were used within lessons to really get children to think and generate ideas. In my own classroom, prior to the intervention the majority of questions which I was asked on a daily basis concerned how to spell particular words. Since the introduction of The Questioner, I have found children asking *why* something happened in history, or where a story was set – questions which deepen their understanding and further their learning.

In all lesson observations I noticed children using their imagination, asking questions and making links with their learning. This was apparent in all classes across the school, with teachers praising and recognising children for their resourceful attitude towards learning.

5.5.2 Resilient learners (Platinum Perseverer, Captain Resilience, Fantastic Focus)

During the pre-intervention pupil interviews, children were asked what the terms 'perseverance' and 'resilience' mean to them. The term perseverance has been used at Applebee Infants for a few years now in light of the growth mindset approach. Consequently, overwhelmingly children told me that it means to *"try and try and never give up"*. However, when I asked them to think of a time when they or someone they knew had persevered, not one child could give me a specific example. What's more, the Headteacher was surprised when I discovered that 15 children said that they didn't know what resilience meant, and those that gave examples were incorrect (such as "*it's the name of a flower*"). Considering how interlinked the two concepts are, children's understanding of them appeared to be somewhat limited. During post-intervention pupil interviews, however, children could provide examples of both resilience and perseverance and explained what this looked and felt like. A Year 2 child told me that *"when I persevere I am putting in all of my effort even if there are like mountains of trickiness and even if I get it wrong I am resilient because I just work out why I got it wrong and then I remember that in my brain for next time"*. This displays a real depth of understanding of these concepts, whereby a child can imagine overcoming 'learning mountains' and is able to visually picture himself strengthening his learning muscles. Interestingly, this child is one who has processing needs. During an interview with his teacher, I asked if they could think of a particular pupil for whom the learning powered approach had particularly benefitted. They spoke about the very same child, telling me that he used to lack any resilience. They explained that:

"We identified that he was crying because he couldn't make mistakes. We tweaked his mindset so that he became a superhero, and his whole approach to learning changed. It transformed him. His parents couldn't believe it".

Examples like this suggest that the approach has supported developing resilience in learners at Applebee Infants, as the Super Learner characters provide examples and techniques to which children can relate to and imitate. What's more, teachers have commented on modelling these qualities more frequently since using the approach, such as persevering with handwriting or spellings, in order to demonstrate that we are *all* learners who are stretching our learning muscles together.

Staff questionnaires revealed that Fantastic Focus was the second most referred-to Super Learner character, as teachers found it really helped children to manage their distractions and concentrate on their learning. During independent tasks, I found that children were far more likely to focus for longer periods of time and choose to sit next to children who they wouldn't distract or be distracted once I spoke about displaying the qualities of Fantastic Focus. Lesson observations confirmed this to be the case in other classes, where children would tell me how they had focussed and persevered during their learning, explaining to me that this was important to be a super learner.

Parent and governor interviews also supported these findings, as parents spoke about how they have seen their children becoming increasingly resilient. They spoke about how important they believed this attitude to be, especially in the future when children undertake high-stakes testing. One parent thought that "*persistence and resilience will really help when they're teenagers and they have exam revision because they just have to never give up".* Although the long-term effects of this approach are unknown, this suggests that parents and teachers understand the important of developing resilience in young people in order to equip them with the confidence to face difficulty not only in their learning now, but in the future.

5.5.3 Reflective learners (Memory Master, Chief Risk Taker, Marvellous Me, deliberate practice, pupil conferencing)

When pupils were explicitly taught about the Memory Master character, they were introduced to the concept of the Learning Pyramid (Education Corner, 2018: Figure 8) to support their understanding of different ways to support memory and retention. Year 2 teachers took this concept further and applied it to their English learning to remember the sequence of a story. Rather than merely telling pupils that they needed to remember information for a test, or the next lesson, discussions evolved around *how* best to remember and recall this information. During an interview, a Year 2 teacher explained that:

"*The Memory Master has encouraged teachers to plan for opportunities where learners can really think about why they need to recall information, raising their awareness of their working memory".*

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Education Corner. 2018. The Learning Pyramid. Online]. Available at: https://www.educationcorner.com/the-learning-pyramid.html

Figure 8:

The Learning Pyramid

This tied in really well with deliberate practice sessions where children recalled and practised their learning from that week. Teachers commented on the benefits of this, especially with SEN children that find processing or retaining information tricky. A teaching assistant told me that:

"The Memory Master is my favourite Super Learner because it supports children with specific difficulties such as dyslexia or weak work memory by providing the opportunity to regularly practice holding and recalling information".

A brilliant example of this is a Year 1 child who struggles with his spelling. When I interviewed him prior to the intervention, he told me that he *"will never be good at spelling. The words just go all jumbled and I can't remember them*". After the intervention, this time when I interviewed him he had scored 5/5 for the first time ever on his weekly spelling quiz, and was quick to tell me all about how he was being just like Memory Master and had to keep practising but now he was getting them right. As long as testing is low-stakes, children are able to reflect on their learning journey and improvement and can become aware of the progress they are making, boosting their self-esteem (Carr, 2011).

Within every lesson observation that I carried out, there was some kind of 'chilli challenge' or 'grapple challenge' which children were asked to 'have a go at', in which their teacher encouraged them to take risks just like Chief Risk Taker. These are activities in which children are asked to problem-solve, often attempting something which they have not been exposed to before and are therefore required to take a risk and not be afraid to make a mistake. I was amazed at the resilience and confidence of children across the school to have a go, using their prior learning to help them. Interestingly, when asked which 3 Super Learners teachers refer to the most, Chief Risk Taker and Marvellous Me were not listed by any of the respondents (Appendix O). However, 29.6% of children stated that Marvellous Me is their favourite Super Learner, with 7.4% preferring Chief Risk Taker. Marvellous Me was chosen

by those children because they liked that she encompassed all of the learning powers, and they wanted to be the best that they can be. One child told me she was her favourite because *"I always try to be Marvellous Me and if I am I tell my mum and she is proud".* Perhaps Marvellous Me could be used more frequently during pupil conferencing to allow children to reflect on *how* they can be the best they can be and what steps they can take to get there to encourage further critical thought and reflection (Lloyd, 2015).

Within questionnaires and interviews, teachers referred to pupil conferencing as a useful tool to provide children with the opportunity to reflect on their learning. This is time set aside to discuss a pupil's learning, including their next steps. Although they explained that it was difficult as their timetable was restricted as no teaching took place on a Friday, they felt that this was outweighed by the benefit it had for the children in terms of slowing down the learning process and allowing them to reflect on and discuss their achievements and targets. Both staff and pupils spoke about the benefit of looking back on their learning, and the Super Learners, deliberate practice and pupil conferencing seem to be providing greater opportunity for this.

5.5.4 Reciprocal learners (The Collaborator, The Listener, Sergeant Independence)

As previously mentioned, prior to the intervention the children I interviewed referred heavily to 'listening to the teacher' and 'not talking' when describing what makes somebody a super learner. Post-intervention pupil interviews revealed that children spoke increasingly about how they can learn from others and the importance of listening and working with others to support their learning. A Year 1 child spoke about "*knowing when it is good to work with a partner, or in a group, or on my own. It depends what learning I am doing and what will help me the most".* Within my own lessons, I used the visuals of the Super Learners to remind children at what stages they should be collaborating, or listening to myself or others or when

they should be working independently. However, as the months of using the approach went on, children began deciding for themselves which approach worked well for them. For example, when they were learning their poem to recite to the class, some children decided to work alone in the outside area where it was quiet and read it to themselves, whereas others decided to work with a partner or in a group.

Staff interviews suggest that children who find it difficult to focus in a group or collaborate effectively with others were beginning to approach a learning task with increasing maturity, understanding the importance of helping others and receiving help. Within most lessons at Applebee Infants, children are provided with time to 'think, pair, share'. This has continued to be used, but is now linked to the Super Learners in that children are told to be Sergeant Independence when having some thinking time, to collaborate with others when discussing their ideas, and then to listen to others when they are sharing their ideas. Learning about The Listener also linked well to mindfulness, which is an approach that some teachers at our school have begun using, where children are encouraged to focus on what's happening now and listen to what is around them. Speaking with staff and pupils and observing learning, it seems that children are developing their skills as reciprocal learners through understanding exactly what kind of collaboration is useful when approaching learning and how listening to others can be beneficial.

5.6 Can we help children to better understand how and when they are learning? Can we make learning more visible?

The introduction of the learning and performance zones aimed to help children with understanding when they are learning and therefore improving and refining and making mistakes, and when they are showcasing their learning. The language of learning power

aimed to equip children with the understanding of what learning looks and feels like, therefore making learning more visible.

The increased discussion of and therefore transparency of when learning is taking place, was one of the key changes noted in pupil interviews. During the first stage of interviews, prior to the intervention, when I asked children what it looked and felt like when they were learning, answers such as '*sitting on the carpet*' and '*listening to my teacher*' prevailed. Children overwhelmingly described what happened during lessons, and not the actual process of learning. When I asked pupils to think of someone who they thought was a super learner and explain why, every child prior to the intervention named a high attaining pupil in their class who '*always gets things right*'. In fact, a child who is always getting things right may not be learning at all if they already know the subject content. Interviews after the introduction of the learning powered approach, however, revealed very different answers. Children named a range of individuals who they believe are super learners, including their teacher, family or friends, as well as their peers. When speaking about another pupil, they explained how they always took a risk with a tricky challenge, or worked well in a group or listened well to others. They were comparing these individuals to the Super Learner characters and their attributes, and they could discuss exactly how that person had been a super learner because of their learning dispositions.

Parent interviews revealed that their children were talking increasingly about their learning at home. One parent commented that normally when she asked her child about their day she would be told about the subjects that she had learnt about: "*today we did Geography and then PE*". However, since the language of learning power had been introduced, her child spoke increasingly about her learning: "*I was Chief Risk Taker in PE today because I tried the tricky balance challenge and I could hold my balance for 30 seconds*". This would suggest

that the approach has provided children with an increased understanding of the process of learning, including their ability to reflect on the progress they are making.

The Super Learner characters were introduced to do just that – to make the positive attributes, dispositions and habits of learning *visible* to pupils. During interviews, staff commented that this has enabled children to evaluate their own learning. A Year 2 teacher told me that:

"When we put the characters on our flipcharts, the children instantly know what kind of learning they will be doing. They evaluate themselves against the learning powers and set themselves targets to improve stretching certain learning muscles. They do this without prompting and it has made the whole process of learning visible and tangible for the children".

It seems, then, that the Super Learner characters and language of learning has provided a scaffold and a vocabulary to allow children to discuss and visualise their learning. It is not that they did not learn beforehand, or that they weren't making excellent progress, but that their learning has become increasingly visible.

5.7 Is it possible for *all* children to develop their learning power?

When developing learning power in my own classroom, along with lesson observations, I have found that all children have been able to develop their learning power in some way. When asked which learning muscles they think they have stretched and developed since the introduction of the approach, the response was that all children believed that they had developed most, if not all of the learning powers. Of course, children may be telling me this as they think it is what I want to hear, but many children were very open and honest in their reflections and were able to speak about which learning muscles they think they need to work on stretching and why.

Staff views seemed to confirm that all children were developing their learning power in different ways. A Year 1 teacher told me that:

"They all respond really well to them but I think that it's good that the characters represent different genders and races. I think that for the SEN children, the logos are really useful because even if they don't understand what the word means, the visual can spark their memory. I think the visuals are really useful for EAL learners and exposes them to lots of new vocabulary. I think they're good for everyone."

Staff at Applebee Infants agreed that *all* children in their class have been able to develop their learning power, although they may access it in a different way. When interviewing pupils, I ensured that I interviewed a representative example of the school's cohort (Appendix P). It was evident that some children had a deeper understanding of the qualities of a super learner than others, but that is the case with learning in general, and every child progresses at a different rate. What's more, that is not to say that the approach is not having an equally positive effect on two different children, but perhaps that one is able to articulate the effect with greater coherency. Overall, I found no evidence to suggest that there were any particular children at Applebee Infants who are not developing their learning power.

5.8 Relationship of findings to the literature

Data collection and analysis of the learning powered approach introduced at Applebee Infants confirms the view held by Claxton that children can develop as resilient, resourceful, reflective and reciprocal learners who are aware of what the process of learning looks and feels like and are able to articulate this. Of course, after only 9 months of this approach being in place, these findings are unable to confirm claims made about the longer-term benefits of this approach, including how young people approach exams and then employment. It does, however, provide evidence of what a practical implementation of the learning powered approach looks like in an infant school and therefore how the approach can work with

children just beginning their school careers. My own design of the Super Learner characters and the unique way in which the approach has been embedded at Applebee Infants offers insights and recommendations for the implementation of the BLP approach within a school, including the impact of this and views of parents, governors, teachers, SLT and pupils. This research could therefore inform the introduction of the approach at other schools.

5.9 Summary

The data collected during the course of this project has enabled me to gather viewpoints and evidence to answer my research questions. The learning powered approach has changed the way children at Applebee Infants view themselves as learners, as they speak increasingly about their own approach to learning rather than the actions of their teacher. The approach seems to have supported children in becoming more resourceful, resilient, reflective and reciprocal learners across the school. This in turn has allowed children's learning to become increasingly visible to both themselves and those around them. What's more, it seems that the approach has helped *all* children in developing their learning power.

Chapter 6: Summary, next steps and personal reflection

6.1 Summary of research

This research project explored and assessed a practical implementation of a learning powered approach at Applebee Infants' School, as influenced by the work of Claxton. A mixed methods approach including questionnaires and semi-structured interviews allowed me to gain insightful knowledge concerning staff, governor, parent, SLT and pupil views about the effects of the approach. My findings suggest that children at Applebee Infants are increasingly aware of how and when they are learning and are able to articulate this learning process as a result of this intervention. This research project has created knowledge-in-action

(Taber, 2007) and has informed my own and other's professional practice in terms of our approach to learning and teaching, including the language that we use, the visuals that we display and the way in which we model learning. The success of this project has rested on its collaborative nature and the full support of the staff, parents and governors at Applebee Infants.

6.2 Next steps

The next steps in terms of developing learning power at Applebee Infants have been discussed with parents, teachers, governors and the SLT. From September 2018, the new characters as designed by a local artist will be used to represent the Super Learner characters (Appendix Q). In September, I will be meeting with all staff to discuss how the approach will continue to be developed. Of course, the new children starting in Reception will need to mirror the introduction to the characters this year, being introduced to them one at a time with explicit lessons for each. However, children in Year 1 and 2 will already be familiar with the characters and the language and so it will need to be decided how the approach will continue to evolve.

Other developments next academic year involve delivering a parent workshop to provide information and the opportunity for discussion about the approach. This will be facilitated by myself and a member of the SLT. My Headteacher would also like myself and our drama specialist to produce a DVD with children playing the Super Learner characters and explaining how they help them with their learning, which will be available to parents. Both forms of parental engagement should allow the language of learning power to be replicated at home.

This research project has already expanded beyond Applebee Infants, as plans are in place to replicate this intervention within all schools in our academy trust, as well as the junior school.

I will be providing two twilight training sessions at Applebee Juniors School in September 2018 to all teaching staff and member of the SLT, allowing continuity of understanding as the children from the infant school transition to the juniors. In October 2018, myself and a colleague will be facilitating a workshop at our school's Academy Trust conference, to upwards of 200 teachers, providing an opportunity for staff to learn about how we use the learning powered approach at Applebee Infants and guidance on how they can implement it in their own school.

Overall, the next step for developing the learning powered approach at Applebee Infants concerns analysing the long term effects on pupils, and continuing to discuss the impact of the approach, reflecting on its benefits and areas for improvement so as to improve and refine the approach so that it has the very best impact for our learners. Increased parental engagement and the use of the approach at other schools in our trust as well as the junior school should aid the further development of the approach and reveal the long term effects for pupils, as well as the implications of this research project beyond Applebee Infants.

6.3 Personal reflection

I feel immensely proud of the impact that this research project has had on not only myself, but the staff and pupils at Applebee Infants. It has allowed me to reflect on my own teaching practice, and to really think of the way in which I approach learning and teaching, thinking about how I am moulding and influencing the children that I teach to prepare them for their future. I have been overwhelmed at the extent of collaboration between staff at my school, and the ways in which they have embedded the approach and made it their own. School displays, a common language, the use of the Super Learners in flipcharts and children's learning, school plays dedicated to learning power, all display the way in which Applebee Infants has fully embraced the approach, believing in its vision and ethos. I really believe that

learning power is having a positive impact on all pupils in our school and that this is better preparing them for a lifetime of learning. The upcoming training and workshops for the junior school and for schools within our academy trust serve to show that the learning powered approach is viewed as a success story within our school. I look forward to seeing the ways in which the approach evolves and takes place in local schools, as well as assessing the longer-term impact that it has on pupils. Developing learning power aims to help young people in becoming confident, thoughtful, resilient learners who have a rich set of habits of mind which will stand them in good stead for whatever their future throws at them (Claxton, 2013). It is so important that we invest in early years education in order to build a strong foundation of positive learning dispositions (Heckman & Masterov, 2007). I can't think of a more noble or fulfilling calling than being such a teacher (Claxton, 2018a: 100).

References

Areljung, S & Kelly-Ware, J. 2017. Navigating the risky terrain of children's working theories. *Early Years*, **37**(4), pp. 370-385.

Arthur, J. 2013. *Citizens of character: new directions in character and values education*. Exeter: Andrews UK Limited.

Barnes, J. 2015. *Expansive education: teaching learners for the real world.* By Bill Lucas, British Journal of Educational Studies, **63**(2), pp. 248-250.

Barth, R. S. 2001. *Learning by heart*. San Francisco: Jossey-Bass.

British Educational Research Association (BERA). 2018. *Ethical guidelines for educational research.* [Online]. Available at: https://www.bera.ac.uk/wp-content/uploads/2018/06/BERA-Ethical-Guidelines-for-Educational-Research_4thEdn_2018.pdf?noredirect=1. [Accessed 24 February 2018].

Biesta, G. 2016. *Good education in an age of measurement: ethics, politics democracy.* London: Routledge.

Briceño, E. 2016. *How to get better at the things you care about*. TEDx Manhattan Beach. [Online]. Available at:

https://www.ted.com/talks/eduardo_briceno_how_to_get_better_at_the_things_you_care_about#t-563647. [Accessed 19 March 2018].

The British Psychological Society (BPS). 2009. *Code of Ethics and Conduct: Guidance published by the Ethic Committee of the British Psychological Society*. [Online]. Available at: https://beta.bps.org.uk/sites/beta.bps.org.uk/files/Policy%20-%20Files/Code%20of%20Ethics%20and%20Conduct%20%282009%29.pdf. [Accessed: 21 April 2018].

Brink, T.L. 1985. Mini review of: Gardner, H. 1983. Frames of Mind: The Theory of Multiple Intelligences. New York: Basic. *Hispanic Journal of Behavioural Sciences*, **7**(3), pp. 311-312.

Bruno, L. 2009. *Lifelong learning characteristics and academic achievement of eighth-grade students: Lessons for educators in preparing students for global citizenship*. PhD Dissertation. ProQuest Dissertations and Theses: ProQuest Dissertations Publishing.

British Sociological Association (BSA). 2002. *Statement of Ethical Practice for the British Sociological Association.* [Online]. Available at: https://www.britsoc.co.uk/equality-diversity/statement-of-ethical-practice/. [Accessed: 5 April 2018]

Burden, B. 2011. New Kinds of Smart: How the Science of Learnable Intelligence is Changing Education (Book Review). *Thinking Skills and Creativity*, **6**(3), pp. 191-192.

Burgess, R.G. 1989. *The Ethics of educational research.* New York: Falmer Press.

Carr, M. 2011. Young children reflecting on their learning: teachers' conservation strategies. *Early Years*, **31**(3), pp. 257-270.

Carr, M & Claxton, G. 2002. Tracking the Development of Learning Dispositions. *Assessment in Education: Principles, Policy & Practice.* **9**(1), pp. 9-37.

Chernokova, T.E. 2014. Features of the Metacognition Structure for Pre-school Age Children. *Procedia – Social and Behavioral Sciences*, **146**, pp. 203-208.

Claro, S., Paunesku, D., Dweck, C.S. 2016. Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences of the United States of America*, **113**(31), pp. 8664-8.

Claxton, G. 2002. *Building learning power: helping young people become better learners.* Bristol: TLO Limited.

Claxton, G. 2007. Expanding young people's capacity to learn. *British Journal of Educational Studies*. **55**(2), pp. 115-134.

Claxton, G. 2011. *The Learning Powered School: Pioneering 21st Century Education.* Bristol: TLO Limited.

Claxton, G. 2013. *What's the point of school? Rediscovering the heart of education.* London: OneWorld Publications.

Claxton, G. 2018a. *The Learning Power Approach: Teaching Learners to Teach Themselves.* Carmarthen: Crown House Publishing.

Claxton, G. 2018b. Deep rivers of learning. *Phi Delta Kappan*. **99**(6), pp. 45-48.

Claxton, G & Lucas, B. 2015. *Educating Ruby: what our children really need to learn.* Carmarthen: Crown House Publishing.

Collins, J., Harkin, J., Nind, M. 2002. *Manifesto for learning.* London: Continuum.

Cohen, L & Manion, L. 2011. *Research Methods in Education.* 7th edition. London: Routledge.

Costa, A.L & Kallick, B. 2008. *Learning and leading with habits of mind: 16 essential characteristic for success.* Alexandria, Va: Association for Supervision and Curriculum Development.

Crick, R.D., Broadfoot, P. and Claxton, G. 2004. Developing an Effective Lifelong Learning Inventory: the ELLI Project. *Assessment in Education: Principles, Policy & Practice*, **11**(3), pp. 247-272.

Department for Education (DfE). 2016. *Educational Excellence Everywhere: March 2016*. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/508447/Educational_Excellence_Everywhere.pdf. [Accessed 30th June 2018].

Department for Education (DfE). 2017. *Developing character skills in schools: Summary report: August 2017.* NatCen Social Research & the National Children's Bureau Research and Policy Team. [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/634710/Developing_Character_skills-synthesis_report.pdf. [Accessed 23rd July 2018].

Department for Education (DfE). 2018. *Schools, pupils and their characteristics: January 2018.* [Online]. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/719226/Schools_Pupils_and_their_Characteristics_2018_Main_Text.pdf. [Accessed 18 June 2018].

Dignath, C & Gerhard, B. 2008. Components of Fostering Self-Regulated Learning among Students. A Meta-Analysis on Intervention Studies at Primary and Secondary School Level. *Metacognition and Learning*, **3**(3), pp. 231-264.

Dweck, C. 2006. *Mindset: The New Psychology of Success*. New York: Random House.

Education Corner. 2018. The Learning Pyramid. [Online]. Available at: https://www.educationcorner.com/the-learning-pyramid.html. [Accessed 22 January 2018].

Edwards, T. 2013. Handbook of Self-Regulation of Learning and Performance. *Educational Psychology Handbook Series, International Journal of Lifelong Education*, **32**(6), pp. 837-839.

Flutter, J & Rudduck, J. 2004. *Consulting pupils: what's in it for schools?* London: RoutledgeFalmer.

Formisano, C. 2008. *School structures compatible with classroom practice based on Gardner's theory of MI.* ProQuest Dissertations Publishing: ProQuest dissertations & theses.

Gardner, H. 1983. Frames of Mind: The Theory of Multiple Intelligences. New York: Basic.

Gardner, H. 1993. *Multiple Intelligences*. New York: Basic Books.

Gardner, H. 2017. Taking a multiple intelligences (MI) perspective. *Behavioural and Brain Sciences*, **40**.

Harris, L.R. & Brown, G.T.L. 2010. Mixing interview and questionnaire methods: Practical problems in aligning data. *Practical Assessment, Research & Evaluation*, **15**(1), pp. 1-19.

Hattie, J. 2009. *Visible learning: a synthesis of over 800 meta-analyses relating to achievement.* London: Routledge.

Heckman, J & Masterov, D. 2007. *The Productivity Argument for Investing in Young Children.* Chicago: University of Chicago.

Hocking, I & Vernon, D. 2017. The right tool for the right task: structured techniques prove less effective on an ill-defined problem finding task. *Thinking Skills and Creativity*, **26**, pp. 84-91.

Hodgson, C & Pyle, K. 2010. *A literature review of Assessment for Learning in science.* National Foundation for Educational Research. [Online]. Available at: https://www.nfer.ac.uk/media/1556/aas01.pdf. [Accessed 28th June 2018].

James, M et al. 2007. *Improving learning how to learn: classrooms, schools and networks.* London: Routledge.

Kautz, T et al. 2014. *Improving Cognitive and Non-Cognitive Skills to Promote Lifetime Success.* Organisation for Economic Cooperation and Development Policy File. Cambridge: National Bureau of Economic Research.

Kelly, P. 2004. *Using Thinking Skills in the Primary Classroom*. 1st ed. London: SAGE Publications.

Kirsch, C. 2012. Developing children's language learner strategies at primary school. *Education 3-13*, **40**(4), pp. 379-399.

Kunesh, T. 2018. *Multiple Intelligence test for children.* [Online]. Available at: https://kids.lovetoknow.com/wiki/Multiple_Intelligence_Test_for_Children. [Accessed 20 June 2018].

Lloyd, D. 2015. Theories of Learning: Brain Gym Nonsense Or Genuinely Useful? *Teaching Business and Economics,* **19**(2), pp. 17-18.

Lynch, M.W. 1995. Multiple Intelligences: Howard Gardner (New York: Basic Books, 1993). *Teaching Education*, **7**(1), pp. 155-157. Taylor & Francis Group.

McWilliam, E & Haukka, S. 2008. Educating the creative workforce: new directions or twenty-first century schooling. *British Educational Research Journal*, **34**(5), pp. 651-666.

Novak, J.D & Gowin, D.B. 1984. *Learning how to learn*. Cambridge: Cambridge University Press.

Punch, K & Oancea, A. 2014. *Introduction to Research Methods in Education*. London: Sage.

Reinhard, J. 2015. Howard Gardner's Multiple Intelligences: A minority view: musical intelligence. *Music Scholarship* **4**, pp. 38-42.

Rieser, S et al. 2016. The connection between teaching and learning: Linking teaching quality and metacognitive strategy use in primary school. *British Journal of Educational Psychology,* **86**(4), pp. 526-545.

Ritchhart, R & Perkins, D.N. 2000. Life in the Mindful Classroom: Nurturing the Disposition of Mindfulness. *Journal of Social Sciences*, **56**(1), pp. 27-47.

Robinson, C. 2017. Growth mindset in the classroom. *Science Scope*, **41**(2), pp. 18-21.

Saavedra, A.R & Opfer, V.D. 2012. Learning 21st century skills requires 21st century teaching. *Phi Delta Kappan*, **94**(2), pp. 8-13.

Sadler, D. 2002. Learning dispositions: Can we really assess them? *Assessment in Education: Principles, Policy & Practice*, **9**(1), pp. 45-51.

Sommers, W.A & Olsen, W. 2010. *Habits of mind: teacher's companion.* Westport: Spectrum Education. [Online]. Available at: https://habitsofmind.org/client/hom/HOM_teacher_Companion.pdf. [Accessed 18th August 2018].

Stoeger, H., Fleischmann, S. and Obergriesser, S. 2015. Self-Regulated Learning (SRL) and the Gifted Learner in Primary School: The Theoretical Basis and Empirical Findings on a

Research Program Dedicated to Ensuring That All Students Learn to Regulate Their Own Learning. *Asia Pacific Education Review,* **16**(2), pp. 257-267.

Stolen, D. 2002. Transforming learning and teaching: introducing building learning power into a sixth form college. *Educational Studies*, **39**(2), pp. 235-238.

Swann, J. 2012. *Learning, Teaching and Education Research in the 21st Century – An evolutionary analysis of the role of teachers.* London: Continuum International Publishing.

Swann, M., Peacock, A., Hart, S and Drummon, M.J. 2012. *Creating learning without limits.* Berkshire: Open University Press.

Sylva, K et al. 2003. *The Effective Provision of Pre-School Education (EPPE) Project: Findings from the Pre-school Period.* London: UCL: The Institute of Education.

Taber, K. 2007. *Classroom-based research and evidence-based practice: a guide for teachers*. London: SAGE.

Taggart, G. 2005. *Thinking skills in the early years: a literature review.* Slough: National Foundation for Educational Research in England and Wales.

Thomas, G.P & Mee, D.A.K. 2005. Changing the Learning Environment to Enhance Students' Metacognition in Hong Kong Primary School Classrooms. *Learning Environments Research*, **8**(3), pp. 221-243.

Tisdall, E.K., Davis, J.M. and Gallagher, M. 2009. *Researching with children and young people: research design, methods and analysis.* London: SAGE.

TLO Limited. *Building Learning Power.* [Online]. Available at: https://www.buildinglearningpower.com/. [Accessed 20th June 2018].

Watkins, C. 2005. *Classrooms as learning communities: what's in it for schools?* London: Routledge.

Weimer, M. 2013. *Learner-Centered Teaching: Five Key Changes to Practice*. 2nd ed. Somerset: John Wiley & Sons.

Zimmerman, B.J & Schunk, D.H. 2011. *Handbook of self-regulation of learning and performance*. New York: Routledge.

Appendices

Appendix A: Thinking Maps used at Applebee Infants

Appendix B: Thinking Hats used at Applebee Infants

Appendix C: Gardner's Multiple Intelligences

Appendix D: Split-screen teaching

Appendix E: Pupil interview questions

Appendix F: Staff questionnaire questions

Appendix G: Staff interview questions

Appendix H: Parent interview questions

Appendix I: Adult consent form

Appendix J: Headteacher consent form

Appendix K: Super Learner characters

Appendix L: Presentation for staff training

Appendix M: Representation of pupil's ideas of a super learner pre-intervention

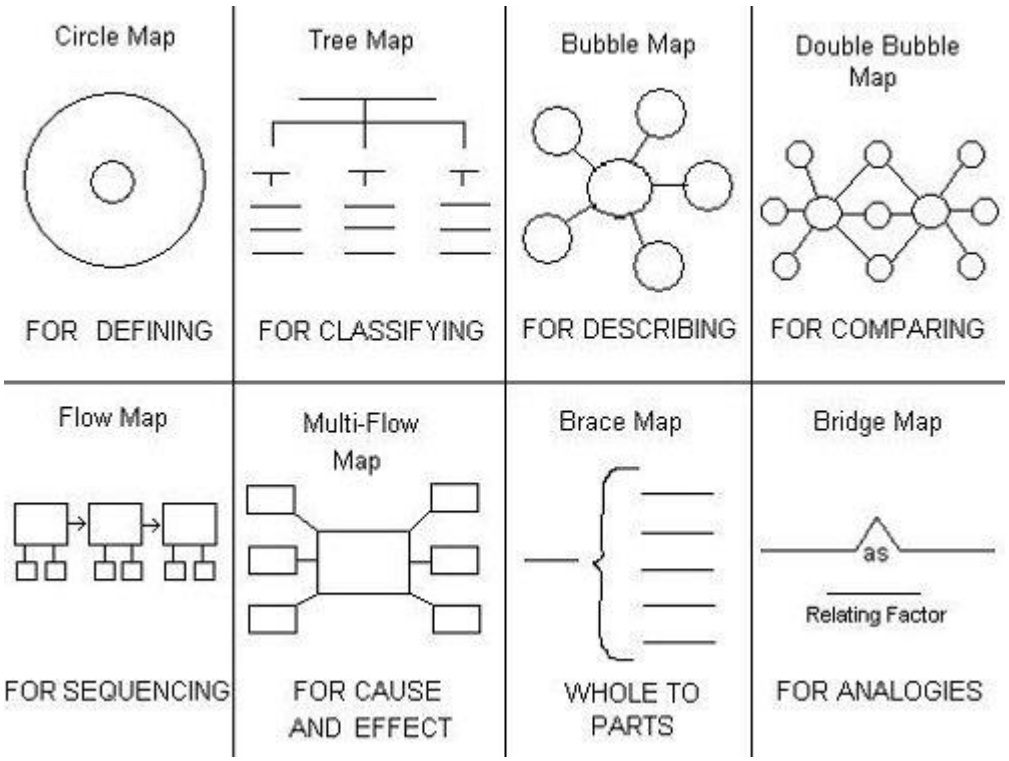
Appendix N: Representation of pupil's ideas of a super learner post-intervention

Appendix O: Teacher questionnaire responses: 3 Super Learners most referred to

Appendix P: Representation of pupils interviewed

Appendix Q: New design of Super Learners

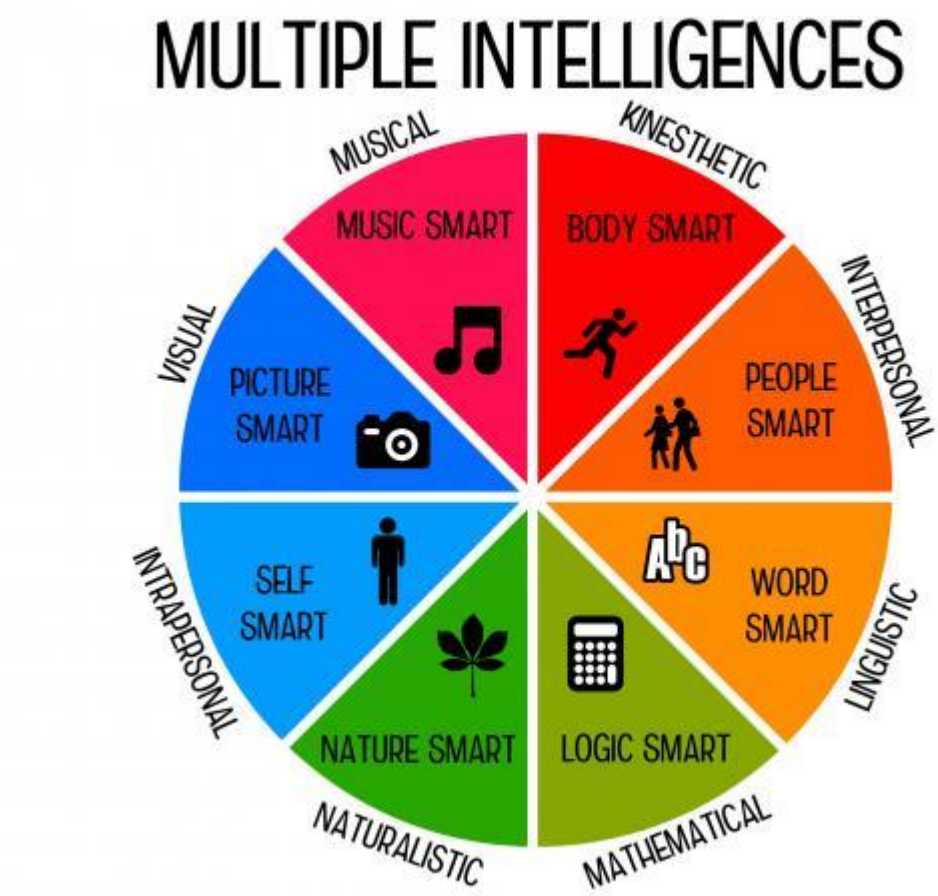
Appendix A: Thinking Maps used at Applebee Infants



Appendix B: Thinking Hats used at Applebee Infants



Appendix C: Gardener's Multiple Intelligences (Kunesh, 2018)



Appendix D: Split-screen teaching (Claxton, 2011)

Today we are learning about	Today we are stretching our
	questioning
how magnets work	muscles

Today we are learning about	Today we are stretching our
	empathy
The Tudors	muscles

Appendix E: Pupil interview questions

Pre-intervention interview questions

1. What do you think makes somebody a super learner?
2. What helps you to learn?
3. What does perseverance mean to you?
4. What does resilience mean to you?
5. Can you think of a time when you make links in your learning?
6. When are you an independent learner? What does this mean?
7. When do you collaborate (work with) others? What does this mean?
8. How do you know that you are focused during your learning?
9. Do you take risks with your learning? Can you think of an example?
10. How does your teacher help you to become a better learner?
11. Is there anything else that would help you to become a better learner?
12. What are you doing when you are being the best you can be?
13. Can you think of someone who is a super learner? What are they like?

Post-intervention interview questions

1. What do you think makes somebody a super learner?
2. Can you name any of our Super Learner characters?
3. How much do you like the Super Learners? (On a scale of 1 – 5)
4. What do you like or not like about the Super Learners?
5. How much do you think the Super Learners help you to learn better? (On a scale of 1 – 5)
6. How do the Super Learners help you to learn better?

7. Do your parents/carers talk about the Super Learners at home?
8. Which is your favourite Super Learner?
9. Why is that your favourite Super Learner?
10. Since meeting the Super Learners, have you got better at any of these things?
    - Asking questions
    - Being resilient
    - Persevering
    - Taking risks in my learning
    - Making links with my learning
    - Being an independent learner
    - Remembering my learning
    - Listening to others
    - Focusing on my learning and managing distractions
    - Collaborating with others
    - Thinking of ideas for my learning
    - Being the best I can be
    - Feeling confident in my learning

11. How do you know when you are learning?
12. What does it feel like when you are learning?
13. How do you know that you are focusing during your learning?
14. What are the learning and performance zones?
15. Can you think of someone who is a super learner? What are they like?
16. How does your teacher help you to become a better learner?
17. Is there anything else that would help you to become a better learner?

18. What are you doing when you are being the best you can be?

Appendix F: Staff questionnaire questions

Pre-intervention questionnaire questions:

1. Have you heard of Guy Claxton or the Building Learning Power approach? If so, what do you know?
2. What do you think we do in school to help our children to become better learners?
3. How do you believe our thinking maps and thinking hats help our children with their learning?
4. Is there anything you would change about our approach to learning and teaching?
5. What skills do you believe children should have by the time they leave school?

Post-intervention questionnaire questions:

1. What would you define as 'building learning power'?
2. How useful have you found the building learning power approach (including the super learners) in helping your children to become better learners? (On a scale of 0 – 10)
3. How important do you believing building learning power is in our school? (On a scale of 0 – 10)
4. How positively have the children in your class responded to the building learning power approach? (On a scale of 0 – 10)
5. How easy have you found implementing the building learning power approach? (On a scale of 0 – 10)

6. How has your approach to learning and teaching changed since the building learning power approach was implemented?
7. Which is your favourite Super Learner?
8. Why is that your favourite Super Learner?
9. Which 3 Super Learners have you used/referred to the most?
10. Do you believe that the building learning power approach has helped the children in your class to develop any of the following habits?
    - Questioning
    - Resilience
    - Perseverance
    - Risk taking
    - Link making between learning
    - Independence
    - Memory/retention of learning
    - Listening
    - Focus/concentration
    - Collaboration/ability to work well with others
    - Imagination
    - Confidence/self-belief

11. Is there anything you would add to or change about the building learning power approach?
12. What do you believe has been the biggest change in your class/our school since implementing the building learning power approach?
13. What do you believe is the next step for building learning power in our school?

Appendix G: Staff interview questions

Pre-intervention interview questions:

1. What approaches to learning and teaching have been used at Applebee Infants in the past? What impact do you think these had?
2. What skills and habits do you think it is important for children to develop at infant school?
3. How do you think our growth mindset approach helps children with their learning?
4. How do you think our thinking maps help children with their learning?
5. How do you think our thinking hats help children with their learning?
6. How do you think we prepare children for a lifetime of learning?

Pre-intervention interview questions:

1. How do you think building learning power has fitted in alongside our other approaches to learning and teaching? (growth mindset/thinking maps/thinking hats)
2. Would you recommend the building learning power approach to other educational professionals?
3. How engaged do you feel the children in our school are with building learning power? (On a scale of 0 - 10)
4. How engaged do you feel the parents of the children in our school are with building learning power? (On a scale of 0 - 10)
5. Where have you seen the Super Learner characters displayed?
6. How often do you use the Super Learner characters in your planning or flipcharts? Teaching assistants or SLT – how often do you see them used? (On a scale of 0 – 10)
7. Have you discussed the learning mind with the children in your class?

8. Do you think the building learning power approach could be differentiated and implemented at junior school/high school?
9. Can you think of a time that building learning power has positively affected a child?
10. Which lessons/situations do you think building learning power works well with?
11. Are there any lessons/situations in which you struggle to implement building learning power?
12. Do you think any more characters should be added to the Super Learners?
13. What do you think are the long term effects of developing children's learning power?
14. Are there any particular children that respond well to the Super Learners?
15. Are there any particular children who do not respond well/aren't engaged with the Super Learners?
16. Can you see building learning power being a long-standing approach which is used at our school?
17. Is there anything else that you would like to say about the building learning power approach?

Appendix H: Parent interview questions

1. Have you heard of building learning power of the Super Learners? If so, where?
2. What do you know about the building learning power approach?
3. Has your child spoken about the Super Learners at home?
4. Which Super Learner characters do you think are the most useful to your child?
5. What skills and habits do you think are important for your child to develop at school?
6. Would you like to see the building learning power approach used when your child attends the junior school?

7. Are there any skills or habits which you feel are not represented by the Super Learners? Is there anything else that you would like to be included?
8. Is there any other information that you would like to be provided with about the building learning power approach?

Appendix I: Adult consent form

Participant information:

The purpose of this interview/questionnaire is to allow me to collect data as part of my research for my MSc in Learning and Teaching at The University of Oxford. My research is looking into developing a learning powered approach to learning and teaching at Applebee Infants school.

Taking part in this research is on a voluntary basis. You can withdraw from it at any time if you wish and do not have to give a reason. You name and the school's name will be kept anonymous at all times. Your answers may be used in my MSc dissertation, and you may request to see this when it's completed.

You do not have to answer all of the questions and you do not need to provide a reason for this. I will be taking notes during the interview which will then be typed up and saved as a password protected file. All data collection will be destroyed upon completion of this research project.

Consent form:

I have read the foregoing information, which informed me about the nature and purpose of this research project. I consent voluntarily to be a participant in this study.

Name and signature of participant:

Appendix J: Headteacher consent form

UNIVERSITY OF OXFORD
DEPARTMENT OF EDUCATION

15 Norham Gardens, Oxford OX2 6PY
Tel: +44(0)1865 274024 Fax: +44(0)1865 274027
general.enquiries@education.ox.ac.uk www.education.ox.ac.uk

Director Professor Jo-Anne Baird

29.11.2017

Dear Headteacher,

I am writing to enquire about conducting research in our school this academic year. As you know, I am studying for the Master's in Learning and Teaching at Oxford University, supervised by Liam Gearon. In my final research project *'Building learning powers: what are the effects of developing a learning powered infant school?',* I will explore the thinking of Guy Claxton, who proposes that schools are able to help children in becoming better learners, and assess whether such an approach could be implemented at Applebee Infants', along with the consequences of doing so.

The research will take place across our school, working with children from Early Years, Year 1 and Year 2. This will involve lesson observations, as well as conducting both questionnaires and interviews with staff and pupils. I am hoping to assess whether the Learning Powered curriculum, which I am introducing this year, has any effect on helping children to become better learners. By participating in the research, the school would be contributing to a project that will deepen our understanding of what helps children to learn, and how, as a school, we can best support this. This will contribute to developing ways of increasing independent and deeper learning in our school in the future, and so will benefit our school as a whole.

I hope to conduct this research between 03/01/2017 and 20/07/2018. I would interview staff and children, taking hard-copy notes; ask staff to complete anonymous questionnaires and observe lessons, taking notes of my observations and making copies of some children's recorded work.

Oxford University has strict ethical procedures on conducting ethical research, consistent with current British Educational Research Association guidelines. The University also recognises, however, that my study is a piece of practitioner research, and that schools already operate with the highest ethical standards. Therefore only <u>your</u> formal consent as Headteacher is necessary, and not that of individual parents or staff. However, throughout my research, students and other teachers will be able to refuse to participate in any research activities at any time.

All participants, including students, teacher and the school, would be made anonymous in all research reports. The data collected would be kept strictly confidential, available only to my supervisor Liam Gearon and myself, and only used for academic purposes. It will be kept for as long as it has academic value.

If you are happy for me to proceed with this study, please confirm that using the attached reply form. If you have any concerns or need more information about what is involved, please contact me or my supervisor (liam.gearon@education.ox.ac.uk). Further, if you have any questions about this ethics process at any time, please contact the chair of the department's research ethics committee, though: research.office@education.ox.ac.uk

I look forward to hearing from you.

Yours sincerely,

'Building learning powers: what are the effects of developing a learning powered infant school?'

☐ We do not wish to participate in this project.

☐ We would like to find out more about this project.

☐ We would like to take part in this project.

_____

Headteacher's signature

Please return this form to me.

Thank you for your help.

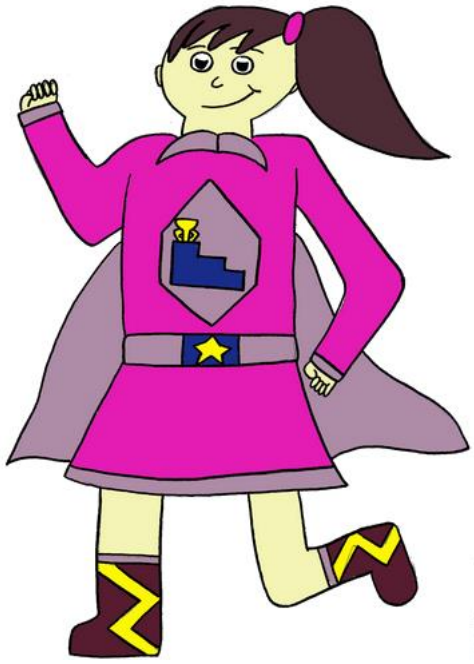
Appendix K: Super Learner characters



The Questioner



Captain Resilience



Platinum Perseverer



Chief Risk Taker



Link Maker



Sergeant Independence



Memory Master



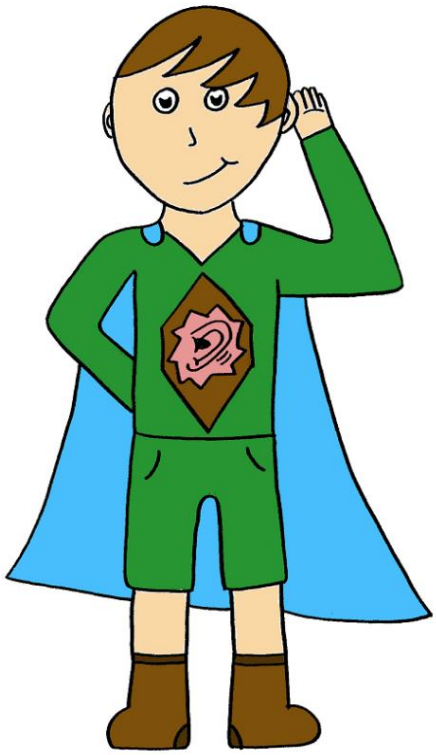
Fantastic Focus



Ideas Agent



The Collaborator



The Listener



Marvellous Me

Appendix L: Presentation for staff training



Building Learning Power

Introduction

- Background for this research project
- Purpose of introducing this approach at Applebee Infants

UNIVERSITY OF OXFORD

Building Learning Power

Aims

- To think about our children's future beyond the school gates
- To introduce the building learning power approach
- To provide an approach to building learning power at Stanley Park Juniors



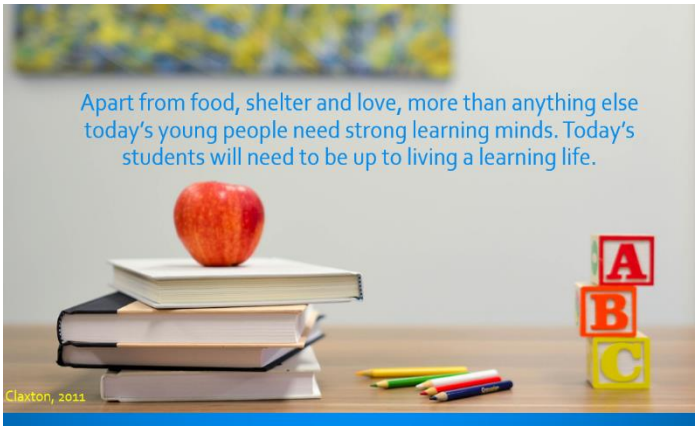
Dweck's growth mindset



Lifelong Learners



- More than qualifications
- Confidence in a changing world
- 21st century learners



Discussion

What skills do we want our children to have by the time they leave school?



Employers



Research studies have found that employers are desperate for people who can think for themselves, show initiative and collaborate effectively.

Employers are crying out for workers who have the right attitude and a willingness to learn.

In a globalised world characterised by rapid change and technological innovation, in which young people have few certainties about their futures, in which most people will have several careers; it is vital that our young people are equipped with the values, the insights and the skills that they will need to navigate their way through the jungle of opportunities and threats.



Claxton, 2011

Educating the whole child

Young people who have been taught to seek the right answer, and never how to flounder intelligently, don't know what to do when they find themselves in a situation where they don't know what to do.



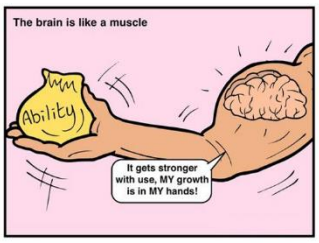
How can building learning power help?

- Mind is like a muscle
- Learning dispositions and habits
- General all-round learning fitness

– curriculum content *and* developing learning power



Stretch your learning muscles



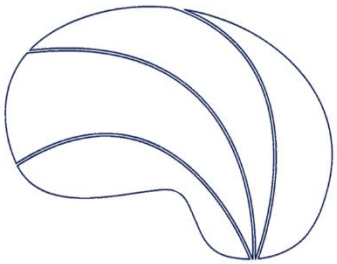


Modelling ourselves as learners

Supple learning mind

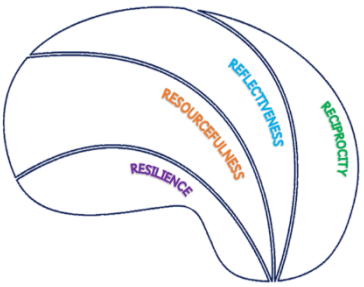
Activity:
What dispositions would you want to develop in the ideal learning mind?



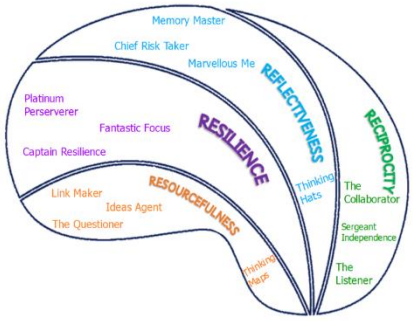


Supple learning mind

- Resilient: Not afraid to make mistakes and learn from them.
- Resourceful: Drawing from a range of learning strategies and methods to support learning.
- Reflective: Thinking of yourself as a learner, including strengths and how to improve learning.
- Reciprocal: Able to work alone or with others when appropriate , making use of relationships in an enjoyable, productive and responsible way.



Applebee Infants Learning Mind







Activity:

Can you match the super learner characters to their names and speech bubbles?



Embedding the learning power approach





Common Language

- Commenting on the process rather than the result
- Using the language of the learning mind/ super learners
- Stretching your learning muscles
- Learning zone and performance zone
- Thinking about what you praise
- Modelling yourself as a learner

Language of learning power can be used in...

Teaching and learning

Reports and targets

Assemblies

Pupil conferencing

Behaviour management



Explicit lessons about each learning power



- Discuss meaning of each learning power
- Provide specific examples
- Activities which stretch that learning muscle

Using Super Learner images on flip charts and within children's learning





Recognising and praising children for developing their learning power



Learning Tree



Behaviour management



Certificates and stamps

Your turn to be Ideas Agent:

How do you think you could start embedding learning power in your classroom?





Some useful activities







Chalk talk or chat mat:

Non-verbal communication

Piecing together a poem before learning about it







Next steps



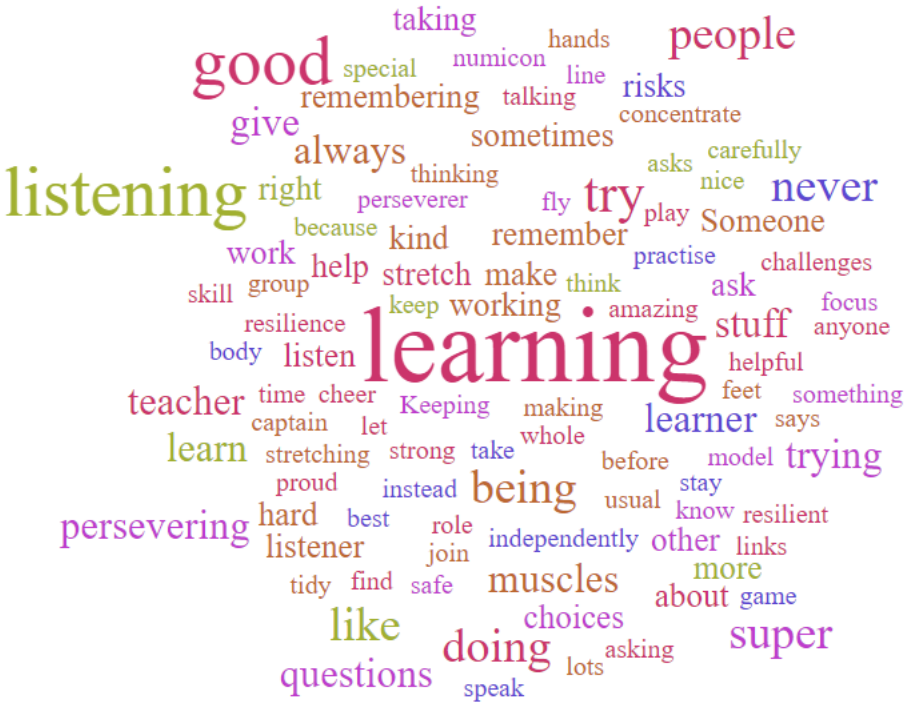
Primary Academy Trust



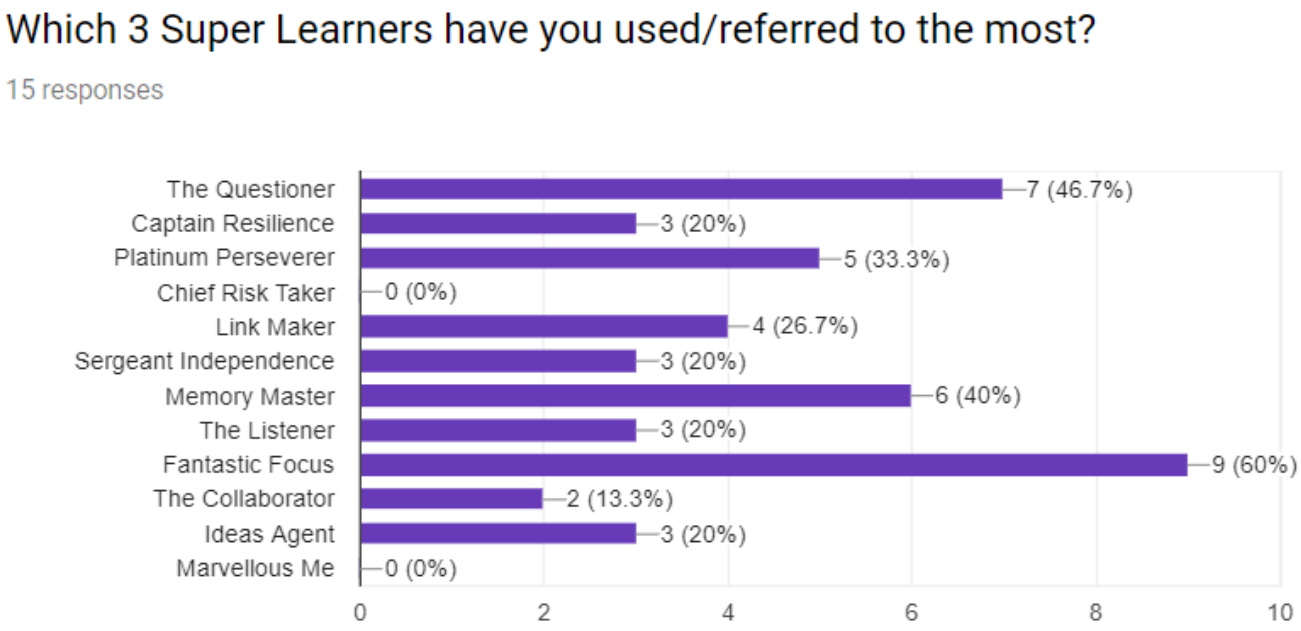
Appendix M: Representation of pupil's ideas of a super learner pre-intervention



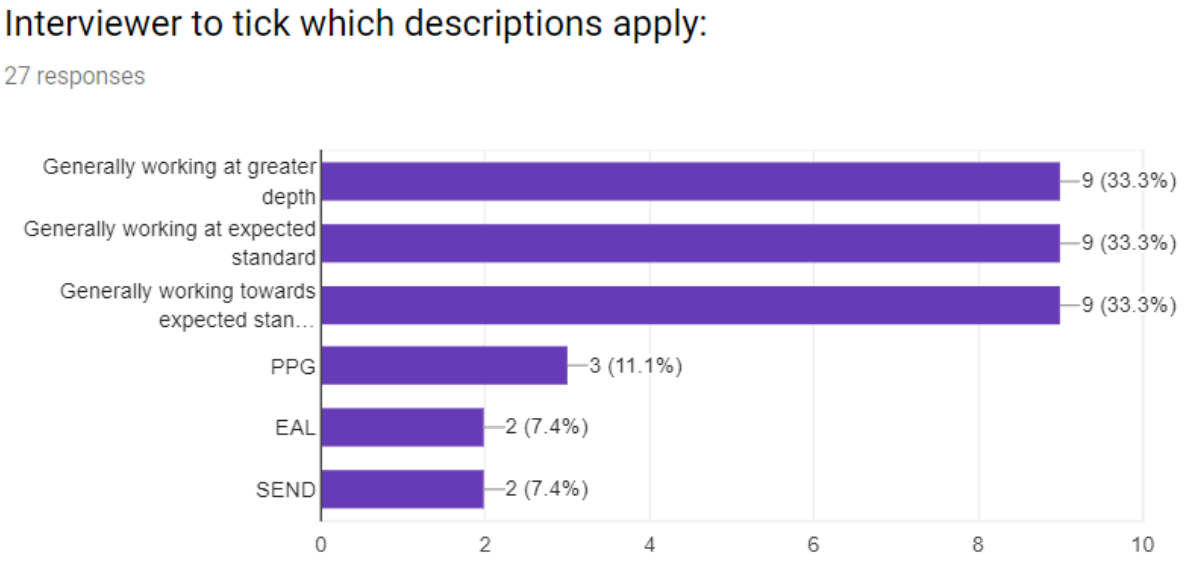
Appendix N: Representation of pupil's ideas of a super learner post-intervention



Appendix O: Teacher questionnaire responses: 3 Super Learners most referred to



Appendix P: Representation of pupils interviewed



Appendix Q: New design of Super Learners



The Questioner



Captain Resilience



Platinum Perseverer



Chief Risk Taker



Link Maker



Sergeant Independence



Memory Master



Fantastic Focus



Ideas Agent



The Collaborator



The Listener



Marvellous Me