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**The discrepancy between pupils' self-concept and academic attainment,
its variance with age and the relationship between self-concept and
motivation**

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Abstract

To what extent is pupils' self-concept of their academic ability reflected in their relative academic attainment? Does the reflection of pupils' self-concept in their relative academic attainment vary with age? What relationships are there between children's self-concept of their academic ability and their engagement and motivation in school? Are there teaching strategies which can be adopted to raise children's engagement and motivation in school? This paper sets out how these questions were explored using a questionnaire and semi-structured interviews with Year 2 and Year 6 children. Overall, members of both year groups revealed a higher self-concept of their ability than their actual relative academic attainment levels. In general, Year 6 pupils' self-concept exceeded their attainment level to a greater extent than that of Year 2 pupils. Although a relationship between pupils' self-concept of their academic ability and their level of engagement and motivation in school was not established, a number of strategies for increasing children's motivation were identified.

The discrepancy between pupils' self-concept and academic attainment, its variance with age and the relationship between self-concept and motivation

Introduction

I chose to explore pupil self-concept, attainment and motivation in my project. Many research studies over the last 35 years have examined children's self-concept of their academic ability and its relation to their academic attainment. Some studies have researched this relationship across age ranges. Studies have also evaluated the implications of children's self-concept for their classroom engagement. Useful definitions of self-concept are offered by Wigfield et al.: "either estimates of how good one is at a given activity or expectations for one's future performance" (1997, p.451) and Marsh and Hattie: "a person's self-perceptions formed through experience with and interpretations of his or her environment" (1996, p.58).

Relatively few studies have investigated the extent to which children's self-concept of their academic ability is realistic, when measured against summative assessments conducted by the teacher. I set out, therefore, to investigate the extent to which children's self-concept of their academic ability is reflected in their actual relative academic attainment, and how this reflection varies with age. I define 'relative academic attainment' as children's summative attainment relative to their peers'. I also set out to explore whether there is any relationship between pupils' self-concept of their academic ability and their engagement and motivation in school. Finally, I wanted to identify ideas on teaching strategies for raising pupil engagement and achievement.

My project, therefore, explores the following questions:

- To what extent is pupils' self-concept of their academic ability reflected in their relative academic attainment?
- Does the reflection of pupils' self-concept in their relative academic attainment vary with age?

- What relationships are there between children's self-concept of their academic ability and their engagement and motivation in school?
- Are there teaching strategies which can be adopted to raise children's engagement and motivation in school?

Critical review of professional literature

When deciding on which aspects of pupil self-concept, attainment and motivation to focus specifically, I reviewed research and thinking on the subject to date, which I categorised into the headings below.

Relationships between pupils' academic self-concept and attainment

Research into the relationship between academic self-concept and attainment has examined both global correlations and subject-specific relationships. Byrne (1996) posits that there is substantial correlation between academic self-concept and academic achievement, but stronger associations are found when specific areas of academic self-concept and achievement are considered, rather than a global academic self-concept. These findings are mirrored by Chiungjung's research in Taiwan (2012), who found a strong correlation between self-concept and academic performance. When a global self-concept was considered, however, there was a weaker correlation to academic performance than when subject-specific self-concepts were considered.

Much research has examined the causal ordering of academic self-concept and performance. This has explored whether a positive self-concept is created by the experience of high academic achievement or whether high academic achievement is driven by a positive self-concept. Research from the 1970s suggests that self-concept is driven by academic achievement. Calsyn and Kenny's research (1977) amongst adolescents supports a skill development model in which academic achievement is causally predominant over self-concept of ability, suggesting that skill-development, rather than self-enhancement, approaches might be most effective within educational support and intervention. Helmke and van Aken (1995), researching German elementary schools, also found evidence in support of a skill-development model in which achievement affects self-concept. Their evidence did not support the self-enhancement model in which prior self-concept contributes to subsequent achievement.

Alternative research suggests, however, that the self-concept – academic attainment relationship is more dynamic. Kurtz-Costes and Schneider (1994) studied the eight to 10 age range in Germany and found that the relationship was bidirectional. Although achievement was shown to have the largest impact on self-concept, there was some, more limited, influence on achievement by self-concept. This is supported by Valentine, DuBois and Cooper (2004) concluding that self-concept has a small, favourable influence on academic achievement. They suggest that stronger effects of self-concept are evident when assessing self-concept specific to an academic subject.

Conversely, some studies suggest that academic attainment is influenced more by self-concept than by academic ability. Bandura, Barbaranelli, Caprara, and Pastorelli (1996) studied the factors behind variance in academic achievement in 11 to 14 year-olds. They concluded that higher achievement was driven by stronger belief in capability to regulate own learning. They suggested that higher self-concept promotes higher academic aspirations and reduces vulnerability to feelings of futility and depression.

The variance of self-concept with age

A number of studies have suggested that children's self-concept of their ability decreases with age. Parsons and Ruble (1977) claim that children may respond more to failure and less to success as they get older. Furthermore, they suggest that children learn with age that it is socially acceptable to express less, rather than more, certainty of success. Eccles, Midgley and Adler (1984) have also found that pupils see themselves as less academically able as they progress through elementary school. Eccles, Wigfield, Harold and Blumenfeld (1993) not only suggest that self-concept decreases with age, but that these perceptions become increasingly categorised into subject areas. They conducted research in the USA finding that fourth graders reported lower estimates of their competence than first graders in a number of subjects and that children differentiate perceptions of their ability between subjects, even in the first grade. Similarly, Marsh, Barnes, Cairns and Tidman (1984) found a strong correlation among children aged six to 11 in Australia between increasing age and decreasing academic self-concept, and they also found that academic self-concept becomes increasingly categorised across this age range. This is further supported by Wigfield et al. (1997) who conducted a three-year longitudinal study in US elementary schools and found a strong correlation between increase in age and decrease in competence belief in the subjects of maths, reading, music and sports.

Explanations have been offered for the claims that self-concept decreases with age. Stipek and MacIver (1989) suggest that developmental shifts found in the criteria children use to assess their academic ability and in their bases for comparison in conjunction with changes in their definition of academic ability. However, other studies have led to perceptions that self-concept becomes more accurate with age, rather than more negative. Harter (1982) examined cognitive competence in American schools. She found that self-perception in this area is very stable across Grades 3 to 6. She also noticed that the relationship between perceived and actual academic competence becomes systematically more aligned through the elementary school years. Guay, Marsh and Boivin's research (2003) into the causal ordering of academic self-concept and achievement among elementary school children supports the reciprocal-effects model in which achievement has an effect on self-concept (skill-development model) and academic self-concept likewise has an effect on achievement (self-enhancement model). Furthermore, they found that pupils' academic self-concept became more accurately aligned with their academic achievement with age.

The relationship between children's self-concept of their academic ability and their engagement and motivation in school

Research suggests that a significant relationship exists between self-concept and engagement in school. It holds that positive self-concept promotes greater engagement and motivation, while negative self-concept reduces motivation and engagement. For example, Harter's work (1981) examining children's perceived competence and intrinsic motivation suggests that children's perceived cognitive competence links strongly to their curiosity, preference for challenge and desire for independent mastery. Harter studied American children in Grades 3 to 9 and concluded that children who perceived themselves as high in competence were more intrinsically motivated at school. Likewise, Jinks and Morgan (1999) argue that pupils with a higher self-concept in a particular subject are more likely to persist and attempt different strategies, creating higher chances of success, whereas children who do not see themselves as competent are likely to apply lower levels of effort and, therefore, less likely to succeed.

Researchers have looked at subject-specific areas to investigate whether there is any association between academic self-concept and engagement and motivation in school. For example, Pavlou (2006) investigated pre-adolescents' self-concepts within art. She concludes that the more able a pupil perceived him or herself to be, the greater their enjoyment, engagement and motivation in the

subject. Pavlou also concludes that low self-concept precipitates a fear of failure, leading to lower levels of engagement. Similarly, Kalaja et al. (2009) studied the effect of self-concept on motivation in PE among Finnish seventh-graders. They found that when teachers create a learning environment in which students perceive an emphasis on self-improvement, learning, co-operation and individual effort – a task-involving motivational climate – perceived competence increased, which in turn brought about more motivation towards PE. These findings are generally in line with the theoretical tenets of self-determination and achievement goal theories.

These findings have informed changes in educational policy. For example, Lucas (1999) explains that one reason streaming – or ‘tracking’ – was almost completely abolished from US secondary schools was because it was seen to impact negatively on the self-concepts of students in lower tracks. This was believed to reduce their aspirations, motivation and engagement. However, Trautwein et al.’s research (2006) among ninth-grade maths students in Germany suggests that streamed pupils contrast themselves only with the other pupils in their streamed group. Being placed in lower achieving groups may actually enhance aspects of students’ self-concept and, consequently, motivation.

Teaching strategies for raising children’s engagement and motivation in school

The research discussed above claims that a high self-concept raises engagement. Some of this research, combined with other investigations, offers insight into how self-concept-raising strategies can be integrated into assessment for learning approaches, raising pupil engagement. Jinks and Morgan (1999) claim that pupils with a low self-concept already believe that they will struggle. Traditional methods of grading, therefore, are likely only to reinforce such suspicions rather than serving as motivators as they might with higher ability pupils. Jinks and Morgan claim that research suggests that low self-concept pupils benefit most from feedback providing concrete evidence of small incremental gains in achievement which they can readily relate to effort. For low self-concept pupils, enactive attainment – recognising that achievement has come as a result of personal performance – is the most effective information that can be provided to them to raise self-concept.

O’Mara, Marsh, Craven and Debus (2006) similarly acknowledge the importance of self-concept in raising engagement, but approach this from a subject-specific position. They conducted a meta-analysis of the impact of self-concept interventions for children and conclude that interventions

targeting self-concept within a specific subject area are much more effective than focusing on global self-concept.

Strategies promoting meta-cognition and independent learning have been suggested as a means of raising self-concept, engagement and motivation. Jambunathan (2012) was involved in a research programme for children aged three to five years from economically disadvantaged backgrounds. He found that when teachers use strategies to promote hands-on learning, curiosity, independence to solve problems and challenge the learning process, children develop a strong sense of competence in accomplishing cognitive tasks.

Research design

I conducted my research at my Placement 1b primary school in January 2013. In exploring my four project questions, I focused on the children in the Year 2 class (six and seven years of age) in which I was training, and also the children in the school's Year 6 class (10 and 11 years of age). I used a mixed methods approach incorporating a questionnaire and semi-structured interviews.

To explore the questions 'To what extent is pupils' self-concept of their academic ability reflected in their relative academic attainment?' and 'Does the reflection of pupils' self-concept in their relative academic attainment vary with age?', I invited all children from both Years to take part in a questionnaire (Appendix 1). 27 and 28 children from Year 2 and 6 respectively took part. A questionnaire allowed all children to be involved in a relatively short space of time (Munn and Drever, 2007). Furthermore, the questionnaire was delivered in a standardised format and conducted under uniform conditions, "controlling the stimulus presented to all respondents" (Munn and Drever, 2007, p.4). I based my questionnaire on an established questionnaire for gauging children's concepts about themselves and school devised by Wigfield et al. (1997). I tailored my questions around the most recent summative assessment information available, being the December 2012 Assessment Focus (AF) levels recorded by the class teachers for Assessing Pupil Progress records. The questionnaire asked participants to rate their abilities in the areas of numeracy, reading and writing. It also asked participants to rate what they thought about each subject because I thought that this could offer insight into the relationship between self-concept of ability and engagement. A 1-5 Likert-style questionnaire was used because it allowed the information returned to be expressed and analysed quantitatively (Denscombe, 2010). Facial expression icons were used to represent the 1-5 ratings to make the questionnaire more accessible, particularly to Year 2 pupils.

The questionnaire was piloted on several primary-aged children not associated with my Placement 1b school to test that the exercise could be carried out in a reasonable length of time and that the questions were clear (Bell, 2005). It is here worth considering whether, generally, children form self-concept of academic ability by comparing themselves to peers, or by forming their own internal measures of attainment which do not take into consideration the performance of others. I decided that it was, ethically, more appropriate to use questions focusing on internal measures of attainment when dealing directly with children.

The numerical scores drawn from the 1-5 questionnaire ratings in each subject were combined giving a total self-concept score out of 45 for each Year 2 and Year 6 pupil. The Year 2 children's AF levels across the three subjects ranged from 1c to 2a. These were converted into a score scale of 1 to 6. The scaled scores from each subject were combined giving a total academic attainment score out of 18 for each Year 2 pupil. The Year 6 children's AF levels across the three subjects ranged from 2c to 5b. These were converted into a score scale of 1 to 9. The Year 6 scaled scores from each subject were also combined giving a total academic attainment score out of 27 for each Year 6 pupil.

Using ANOVA software, this numerical data was subjected to statistical analysis with the help of a tutor from The Faculty of Education. First, the ranges of the Year 2 and Year 6 total academic attainment scores were weighted to convert them to equivalent scores, allowing standardised comparison between Year 2 and Year 6. The statistical analysis then provided a relative measure (in the form of a discrepancy figure) of the extent to which each pupil's self-concept of their academic ability was mismatched by their actual relative academic attainment. The more positive the discrepancy figure, the greater the extent to which the pupil's self-concept exceeded their actual relative attainment. The more negative the discrepancy figure, the greater the extent to which the pupil's self-concept fell short of their actual relative attainment. The discrepancy figures helped me to establish whether the reflection of pupils' self-concept in their relative academic attainment varied between Year 2 and Year 6. Furthermore, I was able to identify the greatest discrepancies between self-concept and relative attainment. I could then invite to interview the participants to whom these discrepancies related.

To explore the questions 'What relationships are there between children's self-concept of their academic ability and their engagement and motivation in school?' and 'Are there teaching strategies which can be adopted to raise children's engagement and motivation in school?', I invited three

pupils from each Year to interview. This triangulation approach gave me the opportunity “to see the same thing from different perspectives and thus be able to confirm or challenge the findings of one method with those of another” (Laws, 2003, p.281). Interviews provided me with the opportunity to obtain high quality data and probe for clarification on answers about which I was unsure (Drever, 2003). The interviews were semi-structured because they combined “the structure of a list of issues to be covered together with the freedom to follow up points as necessary” (Thomas, 2009, p.79).

Ethical considerations

Blaxter, Hughes and Tight (2001) encapsulate the principles of research ethics:

Ethical research involves getting the informed consent of those you are going to interview, question, observe or take materials from. It involves reaching agreements about the uses of this data, and how its analysis will be reported and disseminated. And it is about keeping to such agreements when they have been reached. (p.158)

I ensured that a number of procedures were carried out to meet these principles. First, I had my proposed research area, questions, approach and methods approved by both a member of staff at The Faculty of Education and my Placement 1b mentor (Appendix 2). This also allowed my mentor to check that my project would be practical within the classroom and school setting.

Second, since the participants were children, the extent to which they could be expected to understand or agree voluntarily to partake in my research was limited. It was, therefore, important for me to seek the approval of “those who act in guardianship” of the children (BERA (2011), pp. 6-7). This was achieved through signed confirmation from the Headteacher that the school’s existing procedures meant that parents and guardians gave permission for me to involve children in questionnaires and audio-recorded interviews (Appendix 3). This document also outlined that the information and recordings would be used only by me in my PGCE research project.

Third, I completed the ethics checklist compiled by The Faculty of Education (Appendix 4) and had it signed by my partnership tutor. In particular, this required me to have read and understood the guidelines on educational research ethics issued by the British Educational Research Association (BERA, 2011). Drawing from these guidelines, there were a number of ethical considerations which I endeavoured to uphold. To ensure that I had “voluntary informed consent” (pp.5-6) from the participants, I explained to each questionnaire group and individual interviewee the process in which they were engaged, why their participation was helpful, how the information from the

questionnaires and interviews would be used and how and to whom it would be reported. To ensure that participants knew that they had the “right to withdraw” (p.6), I explained to the children at the beginning of each interaction that they were free to withdraw from the research for any reason at any time. For example, one girl from Year 2 had been happy to participate in the questionnaire. I respected her later decision not to participate in an interview. Having the proposed research area, questions, approach and methods approved by my mentor helped to ensure that children did not experience any “detriment arising from participation in research” (p.7). Finally, the signed confirmation from the Headteacher ensured that the school was aware that I recognised “the participants’ entitlement to privacy... and must accord them their rights to confidentiality and anonymity” (p.7) by exclusion of all names from my written project.

Findings and evaluation

Questionnaire

The questionnaire helped me to explore the question ‘To what extent is children’s self-concept of their academic ability reflected in their relative academic attainment?’. For each Year, the pupils’ self-concept scores, relative attainment scores and the discrepancies between these figures were tabulated, ranked by self-concept score (Appendix 5). The discrepancy between each child’s self-concept score and relative attainment score are set out in two bar charts below (see Figures 1 and 2).

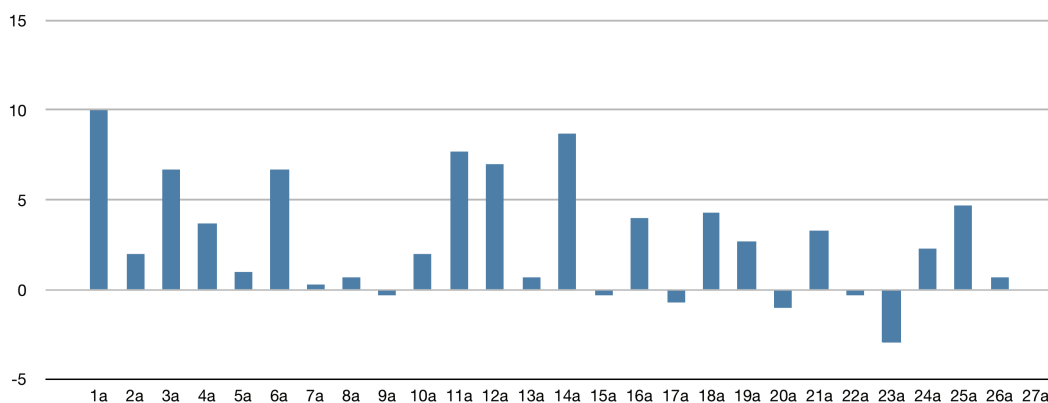


Figure 1: Bar chart showing the discrepancy between each Year 2 pupil’s self-concept of their academic ability and their relative academic attainment level.

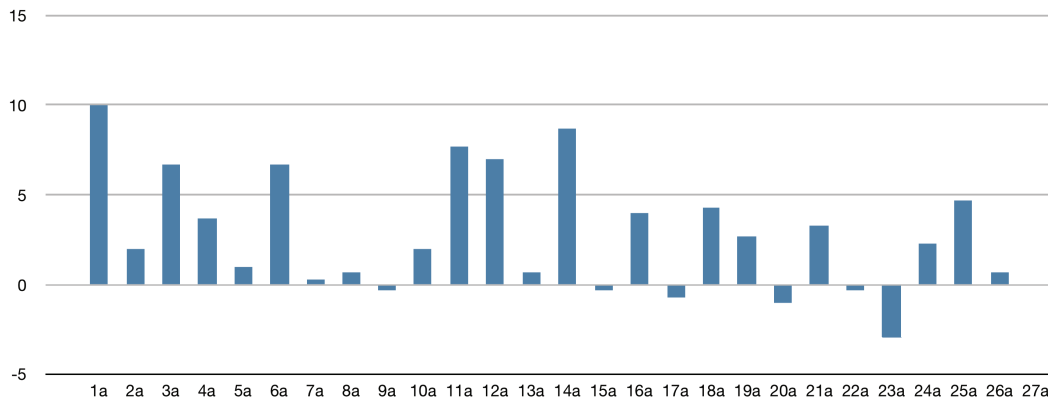


Figure 2: Bar chart showing the discrepancy between each Year 6 pupil's self-concept of their academic ability and their relative academic attainment level.

The questionnaire also helped me to explore the question 'Does the reflection of pupils' self-concept in their relative academic attainment vary with age?' With further assistance from a member of staff at the Faculty of Education, I compared the Year 2 and Year 6 discrepancies. First, the individual discrepancies were converted into standardised z scores (i.e. they were given a mean of zero and standard deviation of 1). The Year 2 pupils' standardised results presented a mean discrepancy between their self-concept scores and their relative attainment scores of 1.90, with a standard deviation of 3.33 ($M = 1.90$ $SD = 3.33$). The Year 6 pupils' standardised results presented a mean discrepancy between their self-concept scores and their relative attainment scores of 3.05, with a standard deviation of 4.31 ($M = 3.05$ $SD = 4.31$). The difference between each Year's mean standardised score is small but statistically significant ($t(53) = 1.03$, $p < 0.03$). With relation to the bar charts, this reflects the fact that the greatest Year 2 positive discrepancy between self-concept score and relative attainment score was 10.0, whereas the greatest Year 6 positive discrepancy was 12.2. Furthermore, the greatest Year 2 negative discrepancy between self-concept score and relative attainment score was -3.0, whereas the greatest Year 6 negative discrepancy was -2.6.

From this information, I concluded that most children in both Year 2 and Year 6 at my Placement 1b school have a higher self-concept of their academic ability than their actual relative academic attainment level. My results suggested that the extent to which self-concept of academic ability exceeds actual relative academic attainment was greater in Year 6 than in Year 2 at my Placement 1b school. This increase in overestimation of academic ability with increase in age contradicted the findings of both Harter (1982) and Guay, Marsh and Boivin (2003). These two pieces of research

suggest that children's concept of their academic ability resembles more accurately their actual relative academic attainment as they grow older.

It is worthwhile considering whether this finding within my Placement 1b school – i.e. that the extent to which Year 6 pupils' self-concept of their academic ability exceeds their actual relative academic attainment is greater than that of Year 2 pupils – is generalisable. In other words, is there an incremental increase in the extent to which self-concept exceeds relative academic attainment across each year group throughout all primary schools? Bassey (1999) explains that social scientists deal with statistical generalisation in which findings are extrapolated from the sample to the population. He points out, however, that "Effective sampling of large populations is difficult and expensive... in the research literature there are few educational studies that lead to statistical generalisation. So, there are unlikely to be statistical generalisations of consequence to educators" (1999, p.46). Given the small scale of my research, therefore, it is not reasonable to assert that my findings can be extrapolated from Years 2 and 6 in my Placement 1b school to all years in all primary schools.

It is also worthwhile exploring for pupils generally some of the positive and negative implications, set out by research literature, of having a higher self-concept of academic ability than actual relative academic attainment level. In discussing positive implications, Pajares and Schunk (2001) argue that, when faced with a difficult task, pupils who have high self-concept will face the challenge as something to be learned and mastered; their interest and motivation in mastering the task will drive them to succeed in their difficult, yet approachable goal. Bandura (1995) posits a self-reinforcing model, suggesting that pupils with high self-concept are more likely to set challenging goals for themselves and be more committed to the goal which, in turn, enhances self-concept. In discussing negative implications, Clark (2001) argues that a very high self-concept can sometimes lead to overconfidence. This can have a negative impact on attainment through employing the wrong strategy, making mistakes, refusal to take responsibility for mistakes or rejecting corrective feedback. Stone (1994) argues that overconfidence can also result in lower effort and attention being devoted to the task.

I noticed within the questionnaire responses that some pupils returned a considerable variance across subjects in their self-concept ratings. A pupil might rate himself or herself poorly in numeracy, for example, but highly in literacy. Crain (1996) argues that adopting a global, rather than subject-specific, focus of how age impacts on self-concept has led to an incoherent picture of

the effects of age on self-concept. He suggests that academic self-concept should be considered in terms of discrete subjects. Furthermore, he suggests that the ways in which children consider and rate self-concept may differ with age. As such, the factors which Year 2 children consider when forming self-concepts are likely to be different to those considered by Year 6 children, creating complications for comparison of self-concept across age ranges. This will be considered further in the next section: Analysis and reflection on methodology.

Semi-structured interviews

The semi-structured interviews helped me to explore the question ‘What relationships are there between children’s self-concept of their academic ability and their engagement and motivation in school?’ Transcripts of my six interviews can be found at Appendix 6. I invited three children from each year group to participate in an interview. Within each year group, I chose one child whose academic self-concept exceeded his/her relative academic ability, one child whose academic self-concept closely matched his/her relative academic ability and one child whose academic self-concept underestimated his/her relative academic ability.

The interviews provided evidence both supporting and undermining assertions from research literature on the relationships between self-concept of academic ability and engagement. Harter (1981) and Jinks and Morgan (1999) claim that higher self-concept increases children’s motivation within a subject. Pupil 19b provides support for this; he explains that he did ICT lower down the school and would try his hardest in that subject if it were taught in Year 6, saying “I was really good at it and I really like computers” (line 411). Pupil 26b’s interview offers both evidence for and against the argument that higher self-concept increases children’s motivation. 26b offers evidence for: “I start doing numeracy but sometimes I don't understand what things mean and I start losing interest” (lines 336-337). Here, it can be inferred that 26b’s frustration leads to a low self-concept which, in turn, lowers his engagement with numeracy. 26b also offers evidence against: “If I find it more difficult, I put more effort into it” (line 332), suggesting that a lower self-concept of ability may actually increase motivation. It is, of course, unclear from this short comment whether 26b was referring to difficulty with a subject in general, or difficulty in one particular area within a subject which, overall, he finds easier. Difficulty in the subject overall might lead to 26b having a low self-concept in the subject and decrease his level of engagement. Difficulty in just one particular area, however, may not affect his overall motivation for the subject.

My interviews provide further evidence contradicting the arguments of Harter (1981) and Jinks and Morgan (1999). When asked whether he thought he would put more effort into literacy if he thought he were better at it, Pupil 17a replied: “No” (line 69). Pupil 19b expressed that “I’m not so good at literacy but I still try hard” (lines 395-396). Similarly, Pupil 10b said that “Art is really fun but I’m not that good at it, but I like to put a lot of effort into it” (lines 276-277). These comments suggest that a low self-concept of ability does not necessarily correlate with low motivation. In 10b’s instance, there is evidence that a pupil’s engagement stems from an intrinsic interest in a subject, rather than their perception of their ability.

The interviews also helped me to explore the question ‘Are there teaching strategies which can be adopted to raise children’s engagement and motivation in school?’ In combination with the research literature, my interviews highlight several approaches for improving children’s engagement and motivation. Jinks and Morgan (1999) claim that research suggests that low self-concept pupils benefit most from assessment providing concrete evidence of small incremental gains in achievement which they can readily relate to their own efforts. For low self-concept pupils, enactive attainment – recognising that achievement has come as a result of personal endeavour – is the most effective information that can be provided to them to raise self-concept. Pupil 5a’s comment: “By giving all classes a little bit of hard work – only a little bit of hard work” (line 192) in response to the question “Is there anything school could change in any way to help you to really want to try harder?” provides evidence for Jinks and Morgan’s assertions. Here, children’s self-concept about their ability to be successful at a task can be raised by the teacher carefully structuring their teaching so that it operates within the child’s zone of proximal development; concepts are initially accessible to learners, before facilitating their progression to a higher level of understanding (Vygotsky, 1978). As 5a suggests, children are more engaged when this teaching framework is in place.

Pavlou (2006) suggests that low self-concept leads to a fear of failure which, in turn, leads to low levels of engagement. There is evidence of this principle in 5a’s interview; she says: “I’m quite good at reading because I always choose easy books” (line 169). 5a may be choosing ‘easy books’ because she is afraid that she would otherwise encounter texts with which she would struggle, resulting in her experiencing feelings of failure. When 17a was asked what makes him try really hard at a subject, he replied: “It’s just knowing that I won’t get much wrong and if I do get

something wrong that it won't matter” (lines 73-74). Like 5a's comment, this supports Pavlou's claim but also suggests that, where children have a low self-concept of their ability, their fear of 'failure' can be allayed and engagement fostered by creating a working environment in which 'failure' is a celebrated stepping-stone along the learning journey.

Finally, 10b noted that

I find writing really fun when you are writing your own thing, so I think it is really fun when the teachers give you an opportunity to let your imagination run riot, run wild to write a story about whatever you want to... It helps me want to make it look professional and look like a real book so I try to make it look my neatest. (lines 245-250)

This supports Jambunathan's claim (2012) that children's enthusiasm can be kindled by affording pupils a degree of autonomy and independence in how they carry out their learning activities.

In summary, the results to my questionnaire suggested that the majority of pupils in both Year 2 and Year 6 had a higher self-concept of their academic ability than their actual relative academic attainment levels. The class mean discrepancy between self-concept of academic ability and relative academic attainment was greater in Year 6. The children's comments in interviews both corroborated and undermined the claim in the literature that higher self-concept increases children's motivation. The interviews, therefore, did not enable me to establish a relationship between pupils' self-concept of their academic ability and their level of engagement and motivation in school. In conjunction with research literature, the interviews suggested that children's motivation can be increased by stretching their ability with small, individually-manageable pieces of work. Furthermore, establishing a classroom culture in which children are not fazed by 'failure' may help to increase pupil motivation. Motivation could also be raised by giving children a degree of control in deciding the nature or format of their learning activities.

Analysis and reflection on methodology

On reflection, I have been able to identify elements of my methodology that worked well. I have also identified some weaknesses in my approach and areas where my methodology could, in theory, be improved. The questionnaire enabled me to gather information from all children in both Year groups and was carried out relatively quickly. The use of facial expression icons made the questionnaire accessible to all pupils. The Likert-rating style of the questionnaire made the data

quantifiable so that quantitative comparisons could be made between Year 2 and Year 6 pupils (Hopkins, 2002).

I designed my questionnaire to help me to explore two questions, the second of which was ‘Does the reflection of pupils’ self-concept in their relative academic attainment vary with age?’ To have helped to maximise the validity of my findings in respect of this question, the research would, ideally, have been conducted longitudinally; the same set of children would have been invited to undertake the same questionnaire for each year in which they were in primary school, offering insight into how a particular sample of children’s self-concepts change year-by-year. Clearly, this was not practical within the context of my study. It is worth considering, therefore, that some degree of the variance in self-concept between the Year 2 and Year 6 classes may stem from the fact that different children participated, rather than the effect of age difference alone.

I based my questionnaire on an established questionnaire for gauging children’s concepts about themselves and school devised by Wigfield et al. (1997). This questionnaire has been tested for reliability and stability. Although my questionnaire was piloted, it had not been subjected to the same reliability and stability testing as that of Wigfield et al.’s questionnaire. The same level of reliability and stability ensuing from my questionnaire cannot, therefore, be attributed to my results as to those from a questionnaire such as Wigfield et al.’s.

My questionnaire asked children about their self-concepts in numeracy, reading and writing. The Likert-rating scores for each subject were totaled to give an overall self-concept score. I was, therefore, measuring self-concept as a unitary construct. Marsh (1993), however, argues that there is evidence for a multiple dimensions model of academic self-concept and, therefore, he argues that it is inappropriate to use an overall index of academic self-concept; considerable information relating to specific subjects would be lost in the formation of a single total score. Marsh suggests that academic self-concept should be based on a profile of scores, each compared to standards established in relation to appropriate norm groups. Were I to repeat my project, therefore, I would consider an approach in which I examined the variance in self-concept with age across specific subjects. This would, of course, be a more complex undertaking.

I designed my interviews to help me to explore the questions ‘What relationships are there between children’s self-concept of their academic ability and their engagement and motivation in school?’ and ‘Are there teaching strategies which can be adopted to raise children’s engagement and

motivation in school?' I asked a number of closed questions, such as "Do you think you could be better if you did try harder?" (line 50) and "Okay, so you try harder if you find things fun and interesting?" (line 199). A number of these questions elicited a positive response. There is a risk when asking questions like this that the interviewee will tend to agree with the idea expressed in the question. This is known as acquiescence response bias (Brace and Byford, 2010). To solve this problem, I would structure future interviews to ensure that they ask the interviewee about the same point using both positive and reverse questions strategically positioned within the interview.

Implications of my research for my own professional development

Considering how my project will help me to raise children's enthusiasm and engagement in school has helped me to clarify in my mind several approaches for my practice which I believe will promote both children's happiness and academic attainment. First, I will draw on as wide a range of activities as possible across all areas of the curriculum. In his interview, Pupil 10b offered an insight into how engagement can stem from factors other than perception of ability: "Art is really fun but I'm not that good at it, but I like to put a lot of effort into it" (lines 276-277). Here, it is worth considering exactly from where 10b's motivation stems. 10b's interest in art might lie in the artistic subject matter itself, such as an appreciation of Picasso or Pollock, or in the activities underpinning the subject such as clay modeling or potato printing. Where pupil enthusiasm in the actual subject matter is low, there is evidence that learning activities themselves can promote children's engagement. Boys' engagement with, and achievement in, writing, for example, has been shown to be dramatically increased by incorporating drama approaches and the physical, oral, visual and imaginative elements to the learning which it offers (UKLA, 2004).

Second, I will communicate with children by reference to an individualised self-concept of ability, rather than relative self-concept of ability. Children are motivated best by seeing where they themselves have started in their learning and how far they have progressed. Earlier, I discussed the idea that children's self-concept of ability may be regulated by an internal compass; children gauge their progress and current ability based on what they themselves have previously known and been able to do. Alternatively, children's self-concept of ability may be determined by their perception of others' abilities. In her interview, Pupil 5a touches on the idea of self-concept regulated by an internal compass: "By giving all classes a little bit of hard work – only a little bit of hard work" (line 192). Here, it is most effective to differentiate and structure learning activities so that

children feel that tasks are within their grasp before being supported in moving on to new levels of understanding. Children progress within their current zone of proximal development by reference to an appreciation of where their understanding has started and reached.

Third, I aim to involve children in deciding how their learning activities should unfold. In his interview, Pupil 10b shared how he is motivated by the opportunity to make decisions about the topic on which he writes: “It helps me want to make it look professional and look like a real book so I try to make it look my neatest” (lines 249-250). 10b’s point is at the heart of Jambunathan’s claim (2012) that autonomy and independence promote children’s enthusiasm as they engage in learning activities. Particularly in the Early Years, observations of child-initiated play have shown it to be an absorbing experience for children; children are in control of their own learning and set their own level of challenge, creating activities that are developmentally appropriate to themselves (Whitebread, 2000).

Finally, my use of language will play an important role in creating a supportive learning environment in which children “feel confident enough to take risks and learn from failure instead of being branded by it” (Halpin, 2003, p.111). Recent research in cognitive neuroscience and positive psychology has provided empirical evidence that well-being promotes optimum conditions for learning (Cremin and Barnes, 2006). In their interviews, Pupils 5a and 17a both allude to the idea that fear of ‘failure’ can impact on children’s motivation and approach to work in the classroom. On my placements, I have focused on using classroom vocabulary such as ‘learning opportunity’, ‘learning point’ and ‘happy accident’, rather than ‘mistake’ and ‘error’, to help to promote mindsets focused on ‘what there is to be learned’ rather than ‘what has been done wrong’.

References

- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1-45). Cambridge: Cambridge University Press.
- Bandura, A., Barbaranelli, C., Caprara, G.V. and Pastorelli, C. (1996). Multifaceted Impact of Self-Efficacy Beliefs on Academic Functioning. *Child Development*, 67(3), 1206-1222.

- Bassey, M. (1999). *Case Study Research in Educational Settings*. Buckingham: Open University Press.
- Bell, J. (2005). *Doing Your Research Project – A guide for first time researchers in education, health and social science*. Maidenhead: Open University Press.
- Blaxter, L., Hughes, C. and Tight, M. (2001). *How to Research*, 2nd ed. Buckingham: Open University Press.
- BERA (2011). *Ethical Guidelines for Educational Research*. Available at: <http://www.bera.ac.uk/files/guidelines/ethica1.pdf>
- Brace, N. and Byford, J. (2010). *Discovering Psychology*. Milton Keynes: The Open University.
- Byrne, B.M. (1996). Academic self-concept: Its structure, measurement, and relation to academic achievement. In B.A. Bracken (Ed.), *Handbook of self-concept: Developmental, social and clinical considerations* (pp.287-316). New York: Wiley.
- Calsyn, R. and Kenny, D. (1977). Self-concept of ability and perceived evaluations by others: Cause or effect of academic achievement? *Journal of Educational Psychology*, **69**, 136-145.
- Chiungjung, H. (2012). Discriminant and incremental validity of self-concept and academic self efficacy: a meta-analysis. *Educational Psychology*, **32(6)**, 777-805.
- Clark, R. E. (2001). *Learning from media: Arguments, analysis, and evidence*. Charlotte, NC: Information Age Publishing.
- Crain, R.M. (1996). The influence of age, race, and gender on child and adolescent multidimensional self-concept. In B.A. Bracken (Ed.), *Handbook of self-concept: Developmental, social and clinical considerations* (pp.395-420). New York: Wiley.
- Cremin, T. and Barnes, J. (2006) Creativity in the Curriculum. In J. Arthur and T. Cremin (Eds.), *Learning to Teach in the Primary School* (pp.357-373).
- Denscombe, M. (2010). *The good research guide for small-scale social research projects* (4th ed.). Maidenhead: Open University Press.
- Drever, E. (2003). *Using Semi-Structured Interviews in Small-Scale Research: A Teacher's Guide*. Glasgow: SCORE.

Gorman, E.

- Eccles, J.S., Midgley, C. and Adler, T. (1984). Grade-related changes in the school environment: Effects on achievement motivation. In J.G. Nicholls (Ed.) *The development of achievement motivation* (pp.283-331). Greenwich, CT: JAI.
- Eccles, J., Wigfield, A., Harold, R.D. and Blumenfeld, P. (1993). Age and gender differences in children's self- and task perceptions during elementary school. *Child Development*, **64**, 830-847.
- Guay, F., Marsh, H.W. and Boivin, M. (2003). Academic self-concept and academic achievement: Developmental perspectives on their causal ordering. *Journal of Educational Psychology*, **95**, 124-136.
- Halpin, D. (2003). *Hope and Education: The Role of the Utopian Imagination*. London: RoutledgeFalmer.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. *Developmental Psychology*, **17**, 300-312.
- Harter, S. (1982) The Perceived Competence Scale for Children. *Child Development*, **53**, 87-97.
- Helmke, A. and van Aken, M.A.G. (1995). The causal ordering of academic achievement and self-concept of ability during elementary school: A longitudinal study. *Journal of Educational Psychology*, **87**, 624-637.
- Hopkins, D. (2002). *A Teacher's Guide to Classroom Research*. Maidenhead: Open University Press.
- Jambunathan, S. (2012). Developmentally appropriate practices and children's perception of self-competence in Head Start classrooms. *Education 3-13*, **40(3)**, 271-279.
- Jinks, J. and Morgan, V. (1999). Children's perceived academic self-efficacy: an inventory scale. *The Clearing House*, **72(4)**, 224-230.
- Kalaja, S., Jaakkola, T., Watt, A., Liukkonen, J. and Ommundsen, Y. (2009). The associations between seventh grade Finnish students' motivational climate, perceived competence, self-determined motivation, and fundamental movement skills. *European Physical Education Review*, **15**, 315-333.

- Kurtz-Costes, B. E. and Schneider, W. (1994). Self-concept, attributional beliefs, and school achievement: a longitudinal analysis. *Contemporary Educational Psychology*, **19**, 199-216.
- Laws, S. with Harper C. and Marcus, R. (2003) *Research for Development*. London: Sage Publications.
- Lucas, S. R. (1999). *Tracking inequality. Stratification and mobility in American high schools*. New York: Teachers College Press.
- Marsh, H.W. (1993). The Multidimensional Structure of Academic Self-Concept: Invariance Over Gender and Age. *American Educational Research Journal*, **30(4)**, 841-860.
- Marsh, H.W., Barnes, J., Cairns, L. and Tidman, M. (1984). Self-description questionnaire: Age and sex effects in the structure and level of self-concept for pre-adolescent children. *Journal of Educational Psychology*, **76**, 940-956.
- Marsh, H.W. and Hattie, J. (1996). Theoretical perspectives on the structure of self-concept. In B.A. Bracken (Ed.), *Handbook of self-concept: Developmental, social and clinical considerations* (pp.38-90). New York: Wiley.
- Munn, P. and Drever, E. (2007). *Using Questionnaires in Small-Scale Research: A Beginner's Guide*. Glasgow: SCRE.
- O'Mara, A.J. Marsh, H.W., Craven, R.G. and Debus, R. (2006). Do self-concept interventions make a difference? A synergistic blend of construct validation and meta-analysis. *Educational Psychologist*, **41**, 181-206.
- Pajares, F. and Schunk, D. (2001). Self-beliefs and school success: Self-efficacy, self-concept, and school achievement. In R. Riding and S. Rayner (Eds.), *Perception* (pp. 239-266). London: Ablex Publishing.
- Parsons, J.E. and Ruble, D.N. (1977). The development of achievement-related expectancies. *Child Development*, **48**, 1075-1079.
- Pavlou, V. (2006). Pre-adolescents' Perceptions of Competence, Motivation and Engagement in Art Activities. *International Journal of Art & Design Education*, **25(2)**, 194–204.

Gorman, E.

Stipek, D. and MacIver, D. (1989). Developmental change in children's assessment of intellectual competence. *Child Development*, **60**, 521-538.

Stone, D. N. (1994). Overconfidence in initial self-efficacy judgments: Effects on decision processes and performance. *Organizational Behavior and Human Decision Processes*, **59**, 452-474.

Thomas, G. (2009). *How To Do Your Research Project*. London: Sage Publications.

Trautwein, U., Ludtke, O., Koller, O., Marsh, H.W. and Baumert, J. (2006). Tracking, Grading, and Student Motivation: Using Group Composition and Status to Predict Self-Concept and Interest in Ninth-Grade Mathematics. *Journal of Educational Psychology*, **98**, 4, 788–806.

UKLA (2004). *Raising Boys' Achievement in Writing*. Available at: http://www.ttrb3.org.uk/wp-content/uploads/2006/12/pri_rais_boys_ach_writ_rep.pdf.

Valentine, J.C., DuBois, D.L. and Cooper, H. (2004). The relations between self-beliefs and academic achievement: A systematic review. *Educational Psychologist*, **39**, 111-133.

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. London: Harvard University Press.

Whitebread, W. (2000). *The Psychology of Teaching and Learning in the Primary School*. London: RoutledgeFalmer.

Wigfield, A., Harold, R. Fredman-Doan, C., Eccles, J., Yoon, K.S., Arbretton, A.J.A. and Blumenfeld, P.C. (1997). Change in children's competence beliefs and subjective task values across the elementary school years: a 3-year study. *Journal of Educational Psychology*, **89**(3), 451-469.

List of Appendices

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Appendix 1: Questionnaire

NAME:

What do you think about numeracy in school?

				
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

How good do you think you are at learning new things in numeracy?

				
------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

How good do you think you are at using what you have already learned in numeracy?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

How good do you think you will be at numeracy when you grow up?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

NAME:

What do you think about reading in school?

				
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

How good do you think you are at improving in reading?

				
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

How good do you think you are at using what you have already learned in reading?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

How good do you think you will be at reading when you grow up?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

NAME:

What do you think about writing in school?

				
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

How good do you think you are at improving in writing?

				
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

How good do you think you are at using what you have already learned in writing?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

How good do you think you will be at writing when you grow up?

				
-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

Appendix 2: Research outline

Faculty of Education, University of Cambridge
Early Years and Primary PGCE Course

Researching Pupil Perspectives Project & Assignment
Proposal form

This form is intended to provide a starting point for discussions about your research with your personal tutor, your school mentor and other trainees.

Name: [redacted] Group: [redacted]

<p>Chosen Area</p> <p>➤ Title and general aims of proposed research. (Your title must include both the focus and an indication of the scope of the research. In expressing your aims, make clear your broad intentions for the research – in other words, expand upon your title so that your intentions for the research are clearly expressed).</p> <p><i>A study of primary children's academic self-concept and whether this relates to age.</i></p> <p><i>I shall establish children's perception of their competence in reading, writing, mathematics (and science?) within Year 2 and 6. I shall then gather the most up-to-date summative assessment results and compare and contrast these with the children's self-concept results.</i></p> <p>➤ Note relevant aspects of school context (What's happening in school that might prompt/connect with/hinder your research?)</p> <p><i>I am not working with Year 6 children on placement. Therefore, I will need to organise time with these pupils by speaking with the relevant form tutor.</i></p> <p><i>What are the most recent summative assessments for Year 2 and 6?</i></p>
<p>Key Academic Texts</p> <p>Note here at least 3 texts that you have consulted in order to check that there is an extant body of research related to your intended work. These should include at least one relevant journal article.</p> <p>1) <i>Self-concept theory, measurement and research into positive: The role of self-concept in educational psychology. Meert & Marsh (2006)</i></p> <p>2) <i>Age and Gender Differences in Children's Self- and Task-Perceptions during Elementary School in Child Development, 64, 830-847 (1992)</i></p> <p>3) <i>Self-Concept Development and Education Burns, R.B. (1982)</i></p>
<p>Proposed research question (s) - absolute maximum of 3</p> <p>➤ You should consider whether these can be addressed through investigation or exploration in the time-frame provided for work on the RPP in school (no more than 3 half days)</p> <p>➤ You may wish to devise a 'main' question and (perhaps) others that may be addressed in the course of the research</p> <p><i>Is there a discrepancy between academic self-concept and academic performance? Does this discrepancy (if there is one) differ with age? Does this discrepancy differ with subject?</i></p>

Faculty of Education, University of Cambridge
Early Years and Primary PGCE Course

Proposed research approach and methods

- Research approach (case study, ethnographic study, experiment etc.). Methods. Probable ages and numbers of participants. Briefly consider why the methods you intend to use are suited to your particular enquiry.
- Provide at least one methodology reference.

I shall use Likert ratings questionnaires to assess self-concept. I will aim to see between 30 and 40 children to complete the questionnaire (15-20 per year group).

I shall later conduct an open-ended interview with 6-8 children (3-4 per year group) in order to i) triangulate the Likert data and ii) begin to develop an explanation for the questionnaire findings.

This proposal has been discussed with Personal Tutor and: is approved

: needs minor amendments as discussed

: needs to be resubmitted

Signed Sue Bingham Personal Tutor

Date 3.12.12

Signed...  Class Mentor

Date 13.12.12

Please bring a completed draft copy of this form to the meeting with your personal tutor that will take place during the week beginning 26 November 2012.

You are required to discuss this work and to have this form signed by your Part 1b mentor during your school visit in December 2012.

Note that you should append a copy of the final version of this to your work, submitting it with your ethical checklist and permission letters in a separate plastic wallet attached to the assignment.

Appendix 3: Permission from Headteacher



Dear Headteacher,

I am carrying out a small-scale research project as part of my Post-Graduate Certificate of Education course. The data from this research will be used in writing an essay focusing on children's ideas about factors that have an impact on their learning. The subject that I'm investigating is 'Primary Children's Academic Self-Concept and Its Relation to Age'.

In order for me to collect information about this topic it will be necessary to interview children and make audio recordings of the interview ready for analysis. The interview recordings that I make will only be used for analysis by myself. All of the recorded material will be destroyed at the end of the 2012-13 academic year. All references to the school and to the children involved in the research will be anonymised in the essay that I will write using the data.

In order for me to be able to carry out this work I need to ask you to confirm, by signing the reply at the bottom of this letter, that the school's existing permissions are sufficient for me to carry out this work.

Thank you.

Yours sincerely,

[Redacted signature]

To

[Redacted recipient name]

I can confirm that the existing school permissions are adequate for you to carry out your research work with a group of children from the school.

Signed:

[Redacted signature]

Name:

[Redacted name]

Name of School

[Redacted school name]

Head of Faculty: Mike Younger MA Acting Secretary of the Faculty: Marina Ballard
184 Hills Road, Cambridge CB2 8PQ Telephone: 01223 767600 <http://www.educ.cam.ac.uk/>

Appendix 4: Ethical checklist

**University of Cambridge - Faculty of Education
Early Years and Primary PGCE
Ethics checklist for research during PGCE placements**

This checklist is intended for use ONLY by Faculty of Education students undertaking initial teacher education ('trainees') for classroom-based research carried during their formal professional placements as temporary members of school staff. The context of this research is that it will be undertaken with pupils in classes for which a qualified teacher has legal responsibility who acts as 'gatekeeper' and where the trainee's intended enquiry has been discussed with and approved by the responsible teacher(s) for the class(es) concerned.

Trainee name: _____

School/setting: _____

Questions to be answered by the trainee -please *clearly ring* the appropriate response.

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1) Do you understand why educational enquiry must be scrutinized from an ethical standpoint before any research commences? | (yes) no |
| 2) Have you read and do you understand the current guideline on educational research ethics issued by the British Educational Research Association ?
(available at http://www.bera.ac.uk/files/guidelines/ethica1.pdf) | (yes)no |
| 3) Can you confirm that <i>to the best of your belief</i> the research you plan to carry out will NOT be to the educational detriment to any pupils involved, and that there is no reason to expect it to cause any harm to any participant –including damaging any pupil's confidence, motivation, interest or self belief in school? | (yes)no |
| 4) Can you confirm that you will have sought any necessary permissions - for example to record lessons, or to work with pupils outside of timetabled lessons- in line with the school's policies and procedures? This might include seeking permission from parents, with guidance from school staff. | (yes)no |
| 5) Can you confirm that you have discussed your research plan with your mentor and other staff responsible for any specific class(es), and that they have approved your plan? | (yes)no |
| 6) Can you confirm that any substantial change to your research design subsequent to completing this form, will be discussed for approval with your mentor (and other school staff if necessary) and shared by email with your partnership tutor? | (yes)no |

Trainee signature and date: _____

Partnership Tutor name: Helena Staples

- I have checked that the trainee has responded 'yes' to all questions above.
- I have discussed issues arising from the trainee not responding 'yes' to one or more of the questions above, and am convinced that this project is ethical (as explained in notes overleaf)

Partnership Tutor signature and date:

Hotarbs (31/1/13)

Note that you should append a copy of the final version of this to your work, submitting it with your research proposal form and permission letters in a separate plastic wallet attached to the assignment.

Appendix 5: Results from questionnaire expressed quantitatively

Table showing Year 2 pupils' total self-concept scores, total academic attainment scores and the discrepancy between each total self-concept score and total academic attainment score.

Year 2 Pupil	Total self-concept score	Total academic attainment score	Discrepancy
1a	45	5	10.0
2a	45	13	2.0
3a	44	8	6.7
4a	42	11	3.7
5a	42	13	1.0
6a	41	8	6.7
7a	40	12	0.3
8a	40	13	0.7
9a	39	13	-0.3
10a	39	13	2.0
11a	39	5	7.7
12a	38	7	7.0
13a	37	9	0.7
14a	36	3	8.7
15a	35	10	-0.3
16a	34	8	4.0
17a	34	15	-0.7
18a	33	4	4.3
19a	33	9	2.7
20a	32	12	-1.0
21a	30	7	3.3
22a	29	14	-0.3
23a	27	12	-3.0
24a	26	9	2.3
25a	26	8	4.7
26a	23	7	0.7
27a	21	9	0.0

Table showing Year 6 pupils' total self-concept scores, total academic attainment scores and the discrepancy between each total self-concept score and total academic attainment score.

Year 6 pupil	Total self-concept score	Total academic attainment score	Discrepancy
1b	42	14	8.4
2b	42	18	4.4
3b	42	20	2.4
4b	42	25	-2.6
5b	41	23	-1.1
6b	41	13	8.9
7b	41	16	5.9
8b	40	20	1.3
9b	40	19	2.3
10b	40	23	-1.7
11b	39	15	5.8
12b	39	14	6.8
13b	38	16	4.3
14b	37	10	9.7
15b	36	10	9.2
16b	36	7	12.2
17b	36	21	-1.8
18b	36	21	-1.8
19b	35	19	-0.3
20b	35	11	7.7
21b	34	16	2.1
22b	34	15	3.1
23b	34	17	1.1
24b	32	15	2.1
25b	31	16	0.5
26b	30	4	12.0
27b	30	9	7.0
28b	25	10	3.3

Appendix 6: Interviews

Interview with Year 2 Pupil 17a (Pupil 17a's self-concept fell short of their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

I think that's true.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

True.

What do you think about the following statement: 'A person can learn new things but they can't really change their basic intelligence'?

I think that's true.

If you come across a difficult question or problem in maths or writing or literacy what would you do?

It would be in literacy because I'm bad at literacy. I would just try to do it and if I couldn't I would ask for help.

Why did you give yourself these particular results in numeracy?

Because I'm really good at numeracy.

Why do you think you're really good at numeracy?

I don't know why I'm really good at numeracy – I just am.

Why do you think you gave yourself those marks for reading?

I gave myself the first result because I like reading at school but I don't think it's brilliant. I gave myself the second result because I think I can keep my best standard but I don't think I can improve it.

Why do you think you gave yourself these results for writing?

I don't much like writing in that I don't much like writing down things and also it is quite hard and I can't improve.

Would you say you tried your hardest at all subjects in school?

No.

So do you think you could be better if you did try harder?

Yes.

Which subject in particular do you think you could try harder in?

Literacy.

What would help you to try harder in literacy?

It would help me to be on my own when I'm doing it.

Why is that?

It would be easier to work because my table is quite a talkative table.

Do you think you would put more effort into literacy if you thought you were better at it?

No.

What is it that makes you try really hard at a subject?

It's just knowing that I won't get much wrong and if I do get something wrong that it won't matter.

Interview with Year 2 Pupil 1a (Pupil 1a's self-concept exceeded their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

No, I don't agree with that.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

Yes, I agree with that.

What do you think about the following statement: 'A person can learn new things but they can't really change their basic intelligence'?

No, I don't agree with that.

Why would you say you gave yourself those results for numeracy?

Because I think that numeracy is easy. I think it is easy because I just do it straight away. I just do it really quickly and give it to the teacher.

Why did you give yourself those results for reading?

Because reading is easy because I read things straight away and I get a house points every time I do.

Why did you give yourself those results for writing?

Writing is easy. I am quite quick at writing.

Would you say you tried your hardest in writing, reading or numeracy?

Writing.

Do you think you could try harder in any of the subjects?

I think I could try harder in all of the subjects.

Do you think you would be better at them if you tried harder?

Yes.

Which subject do you think you could put more effort into most?

I could try harder in spellings.

What would help you to put more effort into subjects at school?

I don't know.

Is there anything which would help you to try harder?

Nothing. I can do it by myself.

Do you think you would try as hard at subjects if you weren't as good at them?

I don't find any of the subjects difficult.

Can you think of a time when you were stuck with some work? What did you do for help?

I didn't have any help. I never get help. That's why I don't want to be on the circles table anymore. The teacher says you're not doing it right when I am. That's why I want to move on to the triangles table.

Interview with Year 2 Pupil 5a (Pupil 5a's self-concept matched their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

Yes, I agree.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

I agree.

If you came across a difficult question or problem in class and the answer or solution wasn't easy to find, what would you do?

I would give it a go.

If you continued to find it difficult what would you do?

I would ask the teacher for something much more easier.

Why did you give yourself these scores in numeracy?

Because numeracy is quite hard because there are quite hard sums to do.

Why did you give yourself those scores in reading?

Because I'm quite good at reading because I always choose easy books.

Why did you give yourself those scores in writing?

Because I don't like writing and when I am writing I do quite a lot of writing and my hand starts to ache.

Would you say you try as hard as you could at all subjects in school?

Yes, I do.

If you weren't as good at subjects as you are, do you think you would try as hard?

Yes, I would always try as hard as I could.

Is there anything that would help you to try even harder in subjects?

By thinking more.

Is there anything school could change in any way to help you to really want to try harder?

By giving all classes a little bit of hard work – only a little bit of hard work.

Is there one subject you would say you try especially hard and are why do you try especially hard?

In art, because it's really fun.

Okay, so you try harder if you find things fun and interesting?

Yes.

Interview with Year 6 Pupil 10b (Pupil 10b's self-concept fell short of their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

Well, they probably feel a bit upset about not being able to do anything about it but they could always work harder or do extra homework or something like that to do something about it, and they could try their very hardest to do well.

Do you agree with that statement?

No, I think you can do quite a lot of things to change it.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

Again, like the first one, it probably is possible to do things to change it.

What do you think about the following statement: 'A person can learn new things but they can't really change their basic intelligence'?

As I said before, you can learn more things but sometimes you can learn a method and if you're really happy with it and you're really stuck with it then when you try to learn a new method to do the same thing, say addition, it can be quite hard to get that one fixed into your brain as well.

If in numeracy, reading or writing you were doing a problem or question and really finding it difficult and the answer wasn't obvious, what would you do?

I would probably ask the person next to me or if they didn't know and they were stuck on the question, I would put my hand up and ask the teacher because they're here to help you learn things.

Is there a particular subject you would say you tried your hardest in?

I try hard in literacy because my mum is really keen for me to get good English marks and things and so I try really hard to include things like adjectives and adverbs in my work.

If there are other subjects that you try not quite as hard in, what would help you to put more effort into, and be more interested in, those subjects?

One subject I don't really like and don't really try hard in is writing, but I find writing really fun when you are writing your own thing, so I think it is really fun when the teachers give you an opportunity to let your imagination run riot, run wild to write a story about whatever you want to. I really like that because I really like story writing. It helps me want to make it look professional and look like a real book so I try to make it look my neatest.

What part of writing do you not like?

I don't like handwriting. It's not much fun. I don't like spelling because it's not that interesting.

When a subject is more interesting, do you find it easier to put more effort into it?

Yes, I do with something like handwriting.

What would help you to put more effort into it?

Well, similar to story writing – if I had an interesting word to put into an interesting sentence, that would be more fun than just putting the normal word into a normal sentence.

If you think about all the subjects you do at school, do you put more effort into each if you think you are better at it?

Yes, sometimes.

If you are not as good at a subject, do you think you need to put more effort into it?

Sometimes I think that, but it kind of depends on which subject it is. Art is really fun but I'm not that good at it but I like to put a lot of effort into it.

Interview with Year 6 Pupil 26b (Pupil 26b's self-concept exceeded their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

Yeah.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

Yes that's true. Well you can, but you can't.

What do you think about the following statement: 'A person can learn new things but they can't really change their basic intelligence'?

You can get smarter but you can get dumber.

If in class you were having difficulty with a piece of writing or with something in numeracy, what would you do?

I would ask a teacher to help me.

Is there a subject that you would say you tried your hardest in?

Maths.

Why is that?

Because I want to get a good job when I am older and I want to get smarter.

Are there any subjects you would say you don't put your full effort into?

No.

What do you think would help you to put even more effort into certain subjects?

Literacy.

Okay. What could be done in literacy to help you put more effort into it?

I don't know.

Do you think you would put more effort into a subject if you thought that you were better at it?

Yeah.

So, you put more effort into subjects that you think you are better at?

Yeah.

Do you try harder if you find a subject more difficult?

If I find it more difficult I put more effort into it.

Why did you give yourself those three scores for numeracy?

I start doing numeracy but sometimes I don't understand what things mean and I start losing interest.

Why did you give yourself these scores for reading?

Because I read more than I used to.

Do you enjoy reading?

Yeah.

Do you read at home?

Sometimes.

Do you think you enjoy it more because you have got better at it?

Yes.

Why do you think you gave yourself those scores for writing?

Gorman, E.

Because sometimes I write and then when I am writing my writing goes big and then it goes downwards and then goes upwards and when I'm writing suddenly my hand goes like that and then my writing gets bigger and smaller and then bigger again.

Interview with Year 6 Pupil 19b (Pupil 19b's self-concept matched their actual relative attainment)

What do you think about the following statement: 'People have a certain amount of intelligence and they can't really do much to change it'?

You can change it a bit.

What do you think about the following statement: 'A person's intelligence is something about them that they can't change very much'?

You can change it, but not in huge ways.

What do you think about the following statement: 'A person can learn new things but they can't really change their basic intelligence'?

Yeah.

If, in any of the subjects you do, you came across a difficulty, what would you do?

I'd either ask the teacher or ask somebody who I was sitting next to to try and work it out, or try and work it out myself.

In reading, writing and numeracy, would you say you tried your hardest?

Yeah.

Are there any subjects you don't put full effort into?

No, not really.

Do you think that you put a lot of effort into subjects because you enjoy them or because you are good at them?

I try really hard at maths because I like it. I'm not so good at literacy but I still try hard.

So, regardless of whether or not you think you're good or bad in a subject you try your hardest?

Yes.

Is there one particular subject you try harder in more than the others?

We don't do ICT in school, but I would try really hard at that. We used to do it, but we don't do it in year six anymore, so I'd really try hard at that. Lower down the school, I tried really hard.

Why did you try really hard at that lower down school in particular?

I was really good at it and I really like computers.