

Closing the Gap:

What role can attribution retraining interventions and implicit theories of intelligence play?

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Overarching abstract

This thesis consists of three chapters: a systematic review, a bridging document and a piece of empirical research.

Chapter one consists of a quantitative investigation into the effectiveness of attribution retraining programmes on school-aged children's achievements. The findings of this systematic review suggest that attribution retraining programmes have variable degrees of success. The most successful attribution retraining programmes are those that focus their attention to a given "gap" rather than those that aim to raise achievement generally. While the findings are positive, the lack of longer-term research designs is a cause for concern.

Chapter two consists of a bridging document, intending to guide the reader from the systematic review of the literature to my empirical research. The bridging document outlines my personal interest in the research area, the development of my research focus, my epistemological and ontological perspectives, as well as my thoughts on the methodological choices I made along the way. In addition, it considers the ethical implications of my research and reflections upon the ways in which the research area can be interpreted.

The third and final chapter consists of my empirical research study. This research study aimed to explore the mindsets (Dweck, 2006; Hong, Chiu, Dweck, Lin, & Wan, 1999) of parents whose children access their two year old Early Education Entitlement in Children's Centres (the Two Year Offer). The research study adopted a two-phase mixed methods design. The first phase noted that far more parents than would be expected reported having incremental theories of intelligence (growth mindsets). The second stage involved carrying out semi-structured interviews with seven parents, which were then analysed using latent theory-driven Thematic Analysis. Six themes were created and were discussed in the light of implications for Educational Psychologists' (EP) practice.

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Chapter 1: Can attribution retraining interventions contribute towards reducing achievement gaps?

1.0 Abstract

The level of education that children in the UK achieve is correlated to a range of factors, including socio-economic background, gender and ethnicity (Clifton & Cook, 2012; DfES, 2007; Strand, 2014, 2015; Tackey, Barnes, & Khambhaita, 2011). Despite efforts by successive governments to reduce these achievement gaps, they remain year on year. This systematic review explores whether attribution retraining programmes can improve the attainment of students in schools and contribute towards reducing achievement gaps.

Following Petticrew and Roberts' (2008) steps, this paper reviews six papers that examine the impact of attribution retraining interventions on students' achievement. The results indicate that programmes that focus their attention to a given "gap" (such as gender, socio-economic status and ethnicity) have a greater impact than those that aim to raise achievement generally. The results do not indicate that one particular method of intervention, or one particular set of attributions, is consistently more desirable.

1.1 Introduction

1.1.1 Achievement gaps

The extent to which children and young people achieve in school is strongly related to a range of factors, including socio-economic status (SES), gender and ethnicity (Clifton & Cook, 2012; DfES, 2007; Strand, 2014, 2015; Tackey et al., 2011). The difference in attainment between different groups of children and young people is frequently referred to as the 'achievement gap'. How well a young person does in school is one factor that determines outcomes in later life; therefore, narrowing the achievement gap is one way in which to contribute to raising the levels of social mobility and improving outcomes (Clifton & Cook, 2012).

In the UK, socio-economic status (SES) is a key determinant of school achievement, with children from more deprived backgrounds achieving less well than their more well-off peers. This correlation is evident by the time children start school; children from lower SES backgrounds perform less well in measures of communication skills, language development, literacy and mathematics than children from more privileged backgrounds (Burger, 2010; Ofsted, 2014; Ramey & Ramey, 2004). The gap continues to widen throughout children's school careers (Sammons, Toth & Sylva, 2015). By the time young people leave school, those from less privileged backgrounds are far less likely to achieve GCSEs than those from more privileged backgrounds; in 2010, 34% of pupils eligible for Free School Meals achieved five good GCSEs (grades A* - C including English or Maths) compared to 62% of pupils from more privileged backgrounds (Clifton & Cook, 2012).

The picture of achievement in relation to ethnicity is complex and multifaceted. In the UK, Chinese and Indian pupils significantly outperform white pupils, being twice as likely to achieve five GCSEs (including English and Maths) grades A* - C. Historically, black African and black Caribbean pupils have performed at a lower level than their white counterparts. However, the GCSE results from 2013 demonstrate that black African pupils outperformed their white counterparts for the first time. The achievement gap between black Caribbean, mixed white and black Caribbean and Pakistani pupils has

narrowed, but remains (Strand, 2015). At age 16, almost all low SES ethnic minority groups now outperform white British students (the exception being Black Caribbean boys who do not differ from white British boys (Strand, 2014, 2015). Achievement gaps related to ethnicity continue, and sometimes widen in higher education (Richardson, 2015). The patterns highlight the role that cultural expectations, parental and personal educational aspirations and self-concept play in academic achievement (Strand, 2010, 2014) as well as in-school factors such as expectations of teachers (Tackey et al., 2011).

Internationally, girls outperform boys academically, yet continue to be underrepresented in the political and economic spheres (Stoet & Geary, 2015), as well as in certain job markets. This pattern can be seen in the UK; girls outperform boys throughout their compulsory school years, culminating in a 10 percentage point advantage in favour of girls in achieving five GCSEs grades A* - C (DfES, 2007). However, they are less likely to carry this success on to study Sciences, Technology, Engineering and Maths (STEM subjects) in higher education and beyond (DfES, 2007; Ziegler & Stoeger, 2004). This may, in part, be because girls are less likely to be encouraged by others to pursue such subjects (Mujtaba & Reiss, 2013), which may contribute to a belief that they are less able or suited to STEM subjects than their male peers. This pattern of subject choice is reflected in STEM career pathways, in which women are significantly underrepresented (Riegle-Crumb & King, 2010).

With the stated aim of reducing achievement gaps and creating a more equitable education system in order to promote equality of opportunity and social mobility, successive governments have implemented a range of policies at all stages of education. For pre-school children this has included the introduction of Sure Start centres and the expansion of free early education provision for two year olds from more deprived backgrounds, and for all three year olds. For school aged children, this includes the coalition government's introduction of a 'pupil premium' in 2011 for children eligible for free school meals, the conversion into academies of schools identified as failing (Clifton & Cook, 2012), and the introduction of free schools. While the impact and motive of some of these policies may be questioned, there is a growing body of evidence that a

number of factors can reduce the achievement gap. These include children having access to high quality pre-school education over an extended period of time (Sammons et al., 2004), children attending good or outstanding primary and secondary schools, access to targeted and ongoing interventions (Sammons et al., 2015), access to extra-curricular activities and encouraging children to read for pleasure (Clifton & Cook, 2012)

More recent research has considered the social psychological processes that contribute towards achievement gaps, by recognising the interplay between thoughts, feelings, learning and achievement (Spitzer & Aronson, 2015). Spitzer and Aronson (2015) argue that academic success is partly dependent on fluid aspects of context, noting that a range of interventions which focus on managing threats to identity have had impressive results. One such type of intervention that addresses the social psychological processes of learning has arisen out of attribution theory.

1.1.2 Attribution theory

Attribution theory explores people's lay theories about why events happen (Försterling, 2013). It has its origins in the work of Heider (1958), who suggested that people attribute behaviours and experiences to either internal factors (those residing within the person) or external factors (those residing within the environment). Attribution theorists built upon Heider's (1958) work to explore the processes by which humans attempt to understand the world around them, and the patterns of attributions people make about every day occurrences, life-changing events or learning experiences. As attribution theory rests on a stimulus – cognition – response model, the attributions made are seen to mediate how we feel about, react to or appraise a given situation.

1.1.3 Attribution retraining

It is proposed that people develop patterns of thinking which influence their behaviour in similar events. These patterns of thinking can be seen as attribution styles, considered either adaptive or maladaptive, and can have a lifelong effect on students' learning (Chodkiewicz & Boyle, 2014). Therefore, attribution retraining methods have been

developed as a means to improve academic performance by encouraging adaptive attribution beliefs (Försterling, 1985).

Attribution retraining research has predominantly been rooted in the work of Bandura’s model of Self Efficacy (Bandura, 1977, 1982), Seligman’s (1975) model of Learned Helplessness and Weiner’s (1979) attributional model of achievement motivation. Below is a brief comparison of the three original models upon which most attribution retraining research was based:

Table 1.1 - Desirable and undesirable attributions for success and failure

Desirable attributions		
	Success	Failure
Bandura’s model of Self Efficacy	High ability	Lack of effort, bad luck
Seligman’s model of Learned Helplessness	Controllable causes such as high effort (internal, global and stable causes such as high ability)	Controllable causes such as lack of effort (external, variable and specific causes such as chance).
Weiner’s attributional model of achievement motivation	High ability; effort	Bad luck; lack of effort
Undesirable attributions		
	Success	Failure
Bandura’s model of Self Efficacy	High effort, luck and external aids	Lack of ability
Seligman’s model of Learned Helplessness	Uncontrollable causes such as luck or task ease (external, specific and variable causes such as luck)	Uncontrollable causes such as chance or task difficulty (internal, global and stable causes such as low ability)
Weiner’s attributional model of achievement motivation	Luck	Lack of ability, task difficulty (stable, uncontrollable causes)

Adapted from Försterling (1985).

Most attribution retraining research has focused on changing attributions based on the above theoretical models. However, some attribution retraining interventions have departed from the above frameworks by, for example, encouraging participants to

attribute their failures to a natural and expected dip in performance which is also experienced by most other people in their given situation, or to the application of ineffective strategies (Försterling, 1985).

Developing attribution theory further, Dweck and colleagues (Dweck, 2000; Dweck & Leggett, 1988; Hong et al., 1999) proposed that individuals' lay theories of intelligence could be defined as either entity (fixed) or incremental (growth). Those who view intelligence as fixed are less likely to put additional effort into tasks they find challenging, and therefore, are less likely to achieve. Those who view their intelligence as incremental will not see challenge as a threat to their ability, but will instead be motivated to apply more effort. Based on this concept, Dweck (2006) coined the term 'growth mindsets' to represent the idea that individuals can learn to change their implicit theories of intelligence and, consequently, apply efforts and strategies that will result in higher achievement.

1.1.4 The current review

Successive governments have implemented a range of strategies that may have improved academic results overall, but have not yet closed the achievement gaps. Therefore, attention has once again turned to the social psychological processes involved in learning and achievement (Spitzer & Aronson, 2015). Attribution retraining is one of a range of interventions designed to improve academic achievement by focusing on more fluid factors that influence learning and achievement (Chodkiewicz & Boyle, 2014; Spitzer & Aronson, 2015).

A literature review by Robertson (2000) found that most of the attribution retraining interventions reviewed had a positive impact on the achievement of children and young people with identified learning difficulties. No more recent reviews of attribution retraining programmes carried out in school have been identified. Chodkiewicz and Boyle (2014) suggest that, despite evidence that attribution retraining can have a positive impact on learning and achievement, there is little evidence that schools are

implementing retraining interventions. Furthermore, no specific resources in the UK are dedicated to supporting schools to carry out such interventions.

With these considerations in mind, this systematic literature review aims to explore the impact of interventions designed to alter attributions and academic achievement of school aged children. The central question to be explored is **“Can attribution retraining interventions contribute towards reducing achievement gaps?”** In the context of this research, achievement gaps include gaps correlated with socio-economic background, ethnicity, gender and self-esteem.

1.2 Method

Systematic reviews are a means by which to make sense of large bodies of information, and to contribute to an understanding of what works and what does not (Petticrew & Roberts, 2008). In order to support researchers fulfil this aim, Pettigrew and Roberts (2008) outlined seven phases which are utilised in the present systematic review:

1. Clearly define the research question that the review is setting out to answer.
2. Determine the types of studies that need to be located in order to answer the question.
3. Carry out a comprehensive literature search to locate those studies.
4. Screen the results of that search using inclusion and exclusion criteria.
5. Describe and critically appraise the included studies.
6. Synthesize the findings of the studies.
7. Disseminate the findings of the review.

1.2.1 Clearly define the research question

As outlined above, the key research question for this systematic review is “Can attribution retraining interventions contribute towards reducing achievement gaps?” In light of the complexity of factors that contribute towards achievement gaps (outlined in the introduction), three more research questions are considered within this overarching research question:

- Which students are more likely to benefit from attribution retraining interventions and why?
- What key attributions have researchers attempted to adjust and what is the effect of these different approaches?
- What are the key features of attribution retraining programmes used in the current literature?

1.2.2 Determine the types of studies needed

An initial exploration of the literature highlighted a strong bias towards quantitative research. It was therefore concluded that experimental quantitative studies were the most appropriate type of study to be included in the review. In addition, it was determined that the studies should have the aim of modifying attributions, rather than simply measuring changes to attribution styles as an outcome. Furthermore, it was deemed that the studies would require a measure of student achievement because the systematic review is considering attribution retraining in relation to closing achievement gaps.

1.2.3 Literature search

I used the following databases: Scopus, Web of Knowledge, Psychinfo via Ovid, ERIC (ProQuest) and British Education Index between November 20th, 2014 and February 17th 2015. In addition, Google Scholar and citation searches were carried out to sift for any additional relevant research. To identify the most current relevant research, and so as not to overlap with Robertson's (2000) systematic review, searches were limited to research dated from 2000 – 2015.

As Dweck (2006) is one of the forerunners of current attribution retraining research, the search terms reflected this by including words linked specifically to Dweck's work ('growth mindset' and 'incremental theory'). The final search terms were selected through background reading and an initial scoping process. The following terms were used in the search:

Table 1.2 - Search terms

Target population terms	School* OR preschool* OR nurser*
Intervention terms	attribut* OR growth+mindset OR incremental+theory
	interven* OR retrain* OR train*

1.2.4 Screen the results of that search using inclusion and exclusion criteria

The initial search results were then screened. Initial screening involved using titles and abstracts to identify possible relevant articles. Once relevant articles were identified, the search was further refined by applying the following inclusion criteria:

Table 1.3 - Inclusion criteria

Participants	Up to 18 years of age
Setting	Educational settings
Design	Intervention design with quantitative or mixed methods
Measures	Included measures of achievement and measures of attributions
Language	English Language articles only

After applying the inclusion criteria, it was not necessary to apply any additional exclusion criteria. The search resulted in six articles being identified as suitable for inclusion in the systematic review.

1.2.5a Describe and critically appraise the included studies

Once the studies to be included were identified they were then coded utilising the following relevant descriptors: Participants (including number and age); Setting (country, educational setting); Intervention type; Design; Measures used; Results and Effect Size. Where available, effect sizes have been provided using Cohen's *d* (1988), where 0.2 can be considered a small effect size, 0.5 a medium effect size and 0.8 a large effect size. Some of the research papers did not provide effect sizes and therefore, where it was possible to do so, Cohen's *d* was calculated.

Table 1.4 - Description of studies

Study	Participants		Setting and country	Intervention	Design	Measures	Results	Effect size
	N	Age						
Blackwell, Trzesniewski, and Dweck (2007)	91	12 – 13 years old	Advisory classes in a city secondary school New York, USA	8 x 25 minute sessions, once a week. 12 – 14 students in each class	Control and experimental group. School randomly assigned. No follow-up study	Achievement: Baseline 6 th grade maths grades, 7 th grade autumn and spring term maths grades	Intervention halted the decline in maths grades for intervention group.	n.p*
	48 in experimental group 43 in control group					Attribution data: Implicit Theories of Intelligence scale (Dweck, 1999)	A change to the intervention group's theory of intelligence, endorsing an incremental theory more strongly in comparison to the control group	0.47

Study	Participants		Setting and country	Intervention	Design	Measures	Results	Effect size
	N	Age						
Chan and Moore (2006)	Cohort 1:		12 primary and 4 high schools New South Wales, Australia	12 – 15 weekly strategy lessons delivered in either 2 nd or 3 rd year of project. Aimed to promote strategic learning by combining the teaching of cognitive and metacognitive strategies with attempts to change students' attributional beliefs.	Longitudinal cohort followed for three years Experimental and control groups	Achievement measures End of year Maths, English and Science (high school only) results	Cohort 1 English Maths	0.08 0.24
	184	10 – 11 years old						
	88 in intervention group							
	96 in control group							
Cohort 2:						Cohort 2 English Maths Science	0.74 0.64 0.43	
478	12 – 13 years olds							
166 in intervention group								
312 in control group								
						Attribution data Causal Attributions (General) Scale (Chan, 1994)	The intervention contributed towards enhanced beliefs in personal control over success and greater strategic knowledge. These attributes were more likely to lead to higher achievement.	n.p*

Study	Participants		Setting	Intervention	Design	Measures	Results	Effect size
	N	Age						
Donohoe, Topping, and Hannah (2012)	33 18 in intervention group 15 in control group	13-14 years old	Middle set English Classes A large comprehensive city school in Scotland	Brainology – a computer program consisting of four units and an introduction. Pupils completed the units in their English lessons and additional worksheets as homework.	Mixed methods, quasi-experimental design (participants not randomly selected or assigned) with intervention and comparison groups Longitudinal – follow up after 3 months.	Achievement Exam results at end of year 9	No significant difference between the academic performance of the intervention and comparison group.	n.p*
						Attribution data Dweck's (2000) Theories of Intelligence Scale for children	Post-test Follow up after 3 months	1.20 (power analysis 0.96) 0.31 (power analysis 0.22)
						Resilience Prince-Embury's (2006) Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths (including mastery)	No significant changes to resiliency or mastery scores from pre-, post or follow up for either intervention or control group.	n.p*

Study	Participants		Setting	Intervention	Design	Measures	Results	Effect size
	N	Age						
Good, Aronson, and Inzlicht (2003)	138	12 – 13 years	Junior High School in rural Texas. (US) 7 th Grade ICT class	2 x 90 minute session with mentor and weekly e-mail contact to support students to design a webpage with the key message of their assigned control condition.	Experimental design - four conditions - incremental, attribution, combination or anti-drug Randomly assigned.	Texas Assessment of Academic Skills (TAAS) (a state-wide standardized assessment test)	Girls' maths scores	
							Incremental	1.13
							Attribution	1.50
							Combined	1.30
							Boys' maths scores	
							Incremental	0.64
Attribution	n.p*							
Combined	n.p*							
							Reading scores	
							Incremental	0.52
							Attribution	0.71
							Combined	0.28

Study	Participants		Setting	Intervention	Design	Measures of learning	Results	Effect size
	N	Age						
Toland and Boyle (2008)	29	10-11 year olds	Four large primary schools in Scotland.	12 x 30 minute sessions using CBT methods to change children's attributions. Children seen in groups of 5 every fortnight over a 6 month period. Teaching points, demonstration, discussion and practice, homework tasks	No control group. Teachers identified suitable participants. 21 children with learning difficulties and poor self-esteem (LD) 6 children with no learning difficulties and poor self-esteem (SE) 2 children with specific learning difficulties in spelling and poor self-esteem (SLD)	British Ability Scale (Elliot, 1996) Single Word Reading subtest and Single Word Spelling subtest.	LD reading age improved by an average of 9 months over a 6 month period.	0.22
		11 – 12 year olds					LD spelling age improved by an average of 6 months over a 6 month period.	.12
		SE (n = 6) and SLD (n = 2) group – no statistical analysis performed as groups were so small.					n/a	
					Short term follow up			

Study	Participants		Setting	Intervention	Design	Measures	Results	Effect size
	N	Age						
Ziegler and Stoeger (2004)	379	15 years old (9 th Grade)	Preparatory High Schools in Bavaria, Germany.	At the end of 8 th grade, treatment group (highest achieving 20% of pupils in maths and science) shown a 10.35 minute long video derived from modelling technique during a regular classroom period.	Experimental design 11 treatment and 6 control classes Pre-test; post-test and follow-up.	Achievement Mid-year and final report grades	Girls: Mid-year Final grade Boys: Mid-year Final grade	0.37 0.45 -0.39 0.02
						Attributions The Multidimensional Domain-specific Attributional Questionnaire for Children and Adolescents Schneewind and Pausch (1990) Questionnaire to Assess Competence and Control Convictions (FKK; Krampen, 1991)].	Attributional style could only be improved among girls in treatment group. Girls in treatment group more likely to attribute success to motivationally desirable internal-variable causes, such as effort, and less so to external-stable causes such as ease of task. Girls in treatment group attributed failure in a less stable manner (both internal and external). No significant differences amongst girls in control group or boys in either control or treatment group. Over the course of the semester the internal control convictions increased amongst girls and boys in the treatment group and boys in the control group. Self-concept in chemistry increased amongst girls and boys in the treatment group and boys in the control group.	n.p*

* n.p = not possible to calculate effect sizes.

1.2.5b Critically appraise the research

Having summarized the articles, their relevance and quality in relation to the research question was considered. Gough (2007) notes that the issue of quality of a piece of research cannot be judged by a set of generic criteria but needs to be taken in context of the relevance of that piece of research to answering a particular conceptual or empirical question. While the process of making judgements on quality and relevance necessarily requires a degree of subjectivity, the use of a framework provides a transparency and clarity to the process (Gough, 2007).

Therefore, the research articles were analysed using the Evidence for Policy and Practice Information (EPPI) Centre Weight of Evidence tool (Eppi-Centre, 2001), which suggests researchers assess research in four key areas:

- A = The trustworthiness of the results judged by the quality of the study within the accepted norms for undertaking the particular type of research design used in the study (methodological quality).
- B = The appropriateness of the use of that study design for addressing the systematic review's research question (methodological relevance).
- C = The appropriateness of focus of the research for answering the review question (topic relevance).
- D = Judgement of overall weight of evidence (WoE) based on the assessments made for each of the criteria A-C.

Table 1.5 - EPPI Weight of Evidence judgements

Study	A Soundness of the study in terms of research question	B Appropriate design and analysis for review question	C Relevance of focus to review question	D Overall weight in relation to review question
Blackwell et al. (2007)	High	High	High	High
Good et al. (2003)	High	High	High	High
Ziegler and Stoeger (2004)	High	High	High	High
Donohoe et al. (2012)	Medium	Medium	Low/Medium	Medium
Toland and Boyle (2008)	Low	Low/Medium	High	Medium
Chan and Moore (2006)	Medium	Medium	Low/medium	Low/Medium

In considering the ratings for Weight of Evidence A, the primary focus was on the methodological quality of the studies. Most of the research articles received a high rating for this as the majority used a control group methodology. However, Toland and Boyle’s (2008) research received a lower grading because they had no control group and their number of participants was small; a total of 29 participants were divided into three subgroups. The two smallest groups only had six and two participants each and thus, comparisons and generalisations could not be meaningfully made. Chan and Moore’s (2006) research design was very comprehensive, following two cohorts of pupils over a period of three years and using a control group design, with some participants receiving an intervention in year two and some in year three. However, the research findings did not specify which groups received which interventions and when, nor did the researchers provide substantial information about the content of the interventions. The rating therefore reflects these concerns. Finally, Donohoe et al. (2012) received a medium rating for Weight of Evidence A. Although the design incorporated a control group, the participants were not randomly assigned and the number of participants was small, making generalisations less reliable.

Category B in the EPPI Weight of Evidence Tool considers how appropriate the design and analysis of the research was to the review question. As a result of applying the

inclusion criteria, all of the research articles had an appropriate research design and mode of analysis for answering the question of this systematic review. Toland and Boyle (2008) again received a lower rating, largely for the reasons outlined above, which were also relevant to the Weight of Evidence B category. Chan and Moore (2006) also received a lower rating because, while the research design appeared to be comprehensive, it was unclear which groups of participants received which form of interventions across the study. In addition, the quantitative information provided did not allow for a reliable analysis of the effect sizes.

Finally, in considering Weight of Evidence C, the extent to which the research articles were relevant to addressing the question of this systematic review was considered. Five of the articles received a high rating for this category as their primary intention was to explore to what degree attribution retraining could contribute towards closing achievement gaps. The achievement gaps in question varied, based on gender, ethnicity, socio-economic status and learning difficulties. However, Donohoe et al. (2012) and Chan and Moore (2006) received a low/medium rating as, although the research was intended to improve academic achievement more generally, there was not a specific focus on narrowing achievement gaps.

Overall, three research papers, Blackwell et al. (2007), Ziegler and Stoeger (2004) and Good et al. (2003) papers, scored highly across all the criteria. The research design included comparison groups, with Ziegler and Stoeger (2004) having the added benefit of follow-up data. In addition, the authors outlined sufficient details of their interventions and were clear on who their target participants were and why.

1.2.6 Synthesise the studies

Following on from critically appraising the studies using the EPPI Weight of Evidence Tool, the studies were then synthesised, taking into consideration the additional research questions identified earlier. The synthesis process explored which students benefited from attribution retraining interventions and why, which attributions were targeted for 'retraining' and the key features of the interventions.

1.2.6a Participants

Research question one considered which students are more likely to benefit from attribution retraining interventions and why. The studies included participants aged between 10 and 16 years old, with the majority of the studies focusing on children and young people in secondary or high schools. It is interesting to note the absence of younger participants; Toland and Boyle (2008) reported that they chose their participants based on evidence suggesting the cognitive behavioural approaches utilised in their research were more successful with older children, and Blackwell et al. (2007) identified children transitioning to high school as being particularly at risk of beginning to underachieve. While most of the literature has focused on older age groups, there is evidence to suggest young children's development is influenced by their parents' attributional beliefs, with children whose parents demonstrate higher effort-related beliefs being more school-ready at the age of four (Kinlaw, Kurtz-Costes, & Goldman-Fraser, 2001).

Additional demographic information relating to the participants varied significantly; an overview is detailed below.

Table 1.6 - Demographic information of participants

Participant information	Authors	Details	Effect sizes for achievement measurements
Socio-economic status	Blackwell et al. (2007)	low income	Not possible to determine effect size. Decline in grades halted.
	Good et al. (2003)	low income	Girls – large (across all experimental conditions) Boys – medium (in incremental condition only)
	Chan and Moore (2006)	low and middle income	Cohort 1 – small Cohort 2 – medium
Ethnicity	Blackwell et al. (2007)	52% African American, 43% Latino, 3% white and Asian	Not possible to determine effect size. Decline in grades halted.
	Good et al. (2003)	67% Hispanic, 13% Black, 20% White	Not possible to determine effect size in relation to ethnicity
Achievement	Blackwell et al. (2007)	low achieving	Not possible to determine effect size. Decline in grades halted.
	Donohoe et al. (2012)	middle set English pupils	No significant impact
	Ziegler and Stoeger (2004)	high achieving – top 20%	Small (nearly medium) for girls only
Gender	Ziegler and Stoeger (2004)	Stereotype threat experienced by girls in chemistry	Girls - Small (nearly medium) Boys – no significant impact to final grade
	Good et al. (2003)	Stereotype threat experienced by girls in maths	Girls – large Boys – medium
Identified learning difficulties	Toland and Boyle (2008)	Identified as having learning difficulties (LD) and specific learning difficulties in spelling (SLD).	LD – Small SLD – not possible to determine effect size.
Emotional Wellbeing	Toland and Boyle (2008)	Low self-esteem	Small

The articles explored in this systematic review included participants from a wide demographic. Two authors considered low income students who were also identified by their ethnicity (Blackwell et al., 2007; Good et al., 2003). The research articles spanned a broad range of levels of academic achievement. Toland and Boyle (2008) specifically considered participants with identified learning difficulties while Blackwell et al. (2007) more generally identified the participants as low-achieving. Donohoe et al. (2012) worked with middle set English pupils and Ziegler and Stoeger (2004) specifically targeted high-achieving participants. In addition, Ziegler and Stoeger (2004) and Good et al. (2003) considered the impact of stereotype threat on girls. Stereotype threat refers to a phenomenon by which individuals perform less well because they have an awareness or concern that their performance may be viewed through the lens of cultural stereotypes (Steele & Aronson, 1995).

While the range of participants varied widely, the underlying thread of the majority of the research papers was to concentrate on closing achievement gaps related to socio-economic status, ethnicity, gender and self-esteem. The two exceptions to the identification of participants particularly at risk of an achievement gap was the work of Chan and Moore (2006) and Donohoe et al. (2012). Chan and Moore's (2006) longitudinal study covered pupils from both low and middle income backgrounds, whereas the intervention carried out by Donohoe et al. (2012) had middle set English pupils as their participants. Interestingly, Chan and Moore's (2006) intervention reported a significant impact on achievement, as measured by final grades in English, Maths and Science for cohort 2, but no impact in cohort 1 English and a small but significant negative effect on Maths. This finding could indicate that children and young people of different ages respond better to certain types of attributions than others. Unfortunately, because Chan and Moore (2006) did not include details of the specific attributions being targeted, it is not possible to explore this possibility further.

Donohoe et al. (2012) reported that their intervention had no impact on participants' grades and a small lasting impact on their theories of intelligence. There is further evidence within the research articles that participants who were not at risk of

experiencing threats to their achievement potential did not respond as positively to retraining techniques. For example, Ziegler and Stoeger’s (2004) research with high achieving chemistry pupils noted the lack of impact on male pupils, while Good et al. (2003) noted that the impact of the attribution retraining intervention had a significantly smaller impact on boys’ maths scores as they were at less risk of stereotype threat in this subject area. Overall, the results suggest that attribution retraining is most effective when applied to students who are particularly at risk of underachieving as a result of stereotype threat rather than using it as a universal strategy to improve achievement for all pupils.

1.2.6b Target attributions of the interventions

The second research question considered what key attributions researchers have attempted to adjust and whether there are differing effects according to the attributions targeted. Table 1.7 below provides an overview of the attributions targeted and the authors’ stated theoretical basis for their interventions.

Table 1.7 – Target attributions and theoretical underpinnings upon which interventions are based

Study	Attributions targeted for retraining	Theoretical position upon which the interventions were based	Effect sizes for achievement measurements
Blackwell et al. (2007)	<ul style="list-style-type: none"> • Intelligence is malleable – learning changes the brain by forming new connections. • Students are in control of this process through effort applied. • Intervention included useful strategies for effective study 	Implicit theories of intelligence (Dweck, 2006; Hong et al., 1999)	Not possible to determine effect size. Decline in grades halted.
Good et al. (2003)	<p><u>Incremental intervention</u></p> <ul style="list-style-type: none"> • Intelligence is malleable and expandable – capacity increases with “mental work” • Intervention included learning about brain functions. • Students in control of this process through effort applied. 	Implicit theories of intelligence (Dweck, 2006; Hong et al., 1999).	Girls maths – large Boys maths – medium Both reading - medium

Study	Attributions targeted for retraining	Theoretical position upon which the interventions were based	Effect sizes for achievement measurements
	<p>Attribution intervention</p> <ul style="list-style-type: none"> Promotion of attributing difficulties to an external, unstable factor (the tendency for all students to initially experience difficulty during 7th grade, but then to experience improvement.) <p>Combined intervention</p> <ul style="list-style-type: none"> Both incremental and attribution messages targeted. 	<p>Influenced by Bandura's model of Self Efficacy and Seligman's model of Learned Helplessness.</p> <p>As above.</p>	<p>Girls maths – large Boys maths – n.p Both reading – medium</p> <p>Girls maths – large Boys maths – n.p Both reading – small</p>
Donohoe et al. (2012)	<ul style="list-style-type: none"> Intelligence is malleable and expandable. Intervention included learning about brain functions. Students are in control of this process through effort applied. Intervention included learning about brain functions. Intervention included study techniques. 	Dweck's (2006) Implicit theories of intelligence as represented by Growth Mindset.	No significant impact
Chan and Moore (2006)	<ul style="list-style-type: none"> Attempts to change students' attributional beliefs (specifics not provided). Teaching of cognitive and metacognitive strategies to promote positive learning habits. 	Not explicitly stated but emphasis on Weiner's (1979) attributional model of achievement and motivation when discussing attributions.	Cohort 1 – small Cohort 2 – medium
Toland and Boyle (2008)	<ul style="list-style-type: none"> Helping children change the way they thought about themselves and how they explained their lack of achievement. Effort leads to achievement. 	Seligman's (1995) techniques to change attributions utilising CBT approaches – changing explanatory styles and promoting optimism.	Small
Ziegler and Stoeger (2004)	<ul style="list-style-type: none"> The causes for success and failure in chemistry instruction can be controlled through personal effort and persistence. Everyone can be successful in chemistry if he/she learns 'properly'. Highlight the importance of the application of suitable learning strategies. 	Influenced by Bandura's Model of Self Efficacy	Girls - Small (nearly medium) Boys – no significant impact to final grade

The research papers included in this review featured interventions influenced by Bandura's (1977; 1982) model of Self Efficacy, Seligman's (1975) model of Learned Helplessness and Weiner's (1979) attributional model of achievement motivation. In addition, the concept of implicit theories of intelligence (Dweck, 2006; Hong et al., 1999) also featured, reflecting and contributing to a growing interest in Dweck's work in the public domain. Furthermore, a focus on the use of strategies was also seen.

While the researchers may be inspired by different theoretical models and frameworks, the main focus on interventions were improving performance and the key attributions targeted were the contribution of effort to achievement and the importance of learning strategies. The main exception to this pattern was the 'attribution' intervention group in Good et al's (2003) research. Good et al. (2003) categorised students into an incremental theory of intelligence group and an attribution group, as well as a group that received both messages. The attribution intervention group were encouraged to attribute difficulties in their learning to the external, temporary consequences of the transition to high school. They were encouraged to recognise that this situation affected all students and would dissipate once they had adjusted to their new setting. The findings conclude that the incremental and attribution interventions were both effective and that combining two messages did not increase the overall effect. This conclusion indicates that there are a number of useful attributions, the effectiveness of which may be dependent on their validity to the situation.

Four out of the six research articles incorporated an emphasis on the importance of applying appropriate strategies in the learning process, the exceptions being Good et al. (2003) and Toland and Boyle (2008). The inclusion of strategy application is an important contribution to attribution interventions because it provides a valid explanation for failure when effort has been applied (Robertson, 2000).

1.2.6c Key features of the intervention

Table 1.8 below summarizes the duration, type and total direct time (where available) of the intervention. The summary considers the length of time dedicated to the interventions, the number of participants in each group and the method of intervention delivery.

Duration of studies

In terms of time over which the interventions took place, the range is substantial; one study (Ziegler & Stoeger, 2004) utilised a brief one-time manipulation whereas Toland and Boyle (2008) and Good et al. (2003) designed and delivered an intervention that lasted for a period of six months or more. The length of intervention does not appear to be directly related to the effect sizes. For example, Ziegler and Stoeger's (2004) intervention consisted of a video modelling session lasting only 10 minutes 35 seconds. The effects appear to be small but significant, and long term. The findings contrast with Robertson's (2000) review, which concluded that interventions are most effective when they span over 4 – 6 sessions. While the findings in this systematic review suggests that brief attribution retraining may be able to contribute towards a closing of the achievement gap, it is also worth noting that the majority of studies were not longitudinal and therefore did not provide evidence of any longer term impact. In order to sustain the narrowing of achievement gaps, interventions should ideally be delivered frequently and over a longer term (Sammons et al., 2015).

Table 1.8 - Features of interventions

Duration	Study	Type of intervention	Effect sizes for achievement measurements
Short term	Ziegler and Stoeger (2004)	Whole class intervention. Experimental group watched a ten minute 35 seconds video - modelling technique. Video showed a female doctor of Chemistry interviewing a former male and female student about their experiences of studying chemistry. Methods of coming to terms with successes and failures in chemistry of particular interest.	Girls - Small (nearly medium) Boys – no significant impact to final grade
Medium term	Donohoe et al. (2012)	Whole class intervention over five sessions. Participants worked independently on “Brainology” computer program. An introductory session followed by four x 40 minute weekly sessions in which participants completed the four remaining units. Related discussions at the start of each session and homework sheets.	No significant impact
	Blackwell et al. (2007)	12 – 14 students in each 8x25 minute sessions delivered by two undergraduate tutors on a weekly basis covering a range of topics, including an incremental theory of intelligence.	Not possible to determine effect size. Decline in grades halted.
Long term	Chan and Moore (2006)	Whole class intervention. Weekly strategy lessons for 12 – 15 weeks by researchers and an assistant. In 2nd year, intervention programme delivered to some year 6 and 8 students in English class. Strategies lessons once a week with emphasis on feedback statements highlighting attributions. In 3rd year, intervention programme delivered to some year 7 and 9 students in English and Maths class by teachers. No data given on length of lessons. Lessons included learning strategies and attribution retraining (no further information provided.)	Cohort 1 – small Cohort 2 – medium
	Good et al. (2003)	Whole class intervention lasting from November to end of Summer term. Assignment of a college school mentor to 7th graders enrolled on a computer skills course, who communicated with in person (90 minutes meeting in November and January) and weekly e-mail contact. Mentors provided support to create a webpage with the key message of their assigned control condition. Access to restricted web space with group-specific information on.	Girls maths – large Boys maths – medium Both reading - medium
	Toland and Boyle (2008)	Discrete intervention – 5 pupils in each group 12 x 30 minute sessions delivered over a period of 6 months. In each session, there were teaching points, demonstration, discussion and practice. There were also homework tasks to encourage further practice, and to gather personal experiences to feed into discussion in the next session.	Small

Group size

This systematic review indicates that the number of participants in each intervention group is not correlated to the impact of the intervention, with the majority of the

designs implementing a whole class approach. This finding contradicts that of Robertson (2000), who reported that interventions delivered to smaller groups have a greater impact. It may be that the defining factor is the extent to which the intervention is relevant to the participants. For example, if there is a fairly homogenous group of pupils who are underachieving, they may all respond well to an attribution retraining intervention, as may be the case in the work of Good et al. (2003) and Blackwell et al. (2007). In contrast, if the group is not homogenous, the effect may be limited only to participants who are at particular risk of stereotype threat, as appears to be the case in Ziegler and Stoeger's (2004) research.

Method of delivery

Three of the interventions used information and communications technology (ICT) as a prominent feature of their delivery. Good et al. (2003) utilised the students' ICT course as a vehicle by which to deliver a longer term intervention, which was supported by both face-to-face and e-mail contact. The positive results indicate that the use of ICT, as part of an attribution retraining intervention can be very effective. However, Donohoe et al. (2012) study utilised Dweck's Brainology computer program and yielded poor results. Although these results are disappointing, it may be that the computer program does not translate effectively to a British audience. Alternatively, it may be that the program was delivered to a group of pupils who were not at risk of underachieving and the response may have been more positive had the researchers targeted a different group of participants.

A synthesis of the findings highlights a diverse approach to attribution retraining in terms of delivery, theoretical groundings, duration and purpose. The key factor to the success of the interventions appears to be the extent to which the interventions are tailored to the needs of the participants, suggesting that there is not a one-size fits all approach to developing helpful attributions to achievement.

1.3 Discussion and conclusions

The findings from this systematic review demonstrate that attribution retraining interventions can have a positive impact on the achievement of children and young people, although the impact is neither simple nor universal. In relation to the wider research questions, it can be concluded that attribution retraining interventions can help to reduce achievement gaps for a wide range of children and young people. Crucially, however, the results indicate that children and young people who are experiencing stereotype threats are more responsive to interventions. The results also indicate that interventions that are tailored to the specific needs of the participants in mind are more effective than more generic interventions.

In terms of the attributions that researchers have targeted, effort and strategy are key features. In terms of the theoretical delivery of these attributions, there has been a clear move towards using Dweck's implicit theories of intelligence framework. One article (Donohoe et al., 2012) included an intervention based on Dweck's (2006) concept of Growth Mindset and the results were poor. It is, however, worth noting that there is a mounting interest in this area, with increased attempts at gathering a research base to examine the effectiveness of growth mindset interventions (Rienzo, Rolfe, & Wilkinson, 2015).

Finally, the key features of the attribution retraining intervention were diverse, incorporating individual, small group and whole-class interventions, one-time manipulations, short courses and courses over six months and beyond. In addition, the researchers included in this systematic review developed a range of interventions, including video modelling, use of computer programs, integrating learning strategies into group interventions and incorporating attribution retraining interventions into curriculum delivery. While this range of interventions makes comparisons difficult, it also highlights the ways in which the concept can be integrated into schools in creative and relevant ways. In addition, it indicates the importance of tailoring interventions to the target population and suggests that a one-size-fits-all approach is not the most effective or desirable approach to take.

1.3.1 Limitations of this study

This systematic review has a number of limitations. Firstly, it is recognised that, as only one researcher worked on the systematic review, there is a greater likelihood that the research is less objective and more open to errors. In particular, the EPPI Weight of Evidence Tool used was based on my judgements alone.

Secondly, the research included in this systematic review may not be representative of all research findings in the subject area including, as it did, only research that has been published. Research that presents significant findings is more likely to be accepted for publication, with potentially far more research that does not present significant findings not being published (Rosenthal, 1979). It is possible, therefore, that the findings from this systematic review are restricted by the fact that only published research was included.

Thirdly, the research articles included are diverse in terms of the participant characteristics and types of interventions used. This has implications for the extent to which the systematic review can be said to be comparing the same concepts.

Finally, only two of the research articles contained data collected in the UK (Scotland), with the others originating from America, Australia and Europe. The pattern of underachievement in the UK has a different profile to those found in other parts of the world; therefore, some subjective judgements are required to translate the results.

1.3.2 Recommendations for further research

The findings of this systematic review indicate that further research into the potential future of attribution retraining interventions in the UK school system would be welcomed. Interestingly, research into the impact of Growth Mindset interventions in schools was published in June 2015; it reported statistically insignificant but promising

results. Consequently, the researchers are expanding their research in this area (Rienzo et al., 2015).

Further research that considers the impact of attribution retraining across age ranges would be helpful. In addition, a more detailed exploration as to whether different attributions prove to be more beneficial for different age ranges would be of interest. Given that the influence of poverty on achievement acquires diverse patterns amongst ethnic groups, an exploration into whether cultural differences in attributional styles amongst children, young people and their parents act as risk or resilience factors would be interesting.

There is evidence to suggest that parents' attributional beliefs have an influence on children's levels of achievement (Kinlaw et al., 2001). Socio-economic status is a significant determinant of achievement in the UK and it is widely recognised that the achievement gap begins to emerge in the early years. Given that the concept of Growth Mindset is becoming increasingly prominent, research that explores parents' understanding of their own theories of intelligence and how this relates to their parenting of their young children would be a welcome contribution to the literature. This research gap formed the basis of my empirical research, detailed in Chapter 3.

Chapter 2: Bridging Document

2.1 Introduction

This document aims to describe and reflect upon the thought processes and decisions made throughout the research process. Its main purpose is to provide the reader with a bridge between the systematic review (chapter 1) and the empirical research (chapter 3), outlining some of my decisions made along the way. It includes an exploration of my personal interest in the research area, a consideration of my ontological and epistemological perspective, my methodological considerations and a more detailed account of my methods. In addition, I describe some ethical considerations and reflection upon the ways in which my research can be interpreted.

2.2 Identifying an area of research

I believe we should strive for a meritocratic society, which can only happen through ensuring equality of opportunity. My professional and academic experiences prior to starting the Doctorate in Applied Educational Psychology had highlighted the complexities of, and the stark relationship that socio-economic status, ethnicity and gender has with academic achievements.

However familiar I was with the concept of achievement gaps, it was only when I started the Doctorate in Applied Educational Psychology (DAppEdPsy) and experienced difficulties managing deadlines and producing work I considered to be of a high enough quality that I was led to reflect upon my own past academic experiences. Together with another trainee, we discussed the stresses and strains of being emotionally and physically available to our young children, and then starting work on assignments once they were in bed. This led me to consider my earlier experiences in school and college. I came to truly appreciate for the first time that each academic achievement was a culmination of every bedtime story I was ever read, the liberal supply of pocket money I was given to spend on books and the relentless enthusiasm of many of my teachers. I recalled the desk I was bought when I started secondary school, my parents' attendance

at every single school play and parents evening, the hefty computer I received for my 17th birthday to help me through my A-Levels and the unquestioned expectation that I *would* do my homework and I *would* revise for exams.

In an effort to manage my anxieties regarding my ability to succeed on the course, I began to think more critically about my attributions to success and failure. In particular, I stuck a post-it note on my laptop (*Internal Locus of Control!!*) to remind (and sometimes to convince) myself that achievement was in my control.

When I first received the details of placements available for Years 2 and 3, I was immediately drawn to one particular offer. This offer requested someone who was interested in researching Growth Mindsets of parents of two year olds who attended the early education provisions in the Children's Centres and were in receipt of the Two Year Offer. From a professional and personal perspective, I decided that this was an area of research I wanted to explore further.

2.3 Developing a research focus

While the initial broad research area had been pre-determined, the particular focus of the research developed over a longer period of time. I had initially intended to focus my systematic review on the impact of parents' beliefs and theories about intelligence on young children's early indicators of school readiness. However, following a significant amount of scoping, it became clear that this would not be a realistic proposal due to the lack of suitable literature. Therefore, I changed direction and focused on the impact of attribution retraining programmes on achievement of school-aged children.

The empirical research itself changed from an intention to explore whether or not Children's Centres had influenced parents' mindsets to taking a more in-depth look at the parents' beliefs about intelligence, in collaboration with their experiences of the Children's Centres, expectations and aspirations for their children's future, and their role within it. This change took place because, during discussions with my first and second

supervisors, I came to recognise that I was making too many assumptions about the parents' own experiences and beliefs. If I really wanted to add to the depth of understanding about parents' mindsets, I would have to take another step back. The final decision to take this step backwards was guided by my ontological and epistemological perspectives.

2.4 Ontology and Epistemology

Ontology refers to our understanding of reality, while epistemology refers to the nature of knowledge and how we come to gain this knowledge. My own ontological and epistemological perspective is aligned with critical realism. Resting between the dichotomous poles of realism and relativism, critical realism assumes that there are realities that exist independently of our knowledge or perceptions of them (Bhaskar, 1975). In contrast, our understanding of these realities are understood within a given context and time, and through the human activity of generating knowledge (Zachariadis, Scott, & Barrett, 2013). Therefore, the researcher may need to interpret the research data to further our knowledge, rather than to provide a reflection of a concrete reality (Willig, 2013).

In terms of the subject area for my systematic review and empirical research, I consider it a reality that people make attributions in order to understand the world around them and that the attributions that people make influence their subsequent behaviour. Through my systematic review and empirical research, I have attempted to understand the influence of attributions through both quantitative and qualitative means. In accordance with my critical realist perspective, my findings are not presented as an absolute truth, but rather, as a reflection of my perceptions of those realities.

2.5 Methodology

Mixed method research can methodologically be considered to be a third paradigm in research design, providing a pragmatic middle position between quantitative and qualitative paradigms (Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner,

2007). Adopting a mixed method paradigm provided me with a means to explore the range of research questions I was interested in, by affording opportunities to answer “what” and “why” questions. Mixed methods approaches are also in accordance with critical realism (Zachariadis et al., 2013).

While mixed methods research has been identified as providing opportunities to broaden or triangulate knowledge, a more meaningful approach is to create a dialogue between different perspectives in order to deepen understanding of the phenomena being studied (Greene & Hall, 2010). My intention with my empirical research was to deepen understanding of parents’ implicit theories of intelligence, rather than to broaden or triangulate existing knowledge.

2.6 Method

My research took a sequential mixed methods design (Creswell & Clark, 2007), and had two phases. While the methods section in Chapter 3 describes the sequential processes undertaken for this piece of research, below is a more considered reflection upon some of the choices I made.

2.6.1 Phase 1 - Questionnaire

The questionnaire aimed to identify how long the children had attended the childcare provision in the Local Authority Children’s Centres, whether they were (or had been) eligible to access the two year old free early education and childcare offer, and the parents’ implicit theories of intelligence, as well as to identify participants who may be willing to participate in Phase 2 of the research design.

In order to ascertain the mindsets of parents whose children attend childcare provisions in Local Authority Children’s Centres, I utilised a slightly adapted version of Dweck and Henderson’s (1989) 3-item Assessment of Implicit Theories (see Appendix A). This scale comprises three entity theory questions and asks participants to rate their agreement to

three statements using a 6-point Likert type scale (from strongly disagree to strongly agree).

The three statements I used are detailed below, with the original statements provided in brackets:

- A person has a certain amount of intelligence and they can't really do much to change it (You have a certain amount of intelligence and you really can't do much to change it).
- A person's intelligence is something about them that they can't change very much (Your intelligence is something about you that you can't change very much).
- A person can learn new things, but they can't really change their basic level of intelligence (You can learn new things, but you can't really change your basic level of intelligence).

I was aware that it is possible for people to hold different theories for themselves and others, and that they may endorse different theories of intelligence depending on whose abilities they are appraising (De Castella & Byrne, 2015). With this in mind, I made the decision to alter this scale to avoid using the second personal pronoun "you", because the research was concerned with how parents' implicit theories of intelligence related to their children rather than to themselves.

The questionnaire went through several variations before I decided on its final configuration. I had initially included more questions gathering demographic information. However, these questions were taken out because it was concluded that they may put participants off completing the questionnaire and they were ultimately not essential to the research aims. In addition, I concluded that the questionnaire should be as short as possible given that the parents would be asked to complete it during the small window of time when they were dropping off and picking up their children.

Furthermore, it was hoped that, should parents require support to access the questionnaire, staff would be more able and willing to provide it if it was brief.

2.6.2 Phase 2 – Semi-structured interviews

Semi-structured interviews were used to explore the participants' experiences of the early education provisions in the Local Authority Children's Centres and to explore their beliefs about intelligence within the theoretical framework of Growth Mindsets. The use of semi-structured interviews can provide rich, in-depth information about participants' experiences and perspectives (Braun & Clarke, 2013). For me, this approach fits closely with my own epistemological beliefs that individuals have their own understanding and experiences of the world, and that those understandings are valid and important sources of knowledge.

As outlined in Chapter 3, recruiting the participants for this phase was more challenging than I had expected. Although my intention was to recruit participants who had a longer relationship with the Children's Centre, and who had more distinct mindsets, as identified by the questionnaire scores, this was not always possible. As the questionnaires were distributed in September, many of the children, and parents, were relatively new to the Children's Centres. In addition, some participants from Phase 1 who showed an interest in Phase 2 chose not to participate. Furthermore, several participants who agreed to participate did not turn up at the agreed time and date. It is for these reasons that some of the participants had only a relatively short relationship with the Children's Centres and that I was only able to conduct interviews with three fixed mindset participants.

Prior to the interviews I created an interview guide (see Appendix B) to be utilised with the participants. Although the flow of the conversations differed in each semi-structured interview, the interview guides were designed to funnel from the more general, introductory questions to the more specific and in-depth topics (Braun & Clarke, 2013).

I was mindful of the potential power imbalance between myself and the participants and was therefore aware of the need to build equitable relationships in a short space of time. Whilst I was mindful of the need to support the participants to feel comfortable throughout the interview so that they could express their views (Willig, 2013), this was counterbalanced by an ethical desire not to build rapport in a way that could be considered to be deceptive and self-serving (Kvale, 2006). I consider that, in being open about my interest in the research project and responding to the participants sensitively, this concern was addressed.

2.6.3 Phase 2 - Analysis

After researching a range of qualitative approaches to analysis, including Interpretive Phenomenological Analysis, Grounded Theory and Discourse Analysis, I concluded that Thematic Analysis would be the most suitable method for my research question.

Thematic Analysis provides a flexible approach to analysing data that can provide rich, detailed and complex accounts (Braun & Clarke, 2006).

Thematic Analysis can be carried out either in an inductive way or a theoretical way. Theoretical Thematic Analysis is driven by the researcher's theoretical or analytic interest in the area. In contrast, inductive Thematic Analysis can be seen as a more bottom-up, data-driven approach, with themes identified being more strongly linked to the data themselves (Braun & Clarke, 2006). Given that my research question is exploring a specific theoretical model (that of implicit theories of intelligence), I concluded that it would be appropriate to adopt a theoretical Thematic Analysis.

In addition, researchers using Thematic Analysis must decide whether to take a semantic or latent approach to analysis. A semantic approach results in themes being created based on the surface meanings of the data, with the researcher progressing from the description to interpretation. A latent approach, on the other hand, considers the underlying ideas and assumptions that underpin what is articulated in the data. I adopted a latent approach to analysing the data as I was aware, prior to beginning the

analysis, that I would want to consider the underlying ideas of the participant, in line with a critical realist approach (Willig, 2013). I also recognise the active role of the researcher in analysing qualitative data and, to me, adopting a latent approach makes this role more explicit and transparent.

2.8 Ethical Considerations

Ethical practice is an important value to me as both a trainee educational psychologist in the workplace and as a doctoral student working in a research capacity. I utilised the British Psychological Society Code of Human Research (2010) to guide me with ethical considerations. A brief overview of this is provided below:

- **Principles**
 - I respected the autonomy and dignity of the participants involved in my research by recognising the value of their knowledge and insight to my research question. I made efforts to explain the nature of my research and clearly outlined during Phase 1 and Phase 2 that participation was voluntary (see Appendices C and D).
 - I used supervision with my university tutors to ensure that my research design was of a high scientific value
 - I consider myself to have a social responsibility to contribute to improving our society; in my view a major social problem is the degree of social inequality we face. I consider that the research area is one which can contribute towards reducing social inequality. I am going to disseminate the findings of this research project with the Children's Centres involved. To varying degrees, the early education providers located in the Children's Centres already have an interest in promoting Growth Mindsets and I am hopeful that this research will contribute towards their knowledge, understanding and application.

- **Risk**
 - In taking part in this research the participants faced no greater risk of harm than they would encounter in the course of their everyday life.

- **Valid Consent**
 - I was mindful of ensuring informed consent. As well as detailing on the questionnaire, I also reminded the staff at the Children's Centre over the phone and by letter that parental completion of the questionnaires was voluntary. For the second phase of the research, I created the informed consent documents, which were read through with the participants to take into account any literacy difficulties. In addition, participants were informed at the start of the interviews and at the end that they had the right to withdraw should they so wish. I highlighted my contact details, and those of my supervisor so they had been fully informed of how to withdraw.

- **Confidentiality**
 - As part of the process of gaining informed consent, I discussed with the participants how their data would be used. They were informed that the voice recordings would be transcribed by an outside, and not local, service and the voice recordings would then be deleted. They were also informed that the transcripts would be saved on a private password-protected computer for a limited period of time. Finally, they were informed that the research would not include identifying information.

- **Giving advice**
 - No advice was given.

- **Deception**
 - There was no deception involved in this study.

- **Debriefing**

- Following each interview, the participant and I discussed how the participant had found the process. I asked them whether they had any additional questions or anything to raise. I also reiterated my contact details and the option to withdraw consent.

2.9 Reflections

Throughout the research process I have continually reflected upon the benefits of Growth Mindset and its place in the current education system. During my time on placement I have had numerous discussions with staff members about the concept of Growth Mindset and I am aware that it is becoming increasingly well-known and adapted to suit individual school requirements.

Whilst I am, on the one hand, delighted that a concept that I believe has the ability to promote positive change is increasingly being used in schools, I am also aware that the current political, economic and social structures need to be taken into consideration. It is my belief that fostering an incremental theory of intelligence and other forms of attribution retraining can have a positive impact on individuals' potential to achieve. It is also my concern that social psychological interventions cannot, on their own, reduce achievement gaps and, in the longer term, improve social mobility. Desirable attributions are only one piece of the puzzle to closing achievement gaps, and closing achievement gaps are only one piece of the larger puzzle of creating a more equitable society.

Chapter 3: What do parents whose children access their two year old Early Education Entitlement in Children's Centres tell us about their "mindsets"?

3.0 Abstract

The relationship between socio-economic status and academic achievement is well-documented (Sammons et al., 2015; Clifton & Cook, 2012; Strand, 2014). It is recognised that parents have a crucial role to play in influencing their children's educational outcomes, through their actions and their beliefs, attitudes and expectations (Kluczniok, Lehrl, Kuger, & Rossbach, 2013). While the importance of parental attitudes and beliefs regarding school achievement is documented, there is currently a gap in the literature regarding the relationship between early education provisions and parents' beliefs about learning. This current study aims to redress that research gap, with a focus on parents' theories of intelligence.

The research study adopted a two-phase sequential mixed methods design. The first phase involved gathering information from parents regarding their implicit theories of intelligence by questionnaire. The findings noted that far more parents than would be expected reported having incremental theories of intelligence (growth mindsets). The second phase involved carrying out semi-structured interviews with seven parents, the transcripts of which were then analysed using latent theory-driven Thematic Analysis. Six themes were identified: 'Children's Provision-Based Experiences', 'Co-operative Home-Provision Links', 'Influence on Family Life', 'Deconstructing Mindsets', 'Parental Responsibilities and Expectations' and 'Reflecting on Past experiences'. The findings are discussed in relation to their implications for Educational Psychologists' practice. Limitations and suggestions for further research are also considered.

3.1 Introduction

3.1.1 Achievement gaps in the Early Years

The relationship between socio-economic status and academic achievement is well-documented (Clifton & Cook, 2012; Sammons et al., 2015; Strand, 2014). Children from lower socio-economic backgrounds frequently start school with fewer academic skills than their more advantaged peers and are less ready for a school setting (Barbarin et al., 2008; Burger, 2010). This gap typically widens throughout their education (Ramey & Ramey, 2004) and has long term ramifications.

This early achievement gap between children from different socio-economic backgrounds has been associated with their early learning experiences, sometimes termed the Home Learning Environment (Sylva et al., 2012). For example, children's exposure to literacy and numeracy activities in the home predicts later literacy and numeracy outcomes in school (LeFevre, Polyzoi, Skwarchuk, Fast, & Sowinski, 2010). Furthermore, both the amount and quality of joint reading activities provided in the home is later correlated to developing early literacy skills (Bingham, 2007; Sonnenschein & Munsterman, 2002). In addition, parents' beliefs, expectations and aspirations are also associated with greater levels of school success (Aunola, Nurmi, Lerkkanen, & Rasku-Puttonen, 2003; Bacon, Ichikawa, William, & Veronica, 1988; Barbarin, Downer, Odom, & Head, 2010; Davis-Kean, 2005; Einglund, Luckner, Whaley, & Egeland, 2004; Galindo & Sheldon, 2012), highlighting the social psychological factors involved in school achievement.

High quality pre-school education has been demonstrated to predict better outcomes for children from more deprived backgrounds (Burger, 2010; Ramey & Ramey, 2004; Sylva et al., 2012), with factors including highly qualified staff and a promotion of parental involvement contributing to children's social, behavioural and communication development (Springate, Atkinson, Straw, Lamont, & Grayson, 2008). While these results are promising, there is evidence that long hours in childcare is correlated to higher levels of externalised problems, as reported by teachers (Belsky et al., 2007). In England all

three and four year olds have been legally entitled to part-time free early education provision since 2003 and 1998, respectively (Gibb et al., 2011). Following pilot schemes, in 2013 this provision was extended nationally to two year olds identified as being most disadvantaged, with the aim of improving their social and academic outcomes so that they are as ready as their more advantaged peers to start school. The concept of school readiness has, however, been criticized, as the onus of 'readiness' appears to be placed onto the child. Instead, it has been suggested that *all* children are ready to learn, but that the quality of relationships between professionals and families can influence children's ability to access learning opportunities (Abo-Zena & New, 2012).

While high quality early years education has a positive impact on children's social and academic development, it may narrow, but does not close, the achievement gap. With this concern in mind, and with an awareness that parents' beliefs, expectations and aspirations are correlated to children's outcomes, a Local Authority Early Years Team commissioned me, as a Trainee Educational Psychologist, to explore the implicit theories of intelligence of parents of two year olds who attend the Children's Centres' early education provisions. This request reflects a growing interest in social psychological interventions aimed at closing the achievement gaps (Chodkiewicz & Boyle, 2014; Spitzer & Aronson, 2015) and in Dweck's (2006) concept of Growth Mindsets (Rienzo et al., 2015).

3.1.2 Growth Mindset

It is proposed that individuals hold implicit theories of intelligence (Dweck, 2006; Hong et al., 1999; Dweck, 2000; Dweck & Leggett, 1988). These can be categorised as incremental, in which skills and abilities can be developed over time, or entity, in which intelligence is viewed as a static trait.

Individuals who have an incremental theory of intelligence (a growth mindset) assign more weight to effort, learning and practice to being important to performance, whereas individuals with an entity theory of intelligence (a fixed mindset) attribute more

weight to ability. Therefore, people with fixed mindsets, when faced with failure, are less likely to be motivated to try again (Dweck, 2000; Hong et al., 1999). It is proposed that students who have a growth mindset are more likely to achieve greater academic success, particularly in situations where they may otherwise experience stereotype threat. Furthermore, students who experience such threats can help to develop growth mindsets through interventions (Blackwell et al., 2007; Good et al., 2003).

3.1.3 Growth Mindset in the Early Years: Parents

As already indicated, parents have a crucial role to play in influencing their children’s educational outcomes, both through their actions and their beliefs, attitudes and expectations (Kluczniok et al., 2013). Jose and Bellamy (2012) found that parents’ support for an incremental theory of intelligence was correlated to children’s higher levels of persistence in difficult tasks. Furthermore, Gunderson et al. (2013) reported that mothers’ use of process praise with their pre-school children predicted incremental theories of intelligence five years later. This research is promising because it highlights the role that parents can play in supporting their children to overcome risk factors associated with lower socio-economic status.

3.1.4 The current study

While the importance of parental attitudes and beliefs regarding school achievement is documented, there is currently a gap in the literature regarding the relationship between early years’ settings and parents’ theories of intelligence. This current study aims to redress that research gap by exploring: **“What do parents whose children access their two year old Early Education Entitlement in Children’s Centres tell us about their “mindsets”?** The table below identifies the three research aims identified.

Table 3.1 – Research aims

1.	Ascertaining the “mindsets” of parents whose children attend childcare provisions in Local Authority Children’s Centres.
2.	Qualitatively exploring parents’ experiences of the child care facilities in the Local Authority Children’s Centres.
3.	Qualitatively exploring parents’ beliefs about intelligence within the theoretical framework of Growth Mindsets.

3.3 Method

3.3.1 Design

To address the above aims, the present study utilised a two-phase sequential mixed methods design (Creswell & Clark, 2007). In the first phase, questionnaires incorporating a slightly adapted version of Dweck and Henderson's (1989) 3-item Implicit Theories of Intelligence scale (see Appendix A) were sent to the early education provisions in the Children's Centres for completion by parents. As the questionnaire was only minimally adapted, it was concluded that a pilot was not necessary. In the second phase, semi-structured interviews (see Appendix B) with parents were held to explore the second and third research aims.

3.3.2 Participants

3.3.2a Phase 1

The Local Authority provides early education provision for two, three and four year old within each of their twelve Children's Centres. The twelve early education provisions were approached and invited to participate in the research project. All initially agreed. At the time of the research, the Children's Centres had a total of 311 children aged two years to four years on roll. Out of the twelve children's centres, eight returned a total of 100 questionnaires, giving a response rate of 32.2%.

Participants in Phase 1 were 100 parents whose children (aged two years to four years) attend the early education provisions based within the Children's Centres.

3.3.2b Phase 2

Following collection and analysis of the data in Phase 1, participants for Phase 2 were selected. The criteria for selection were:

Table 3.2 – Phase 2 selection criteria

1.	The participant had provided their contact details indicating a willingness, or interest in participating.
2.	The participant was accessing the Two Year Offer.
3.	The participant's scores indicated that they had either a fixed or growth mindset, rather than a mixed mindset. N.B. If a participant yields a score of 3.0 or lower, they are considered to be entity theorists (fixed mindset), if a participant yields a score of 4.0 or higher, they are considered to be incremental theorists (have a growth mindset). Participants who yield a score of between 3.0 and 4.0 have indeterminate or mixed beliefs about intelligence.

By applying this inclusion criteria, I was left with 51 potential candidates (7 with fixed and 44 with growth mindsets). From these potential candidates, I carried out interviews with seven parents, three with fixed mindsets and four with growth mindsets. Recruiting the participants for this phase was more challenging than I had expected. I initially focussed on trying to recruit participants who had a longer relationship with the Children's Centres and who had more distinct mindsets, as identified by the questionnaire scores. However, some flexibility was required as some participants from Phase 1 who showed an interest in Phase 2 chose not to participate. In addition, several participants who agreed to participate did not turn up at the agreed time and date. It is for these reasons that some of the participants had only a relatively short relationship with the Children's Centres and that I was only able to conduct interviews with three fixed mindset participants. Participant characteristics are detailed below:

Table 3.3– Participant information

Participant	Relationship to child	Mindset (score)	Age	Child characteristics	Length of contact with Children’s Centre
1.	Mother	Growth (5)	30	8 year old boy; 2 year old girl; 30 weeks pregnant. Not working Partner.	A year (plus time in the baby room)
2.	Mother	Growth (4.67)	39	15 year old girl; 8 year old boy; 2 year old girl. Not working Partner works.	3 months
3.	Mother	Growth (5.67)	24	2 year old girl; 6 month old boy. Not working Partner	3 months
4.	Mother	Growth (6)	42	Three children, 12, 8 and 2 years (boy) old. Self-employed Husband works	3 months
5.	Mother	Fixed (2)	24	2 year old boy Not working Partner	6 months
6.	Mother	Fixed (2.33)	28	10, 9, 6 and 2 year old (boy) Not working Partner works	3 months
7.	Father	Fixed (2)	36	8 year old girl (lives with mother) 2 year old girl Married Works night shifts; wife also works	11 months

3.3.3 Procedure

3.3.3a Phase 1

Prior to sending out the questionnaires to the early education provisions, the managers were asked, and had agreed, to hand out the questionnaires to parents and carers when they brought their children in for the session. Staff were informed by telephone and letter that participation as a provision, and for individual parents, was voluntary. Once the questionnaires had been gathered, they were returned to me in a pre-addressed envelope.

Measure

The questionnaire gathered information on the length of time the participants' children had been attending the early education provision, whether or not they were accessing, or had previously accessed the Two Year Offer and a measure of their implicit theory of intelligence, as measured by a slightly adapted version of Dweck and Henderson's (1989) three-item 6-point scale. In this scale the participants were asked to show the extent to which they agreed with the statements below, using a 6-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree):

- A person has a certain amount of intelligence and they can't really do much to change it.
- A person's intelligence is something about them that they can't change very much.
- A person can learn new things, but they can't really change their basic level of intelligence.

Each response was scored from one to six, and the total divided by the number of questions (three). Thus, a participant who answered "strongly disagree" to all three statements would have a total score of 18, and a final score of 6. Their score would therefore indicate that they held a strong incremental theory of intelligence.

3.3.3b Phase 2

The semi-structured interviews took place in the Children's Centre, either once the parents had dropped their child off or before they picked them up. The interviews were recorded on a digital voice recorder and transcribed by an external transcription service. The voice recordings were later deleted. Further consideration of the use of semi-structured interviews can be found in section 2.6.2.

Table 3.4 – Research timeline

Date	Activity
June 2015	Contacted early education providers by phone to discuss research and request permission to send questionnaires out.
July – August 2015	Designed and refined questionnaire.
September 2015	Sent out questionnaires to early education providers.
October 2015	Contacted early education providers by e-mail and phone to inquire whether they had handed out questionnaires and if they were still willing to participate.
November 2015	Questionnaires received and data analysed.
December 2015	Contacted participants for Phase 2. Arranged appointments for semi-structured interviews with the participants.
January 2016	Transcriptions of the interviews completed by Transcription City.
January – March 2016	Carried out analysis of the data
April – June 2016	Write up of thesis.

3.3.4 Analytic procedure

The transcripts were analysed using a latent theory-driven Thematic Analysis (Braun & Clarke, 2006). A more detailed justification for this approach can be found in 2.8. Please see table 3.5 below for a brief explanation of the steps taken.

Table 3.5 – Steps taken to analyse data

Step	Process
Transcription	Once all interviews had been completed, the recordings were sent to an external transcription service, Transcription City, to be transcribed. Upon return, I checked the transcripts against the original recordings for accuracy.
Reading and familiarisation with the data set	I came to this stage already familiar with the data having interviewed the participants and listened to the recordings whilst checking the transcripts. I read through the transcripts and made notes identifying potential areas of interest and meaning.
Coding	Following on from the familiarisation process, I began coding across the whole data set. This process involved listing, highlighting and taking notes about the data and organising them into meaningful groups.
Searching for themes	I sorted the codes into potential themes and began creating early visual representations of the themes and subthemes.
Reviewing themes	I revisited the themes and began to refine them by evaluating whether or not there was enough data evidence to support those themes and whether some of the themes could be amalgamated. I also refined the thematic map to highlight the relationship and interactions between the themes and subthemes.
Defining and naming themes	During this final analytical process, I reviewed and determined the 'essence' of each theme, relating the themes back to the data set to ensure the themes were consistent with the data.
Writing report	The themes were written up as part of this report. I aimed to produce a concise and clear account of the research findings.

3.3.5 Ethical Considerations

This study was given ethical approval by Newcastle University. At each stage, participants were informed that their participation was entirely voluntary and they were entitled to withdraw at any point (see Appendix C). At the start of each semi-structured interview, I discussed the purpose of the research and processes involved and read through the informed consent form (see Appendix D) with the participant. I also ensured

each participant had contact details should they wish to withdraw consent. Further detail of ethical considerations can be found at 2.8.

3.4 Findings

3.4.1 Phase 1

Research aim 1

One hundred questionnaires were returned from eight early education providers giving a response rate of 32.2%. As well as providing an overview of mindsets amongst the participant population, this data was crucial for identifying potential participants for Phase 2. Table 3.6 provides information regarding the implicit theories of intelligence of the participants, broken down by whether parents received the Two Year Offer or paid for their provision:

Table 3.6 – Indicative implicit theories of intelligence of participants in Phase 1

Mindsets	Number (%) (n = 100)	Two Year Offer (n = 91)	Paid place (n = 9)
Growth	71 (71%)	65 (71%)	7 (78%)
Fixed	12 (12%)	12 (13%)	0 (0%)
Undecided or Mixed	17 (17%)	15 (16%)	2 (22%)

A higher number of participants reported having a growth mindset than expected. According to Dweck (2006), around 40% of people have a growth mindset, 40% have a fixed mindset and 20% are classified as mixed.

While there were some differences in the scores of parents who accessed the Two Year Offer and those who did not, the number of participants who paid for their child’s provision was considered to be too small to carry out further statistical analysis.

3.4.2 Phase 2

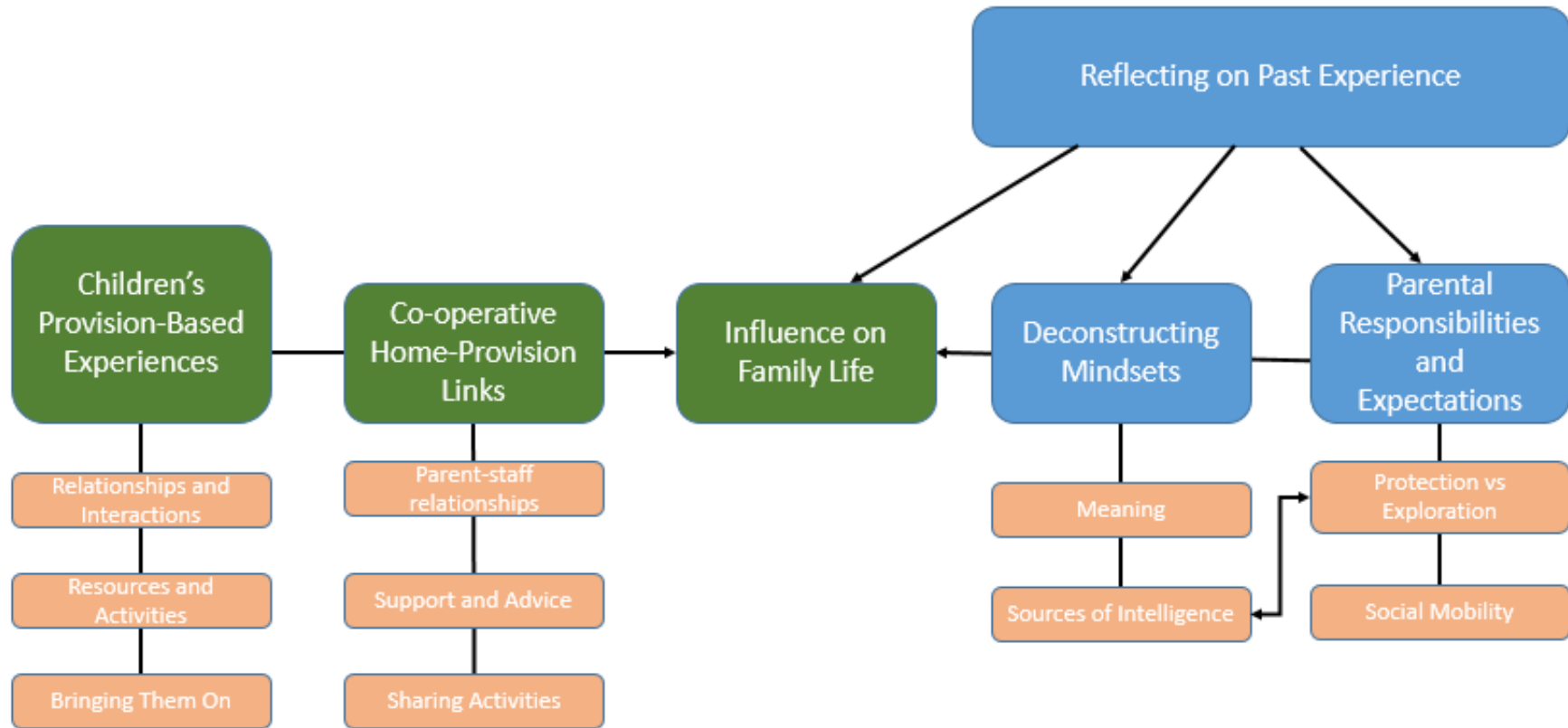
The remaining research aims are to qualitatively explore parents' experiences of the early education provision in the Local Authority Children's Centres and to qualitatively explore parents' beliefs about intelligence within the theoretical framework of growth mindsets. These were addressed through the use of semi-structured interviews with seven parents. Three parents were identified in Phase 1 as reporting a fixed mindset and four were identified as reporting a growth mindset.

The transcribed interviews were analysed using latent theory-driven Thematic Analysis (Braun & Clarke, 2006). A further consideration of this approach can be found at 2.6.3. Although the participants were identified as having either growth or fixed mindsets, the decision was made to analyse across the whole data set because, whilst the analysis was theory-driven, I did not want it to be theory-defined. I was concerned that, if I was to analyse the data separately, I may be at greater risk of 'finding' the evidence to fit the theory. Given my critical realist approach, I was also keen to consider the underlying concepts of the research data and not to view the theoretical concepts I was exploring as a reality. I was also aware that the 'categorisation' of the participants was based only on their completing the questionnaire at one point in time. Therefore, the themes presented arise from both fixed and growth mindset data-sets and, where appropriate, greater detail and description is included to outline the significant differences identified.

In relation to research aim 2, three themes were identified: 'Children's Provision-Based Experiences', 'Cooperative Home-Provision Links' and 'Influence on Family Life'. In relation to research aim 3, three themes were created, 'Deconstructing Mindsets', 'Parental Responsibilities and Expectations' and 'Reflecting on Past Experiences'. The two sets of themes were connected by their contribution into 'Influence on Family Life'. A visual representation of the themes, along with their subthemes, is presented below.

Figure 1- Thematic Map

(Green –themes relating to research aim 1; Blue – themes relating to research aim 2; Pink – subthemes)



3.4.2a Research aim 2

Children's Provision-Based Experiences

Parents described the opportunity for children to have experiences over and above what they believed they could provide as being a primary reason they accepted the Two Year Offer at the early education provision. The subthemes that constitute this theme are described next.

Relationships and Interactions

The parents described the importance of children experiencing relationships with the staff and other children in the provision. The staff were described as being a key part of their children's lives, providing an additional close relationship, and facilitating access to activities and opportunities.

"They're always chatting to her and encouraging her to talk and the songs. I think it's the songs and all that kind of thing that's helped her come on, yeah... I just liked the friendliness of it and the fact that the staff rotate a lot."

Participant 1

While parents appreciated all staff members, they identified key workers as being of particular importance:

"His Key Worker is [name] and all he ever talks about is [name] and when I bring him to the nursery, I know he's happy because I'll say to him, "Right, it's nursery time now," and he'll get his coat and shoes and everything and he'll come and he's really excited to see her and he does everything in the classroom with [name]."

Participant 5

For some of the parents, an opportunity for their child to spend time with other children was an important element of the experience, as outlined in the comment below:

“She loves being able to like play with the other children, which is something that she can't do at home 'cos there's ... the kids that live around us are a lot older.”

Participant 3

The views the parents shared demonstrated a valuing of the relational aspects the early education provision provided. The parents' thoughts reflected the Governments' claims that early education provision should also be addressing social development (Gibb et al., 2011).

Resources and activities

Parents identified resources and activities in the provision as being of importance. They noted the role play corner, painting activities and outdoor spaces that their children enjoyed accessing. For some of the parents, these resources and activities were seen to be better than their children could otherwise access:

“He needs more stimulation than just the usual, ‘oh we'll go to the shops today or we'll go to Tumble Tots or’ – he needs more than that and I think he gets more than that here... I think the way they've got everything set out in different areas, like the dinosaurs here, and there's playing, you can bake over here, you can ... each kid can decide what they want to do and I like that.”

Participant 4

Some parents thought that the environment of the early education provision was superior to that of other, private nurseries.

“I've seen some horrible nurseries. So I knew that Children's Centres were... It was a nicer environment and we came and we had a good look around.”

Participant 1

Bringing Them On

Parents described the early education provision as furthering their children's development, which was seen as a consequence of the relationships, interactions, resources and activities available for their children to experience. For the parents, 'bringing them on' included furthering their children's confidence, developing their independence, socialising with other children and developing their language and communication abilities:

"She's a lot more confident in herself to do things where she used to be really hesitant to try new things. Now she'll just throw herself straight in, so I was... I was really surprised at how quick it's managed to help her to achieve so much so... like so quick."

Participant 1

"The potty training, they've done a lot with the potty training. She's superb with that. She goes to the toilet on her own now. They put a lot of effort and time in with the children."

Participant 7

"Yeah, he's picked up loads of words. So he'll come in and he's constantly singing, all the different nursery rhymes, and Christmas songs. Where before, he didn't really know any. He knew the odd one, but now, he never stops. Never stops singing. From getting up, to going to bed, that's all he does, is sing."

Participant 6

The concept of 'bringing them on' had a direct impact on parents' experiences and interactions with their children. Communication was particularly important for the parents, who commented that singing and nursery rhymes had had a strong influence on their child's ability to communicate.

Cooperative Home-Provision links

This theme aims to encapsulate the positive relational aspects that parents believed access to the early education provided. It consists of three subthemes: 'Parent-Staff Relationships', 'Support and Advice' and 'Sharing Activities'.

Parent-Staff Relationships

Parents had high regard for the staff working in the settings, describing them as "friendly", "nice", "amazing" and "like family". Staff engaged with the parents who noted that the communication between them was a positive aspect of the setting.

"They'll pull you to one side and they'll tell you what she did and they'll tell her that she can't do it and they'll deal with it that way ... They keep you informed. They don't just not say nothing – there's your child back. They'll keep you informed of how her day's gone."

Participant 6

Regular communication served as a means of reassuring parents that their children were doing well, but also provided opportunities to discuss any difficulties their children were having in an open and honest manner.

Support and Advice

The parents appreciated the support and advice the staff provided and frequently trusted their judgement. The support and advice ranged from issues regarding toilet training, behaviours such as biting, supporting the children to settle in and providing advice on future school placements.

"Well [key worker's name] said it to me, 'Does he use the toilet at home?' and I says, 'Yeah.' She says, 'Well do you want him to use ours because it's little? And he watches the other kids go on as well.' So I says, 'Yeah.'"

Participant 5

"... I'll probably ask their advice nearer the time. I'll put his name down at school but I'll probably ask their advice and just see what other parents have chosen to do."

Participant 4

The advice given was appreciated and received as a result of the positive parent-staff relationships. It was often given informally before and after nursery sessions and as an extension to discussions regarding their children's progress within the setting.

Sharing Activities

The early education provisions run stay-and-play sessions. For the parents participating in this research, either they or their partners attended these activities which provided opportunities to engage with other parents, learn about what their children did whilst at nursery and spend structured time with their children.

"Yeah, we stay with them 'till ten, and have a look at what they've learned, and sing their songs with them. It's brilliant...I love it! ...I just like that they let us get involved. Because when they start going to proper school, you can't."

Participant 2

In addition, the provisions offered games and activities for the children to take home. These shared activities provided another link with the setting. They were an important tangible contribution to forming positive home-provision links.

Influence on family life

The links between home and nursery had an impact on the wider family life. For some parents, the nursery sessions provided them with the opportunity to do shopping and other tasks with greater ease. As one tired mother described it:

"It's the only thing that's keeping me sane at the minute."

Participant 3

The resources and activities the children and parents accessed through the early education provision also had an impact on family life. One parent noted that the resources her son brought home had resulted in more interactions between him and his older siblings. For another parent, the resources she saw her child use were an inspiration for Christmas presents.

"I bought him some foamy... I don't know, I can't describe them, like building blocks and he plays with them in the boo time and he said he wanted some so obviously I got him a massive big box out of Smyth's Toys and I bought him some and I think they're really good. It helps him like focus on stuff and picks the colours out because they're all different colours and he builds little towers and stuff and he knocks them over – I praise him for it when he does it – but then so I thought I might as well buy him some."

Participant 5

In addition, the children's developing independence and language and communication skills were seen to be improving the quality of interactions in the home.

"There's a lot more communication where before she couldn't talk... Now I can understand when she wants dinner... I'm finding it a lot easier to kind of, understand how she's feeling and stuff like that really."

Participant 4

Although the theme of "Influence on Family Life" was identified as primarily being related to the second research aim, the concept also runs through the themes described below. Where relevant, reference is made to this theme.

3.4.2b Research aim 3

Three themes were created in relation to research aim 3: 'Deconstructing Mindsets', 'Parental Responsibilities and Expectations' and 'Reflecting on Past Experiences'. Within these themes, there were some marked differences between the thoughts of parents who were identified as having a fixed mindset (entity theorists) and those who were identified as having a growth mindset (incremental theorists). There were also, however, some marked and unexpected similarities.

Deconstructing Mindsets

Two subthemes were created within this theme: 'Meaning' and 'Sources of Intelligence'. The parents were asked what the term "intelligence" meant to them. There were two distinct views, which correlated to their identified implicit theories of intelligence.

Meaning

Those who apparently had a fixed mindset viewed intelligence as a one-dimensional trait:

"Intelligence is like you're brainy and stuff... that they've got a good job maybe."

Participant 5

"...someone smart and basically knows things and stuff like that..."

Participant 7

In contrast, the growth mindset parents described intelligence as being a broader set of characteristics that were needed for everyday living, rather than being restricted to a formal learning environment.

"[Being intelligent is] being able to understand things, not so much brainy and knowing everything about everything but knowing what you need to know, kinda thing."

Participant 3

"I think academically [you] can be intelligent and by that I mean [you] can be very mathematically minded or... you can have great knowledge of geography or you can be intelligent that way or you can be intelligent in the way of the world and how people work... I think there's different ways you can interpret intelligence."

Participant 4

Although these findings reflect Dweck's theory to some extent, they also indicate that, in this cohort of participants, Dweck's Implicit Theories of Intelligence scale may have been measuring two different concepts.

While there was a marked difference between parents' understanding of the meaning of intelligence, most parents considered that intelligence, as they understood it, was a trait that was influenced by environmental factors.

Sources of Intelligence

Only one parent (identified as having a fixed mindset) described intelligence as being innate, or a result of "different genes". The other six described the source of intelligence as being environmental. They thought that intelligence came from the home environment and from experiences provided in educational settings.

[Intelligence comes from] home because kids the same age, and they can't talk properly. And she'll come home and "ga ga ga". But if they've got told to stop that at home... [you need to] talk to them, do stuff with them. Go out, not just... I mean, we go to museums and everywhere, and talk about it. I've done that with all of them." "I think I do the hard bit. They just go to school after it all."

Participant 2

"It's just the way you're brought up, isn't it... having both parents around I think does help with the intelligence and stuff like that."

Participant 7

In terms of implicit theories of intelligence, the participants in this study had a predominantly incremental view of intelligence, regardless of their responses to the initial questionnaire. It was the way in which this 'growing' of intelligence was achieved that differed, rather than that it could be achieved. This finding is discussed in greater detail below.

Parental Responsibilities and Expectations

This theme consisted of two subthemes: 'Exploration vs Protection' and 'Social Mobility'.

Exploration vs Protection

The parents identified as having growth mindsets viewed their parental role in the learning process quite differently to those who were identified as having fixed mindsets. The former placed more emphasis on allowing their children to experience, to explore, to make, and to learn from their own mistakes.

"And I just think if he's wanting to learn about something, it's best to encourage them; outside of school, as well as inside of school."

Participant 1

"If [daughter's name] goes climbing in the park, I'm not gonna go, oh, no, no, no, you can't do that [name]. I'll let her learn like if she falls, okay, I fell, maybe that's not a good idea rather than trying to mother her too much."

Participant 3

"If that's what you wanna do, if that's what interests you, I want to encourage it as much as I possibly can... So, if [child's name] finds that, I don't know, he's a great scientist of something like that, I think he should be pushed in that area. I just want them to be confident of who they are and not just follow suit."

Participant 4

"Just protect him and look after him, lead him in the right direction... Just make sure he doesn't get into any trouble, but you can only do so much, can't you, when they grow older... I'll try my best to look after him and make sure he's safe because that's what mums do."

Participant 5 "

"I don't want to push him... I say to my other three, do what you can do, don't try and do something you can't do, sort of thing. And that's the same with him. I'll be proud of whatever he does achieve".

Participant 6

Keeping her on the right track. Not letting her go out drinking and partying on weekends and stuff like that. Just basically keeping her on the right track and trying to send her in the right direction.

Participant 7

These differences seem congruous in light of the different meanings given to 'intelligence'. The parents identified having a growth mindset considered intelligence to take many forms, so can be achieved through a whole range of means. The parents identified having a fixed mindset had a far more narrow definition of intelligence. They therefore considered their role as ensuring their children are kept on the "right track" so that they can access those narrower opportunities to become "smart".

Social mobility

The parents recognised their role in their children's longer term outcomes. All of the parents wanted their children to have a job when they got older, with some parents being more aspirational than others.

"I hope she goes to University or makes something of her life – doctor and whatever, you know? I just hope she doesn't go on the wrong path. I mean [we] will do everything to try and keep her on that track... I just don't want her to have a dead-end job. I don't want her to be stuck in some dead-end job where she's not happy."

Participant 7

"Oh, just anything, as long as she's not on the dole. Just a job. A good one, a bad one, she can do whatever she wants"

Participant 2

"I think it's every parent's hope that they'll just get a job and do that kind of thing. I don't think I hold any great expectations for her, you know."

Participant 1

The spectrum of aspiration was not defined by the mindset of the parents and it was not possible to identify what appeared to be causing the different levels of aspirations amongst the participants.

Reflecting on past experiences

All parents reflected on their past experiences, which were a factor in the development of their implicit theories of intelligence and in considering their role as a parent. They also reflected on their past experiences in their beliefs about social mobility. Although some parents reflected on the experiences of others, the most prominent consideration was their own experiences with their parents.

"I went through a bad experience, I got kicked out at 16. I had to fend for myself, sort of thing. So I don't want that for mine, I want to be there and get stuff what they need, and just sort of, I've had to fight for what I've got, and I just keep fighting, sort of thing. It's just the way I am."

Participant 6

"And like [my mother] always says now, really, you've got to learn from your own mistakes in life. Not that she just lets... She wouldn't let us make huge massive mistakes but if I fancied trying something, she'd let us do it and really that's what I want them to do."

Participant 4

"I don't want her going the way I did – working on the roads and stuff like that, I've got to do that, but I want her to make a career of herself and to have something behind her so she can bring her family up and pass it on and stuff like that."

Participant 7

For the parents in this study, reflecting on past experiences had a direct impact on their family life. For some parents, they were keen to avoid the experiences they had had as a child, for others, they were keen to replicate them for their children. Present experiences, while influencing interactions, were not described as being influential in their broader views.

3.5 Discussion

3.5.1 Research aim 1

The results from the questionnaire revealed that a higher proportion of parents have an incremental theory of intelligence than other populations. There are a number of potential explanations for this finding. It could be that parents who have a growth mindset are more likely to send their children to early education provisions in Children's Centres, rather than either not utilising the Two Year Offer or sending them to a private

nursery. Alternatively, parents may have developed a growth mindset as a result of being involved with the Children's Centres. However, analysis of the interview data revealed that parents reflected on their past experiences rather than their experiences of the Children's Centres when discussing their theories of intelligence. It could also be that the use of the term "a person" rather than "you" made the question less personal, which may have influenced the responses. As noted in 2.6.1, participants may have different theories of intelligence when considering others rather than themselves (De Castella & Byrne, 2015).

3.5.2 Research aim 2

All parents greatly valued the early education provisions their children attended. There were no marked differences between the two groups of parents in terms of what they valued. Parents' experiences reflect strategies and examples of good practice that are identified as narrowing early achievement gaps (Springate et al., 2008; Sylva et al., 2012) and promoting school readiness (Ofsted, 2014).

It was interesting to note that, while the parents recognised the importance of the home environment in fostering 'intelligence', they conversely gave almost full credit to their early education provider for 'Bringing Them On'. This was particularly prevalent in relation to language development. It therefore raises questions as to the extent to which parents feel empowered to 'bring their own children on'. A tentative suggestion is that by providing the Two Year Offer for 'disadvantaged' children and not as a universal provision, there is a wider political subtext that poorer parents are *intrinsically* less capable of promoting their children's learning and development.

3.5.3 Research aim 3:

While the parents' experiences of the early education provisions and the aspects that they valued were consistent across both growth and fixed mindset participants, the research findings suggest that the parents do not have theories of intelligence that can be dichotomously defined as incremental and entity. This is because the very concept of

'intelligence' seemed to differ more significantly than expected between the two groups.

Furthermore, two out of the three parents who were identified as having a fixed mindset also described intelligence as being related to environmental, rather than innate factors. This does not fit with Dweck's implicit theories of intelligence framework or the statements used in the Implicit Theories of Intelligence scale. I am aware that qualitative interviews are complex interactions (Potter & Hepburn, 2005) in which there are potential disparities in power between interviewer and interviewee (Kvale, 2006). It could be that the parents were swayed by their perceptions of my expectations as the interviewer.

Another explanation is that the interview process itself encouraged the participants to explore their perceptions. Qualitative research is an active process for both the participants and the interviewer (Willig, 2013). I made the decision to explore the participants' experiences of the early education provisions before discussing their theories of intelligence. It could be that these discussions primed the participants identified as having a fixed mindset to consider their theories of intelligence in relation to their views on 'bringing their children on'.

It could also be that, by the time that parents participated in the interviews, they had two more months of involvement with the Children's Centres who may have been successful in promoting a more incremental theory of intelligence.

3.5.4 Implications for Educational Psychologists

Educational psychologists carry out, to varying degrees, consultations, assessments, interventions, training and research. Within these functions, they work in a multi-layered way with children, young people, parents, organisations and the local authority (Boyle & MacKay, 2007; Scottish Executive, 2002).

The analysis highlighted parents' beliefs that the early education provisions their children attended promoted their social and cognitive development. The practices of the staff that were valued by the parents are reflected as being best practice in literature. Educational Psychologists may wish to play a role in sharing and promoting this good practice with other early education providers through, for example, training or supporting self-assessment processes. Educational Psychologists may also wish to consult with parents, or settings, to identify ways in which to help parents feel more empowered in promoting their children's development. This could be achieved by, for example, using the Interactive Factors Framework (IFF) within context of the steps outlined in the Integrated Framework (Woolfson, Whaling, Stewart, & Monsen, 2003). The IFF would allow for an explicit exploration of environmental factors, while the Integrated Framework would allow for opportunities to evaluate and reflect upon any changes, which could highlight the impact of parental involvement.

Educational Psychologists could be involved in designing and delivering interventions for individuals and groups of children to promote a growth mindset approach. However, this research has highlighted some key issues that should be considered by Educational Psychologists as critical practitioners. As outlined in the systematic review, evidence indicates that attribution retraining interventions, which may include growth mindset approaches, are more effective when students are at risk of experiencing stereotype threat. Therefore, Educational Psychologists should keep this in mind when working with schools. In terms of the current study, it may be that parents have differing interpretations of 'intelligence' and perceptions about what, how and why their children should learn. The nuances of this should be considered.

In addition, Educational Psychologists invested in trying to promote social mobility would benefit from being aware that having a growth mindset does not necessarily correlate to aspirations towards upward social mobility. Therefore, Educational Psychologists may want to be mindful of promoting growth mindsets alongside social mobility as aims. This could be achieved by working with teaching staff to examine, and promote, their aspirations for pupils, perhaps through training sessions. Educational

Psychologists may also draw upon their research skills to hold focus groups with children, young people and parents to explore their aspirations, and their perceived barriers, to help direct interventions.

3.5.5 Limitations

The scope of this study was small-scale and limited by practical constraints. While I recognise that piloting the interview schedule may have helped with refining the questions asked, due to time constraints, this was not possible. The interview schedule was, however, discussed in formal research tutorials, and with colleagues. In addition, this research only considers the parents' perspectives of theories of intelligence and their experiences of Children's Centres across one Local Authority. An exploration of how this relates to the views of staff working in the setting would have provided greater contextual depth to the findings.

In addition, the research was carried out in one small Local Authority. While all the parents interviewed were entitled to the Two Year Offer and therefore are identified as disadvantaged by the Government, they are also parents who have chosen to access their early education provision in Children's Centres and agreed to participate in the research. Therefore, they may not represent the parental group as a whole.

Finally, I recognise that the research methods result in subjective analysis of the data, which is open to interpretation.

3.5.6 Suggestions for further research

The findings from this study raise a number of potential areas for further research. In relation to research aim 1, it would be interesting to explore the mindsets of parents of children who attend other types of provisions, such as private nurseries and school nurseries, to identify whether patterns of implicit theories of intelligence differ amongst settings. It would also be interesting to explore the extent to which 'self'-theories of intelligence differ to 'other'-theories of intelligence.

This study has raised questions about the generalisability of Dweck's (2006) Growth Mindset concept to the UK setting. There is some evidence to suggest that the concepts of incremental and entity theories of intelligence are understood and experienced differently by different cultural groups (Jose & Bellamy, 2012). In light of the findings of this study, this could be explored further in the UK context.

In addition, the research indicates that there is not a clear correlation between mindsets and belief in social mobility. Given that a major aim of early years education is to narrow achievement gaps to promote social mobility, and that parents' aspirations are a key factor in later achievement, the relationship between theories of intelligence and aspirations for social mobility is an area that warrants further research. Research that adopts a longitudinal method would be particularly welcomed.

3.7 Conclusion

This empirical research arose out of a recognition that the achievement gap between richer and poorer children begins to emerge in the early years; access to high quality early education provision and the contribution of parents, in terms of their actions, beliefs and aspirations, help to reduce this gap. This study aimed to ascertain the mindsets of parents whose children attend early education provisions in Local Authority Children's Centres, to explore parents' experiences of the early education provisions in the Local Authority Children's Centres and to explore parents' implicit theories of intelligence.

The findings of this study indicate that parents of children who access the Two Year Offer from early education providers in Children's Centres are highly likely to report an incremental theory of intelligence, at least in relation to others. A number of reasons for this finding were suggested. The analysis found that the parents' experiences indicated that the early education provisions were of high quality and furthered their children's

development. I tentatively suggested that, in being eligible to access the Two Year Offer, some parents may not fully realise their own potential to 'bring their children on'.

The research has highlighted some interesting points regarding the application of Dweck's implicit theories of intelligence in the context in which the current research was carried out. These include the validity of Dweck's implicit theories of intelligence scale, the dichotomous nature of the Growth Mindset framework and cultural variations in the meaning given to the term 'intelligence'. As discussed, two of the three parents who indicated that they had an entity theory of intelligence in Phase 1 described a far more incremental view of intelligence during the interview process. I suggested that this could be a result of the interviewees responding to their perceptions of my expectations as an interviewer, or because the interview process itself led the participants to more actively explore their implicit theories of intelligence. If this is the case, the extent to which Dweck and Henderson's (1989) scale is measuring participants' considered implicit theories of intelligence can be questioned. In addition, the research highlighted that the fixed and growth mindset participants did not hold clearly contrasting mindsets, indicating that Dweck's framework may be too dichotomous. Furthermore, the research highlighted that the parents involved in this study may interpret the term 'intelligence' in a way that is broader and more encompassing than Dweck's Growth Mindset framework suggests, and this may influence their views on learning.

Importantly, holding a Growth Mindset, as measured by Dweck and Henderson's (1989) implicit theories of intelligence scale, does not necessarily equate to having high expectations. Therefore, whilst Dweck's Growth Mindset model can be an important starting point for examining parents' perceptions of learning, and potentially for developing a framework by which to promote high expectations and aspirations, it should be used thoughtfully, with the recognition that individuals' theories of intelligence are complex and multifaceted concepts, influenced by personal narratives and cultural factors.

This research is of relevance to those interested in finding out how parents' interpretations of intelligence impacts on their behaviours towards their children. It may also interest those who would like to explore the cultural and social influences that contribute towards implicit theories of intelligence. Finally, this research is of relevance to those interested in exploring the social psychological influences upon achievement gaps, and ways in which these can be harnessed to contribute towards narrowing those gaps.

Appendices

Appendix A – Questionnaire

Dear Parent/Carer,

I am a Trainee Educational Psychologist studying at XXXXXXXX University and working on placement at XXXXXXXX Local Authority. As part of my training I am carrying out some research exploring what parents and carers of young children think about intelligence. If your child is **aged two years or older** I would be very grateful if you could complete the short questionnaire below.

1. How long has your child(ren) attended the Children’s Centre

___ years ___ months

2. Is/was your child entitled to the two year old free early education and childcare offer?

- Yes
- No

3. To what extent do you agree with the following statements (please tick)¹

	Disagree a lot	Disagree	Disagree a little	Agree a little	Agree	Agree a lot
A person has a certain amount of intelligence and they really can’t do much to change it						
A person’s intelligence is something about them that they can’t change very much.						
A person can learn new things, but they can’t really change their basic level of intelligence.						

For the next stage of my research, I am hoping to chat to some parents about their beliefs about intelligence and their experiences of the Children’s Centre. Any discussions will be treated with complete confidentiality. If you would be willing to talk to me further, **please write your name and contact details below.**

Name: _____

Telephone number _____

If you have any questions about my research, please feel free to contact me on: XXXXX@XXXXX.ac.uk. Alternatively, you can contact my supervisor, XXXXX XXXXXXXX on XXXXX@XXXXX.ac.uk.

¹ Adapted version of Dweck & Henderson’s (1989) Implicit Theories of Intelligence Scale.

Appendix B – Interview guide

<p>My research: I'm interested in finding out what parents think about intelligence and learning. I'm wondering what parents understand by those terms and why they understand them in this way. I'm also interested in what your hopes are for your child's future and your experiences of XXXXX's childcare so far. I'd like to have a discussion with you about it if that's ok? I'll record the discussion and then it will be transcribed. I'll then study all of the interviews to identify any themes. No personal or identifying information will be shared. When I write up the research, there won't be anything that is identifiable to you. You can stop this discussion at any time and if you want to pull out of the research at a later date that is fine too.</p>		
Areas	Possible questions	Clarifying questions/prompts
1. Introduction	Could we say our names for the record?	
2. Background information	<ul style="list-style-type: none"> • Could you tell me little bit about yourself and your family? • How many children do you have? • How old are they? • How many attend the CC? • For how long? 	<p>What I think you were saying was...is that right?</p> <p>Could you tell me/us anything else?</p>
3. Experience of nursery setting	<ul style="list-style-type: none"> • Could we talk a little about XXXX's child care? What are your thoughts on XXXXX's • Why did you choose XXXXX's? • What do you see as their main purpose? • What do you think about their role so far? • Is there anything you have been surprised by? • What is your involvement with them so far? • Is there anything you would like to see more of? 	<p>Could you expand a little on this?</p> <p>Are there any other examples?</p> <p>Is there anything else that you think is important?</p> <p>How....?</p>
4. Understanding beliefs about "intelligence"	<ul style="list-style-type: none"> • Can you tell me what does the term "intelligence" means to you? • What is it and where does it (intelligence) come from? • Where do you think your ideas about intelligence came from? 	<p>Why....?</p> <p>And then....?</p> <p><i>How are you feeling at the moment?</i></p>
5. Thinking about own child, what do you hope for their future?	<ul style="list-style-type: none"> • Could you tell me a little about your expectations for your child's future? • What do you hope for your child's future? • Do you think that might be achieved? How? Why? / Why not? 	<p><i>How is this conversation going for you?</i></p>
6. Any additional thoughts?	<ul style="list-style-type: none"> • Is there anything you would like to add? • Anything you think you have left out? 	<p><i>Are you happy to carry on?</i></p>
<p>Thank you for your contribution to my research. If you would like to get in touch to find out more, please do not hesitate to contact me.</p>		

Appendix C – Participant information sheet

Information Sheet for Participants

Introduction

My name is XXXXX and I am a Trainee Educational Psychologist in XXXXXXXX Local Authority's Educational Psychology Service. I am also studying for my Doctorate in Applied Educational Psychology at XXXXX University. As part of this doctorate I am carrying out some research into how parents view intelligence and achievement and whether XXXXX's childcare settings within the Children's Centres may have an influence in this.

What is the purpose of this research?

The purpose of this research is to help XXXXXXXX Local Authority to understand more about how parents of young children experience the nursery settings in the Children's Centres and their ideas about how children learn. It is hoped that this deeper understanding will help them to develop ways of further tailoring their support of children and their parents.

Why am I being asked to take part and what will it involve?

I would like to have a chat with parents about how they view intelligence and learning and about their experiences of their XXXXXs childcare provision. This can take place either in parents' homes or somewhere else they would feel comfortable. The conversation will be recorded and transcribed. I will then use these conversations to identify and explore any related themes, which will later be fed back to the local authority.

You are being asked to take part because you have one or more child aged at least two years old who attends a XXXXXXXX childcare provision within a Children's Centre in [this Local Authority].

What happens to my information?

All information will remain entirely confidential. Once data has been collected, it will be stored on a password protected computer to ensure confidentiality. Any details that would identify you or your family will be removed and none of this information will be shared with anyone else.

You are under no obligation to take part and may withdraw from the study at any point.

If you have any further questions about this study then please contact me, or my supervisor, XXXXX XXXXX using the contact details provided below.

[RESEARCHER'S FULL CONTACT DETAILS PROVIDED]	[SUPERVISOR'S FULL CONTACT DETAILS PROVIDED]
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Thank you for reading this information.

If you are happy to continue, please complete the attached consent form.

Appendix D – Consent forms

Consent forms

If you are happy to take part in the study, please read the statements below and tick the relevant boxes.

- | | YES | NO |
|---|--------------------------|--------------------------|
| 1. I have read and understand the information sheet for this study and have had any questions answered. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I agree to the interview being recorded and understand that the recording will later be transcribed. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. I agree to the use of anonymised quotes in publications. | <input type="checkbox"/> | <input type="checkbox"/> |

Name of Participant	Signature	Date

Name of Researcher	Signature	Date

If you have any queries about this form or the study please contact me or my supervisor, XXX XXXXX. Contact details can be found on your participant information sheet.

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