

THE UNIVERSITY OF HULL

Investigating ability grouping and group work in the primary school classroom

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Abstract

This thesis focuses on ability grouping and group work within the primary school classroom, and within the context of literacy instruction. The aim of this thesis was to examine the relationship between children's literacy ability group, reading skills and motivation to read (Study 1). As ability grouping requires children to engage in group work, a further aim was to examine children's attitudes to group work and the child specific characteristics that influence children's enjoyment, participation and perceived benefits of group work (Study 2). It was found that children's literacy ability group was related to their expectations of success in reading, but unrelated to the extent to which they valued reading (Study 1). With regard to group work, children's personality traits were associated with their reported participation in group work activities, whilst their academic ability was associated with their reported enjoyment and perceived benefits of group work (Study 2). Implications for ability setting and forming groups within the primary school classroom are discussed.

For my grandma

For always being there for me and supporting my aspirations. Thank you for teaching me to do what is necessary, then to do what is possible and, from that you can achieve what you once thought was impossible! Thank you.

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CHAPTER 1: MAIN INTRODUCTION

School plays an important part in children's lives; its role can impact on students' successes and future opportunities, making some opportunities more likely, whilst reducing others (Hallam, 2011). In recent years the government has legislated to ensure that every child, regardless of background, has an equal opportunity to achieve their full potential: personally, socially and educationally. The government created the Every Child Matters agenda (ECM, 2001), which stated that every public service which comes into contact with a child, including schools, should ensure that children are healthy, safe, enjoy and achieve, make a positive contribution and achieve economic well-being (The Excellence Gateway Treasury, 2012).

In school, children's learning experiences often take place within group based activities. Grouping sizes vary and groups can be used for various different reasons. Groups can differ in their size, composition and the amount of adult support given to children whilst working in groups.

There are two distinct types of groups. The first is ability setting, in which children are grouped on the basis of their ability. This type of grouping is often not utilised for general classroom group work activities, but is used for tasks that typically require pupils at a similar cognitive or ability level to work together. There is a significant history behind ability setting and research studies have investigated the positive and negative effects that this grouping composition may have on children's learning and development. The second type of group concerns those created for general classroom group work activities. This type of grouping is utilised for learning and practical activities within the classroom (often regardless of ability).

Grouping children for learning activities has been found to have a number of positive outcomes on children's learning and development (Hallam, 2011). There is an overlap in the literature between ability grouping (often termed ability setting) and group work as they are closely related and much of the literature discusses the two together. Therefore the present research examines both ability setting and group work within the context of the primary school classroom.

CHAPTER 2: ABILITY SETTING

Abstract

The aim of the study was to examine the influence of ability setting in literacy on children's motivation to read. The study specifically examined how children's reading skill and literacy ability set related to how competent children felt about their reading skill (reading self-concept) and the value they attached to the activity of reading (reading value). Analyses examining children with and without English as an additional language (EAL) were also carried out. Correlational analyses, co-varying for the effects of age, showed a positive association between children's school reading level (ability set), reading skill and reading self-concept, but not reading value. However changes over time in children's reading level related more closely to their value of reading. In addition, correlational analyses suggest that children's reading skill is more closely associated with how well they expect to read (self-concept) than the value they attach to reading (value). Finally, children with and without EAL did not differ significantly in terms of their reading motivation; however the correlation between the standardised assessment of reading and the school placed reading level (ability set) was stronger for children without EAL. Implications, limitations and suggestions for further research are discussed.

Introduction

Ability Setting

For many years it has been recognised that low attainment is a major problem within the UK education system (Ireson & Hallam, 1999). Historically, grouping in the UK has been based on measures of general ability or intelligence, such as verbal reasoning or cognitive abilities; such tests were used by many secondary schools during the 1960s and 1970s to allocate pupils to streams¹ on entry. Since then, many schools have introduced less rigid forms of grouping such as setting² (Ireson & Hallam, 1999). Research has found that streaming still takes place today; 1 in 6 children are being streamed by ability by the age of 7, according to research by the Institute of Education *"We know that once in a stream the opportunities for movement to another stream are limited so life chances are being determined at a very early age"* (Hallam, 2011).

The topic of ability grouping has long been a controversial one. Its main purpose is to provide instruction that is effective for all children. Researchers and educationalists have debated and been interested in the impact of ability grouping on children's attainment and raising standards (Department for Education, 2008). Much of the debate at times has been based on promoting ideologies within education, particularly when it comes to pupil grouping and how best to implement it to promote and raise standards, rather than drawing conclusions based on clear cut discussions or research evidence (Kutnick et al., 2006). Whilst there has been a

¹ Streaming: where pupils are placed into different classes on the basis of a judgement about their overall academic ability.

² Setting: where children in mixed ability classes are grouped for different subjects according to their level in that particular discipline.

considerable amount of research on raising attainment standards, there is relatively little research that focuses on children's social and personal development in the school setting, particularly their experiences of ability grouping and working in groups (Hallam, Ireson & Davies, 2004).

The current educational climate in the UK, with its emphasis on raising standards, rigorous and frequent school inspections, the publication of national test results and competition between schools in terms of league tables, has reduced the opportunities for schools to demonstrate diversity in their teaching methods (Hallam et al., 2004). The DfEE states that:

We do not believe that any single model of grouping pupils should be imposed on secondary schools, but unless a school can demonstrate that it is getting better than expected results through a different approach, we do make the presumption that setting should be the norm in secondary schools (DfEE, 1997, p.38).

Research has also suggested that setting is worth considering in primary schools (Hallam, Ireson, Lister, Chaudhury, & Davies, 2003). A number of surveys have been carried out to discover which type of grouping practices schools implement across England. For example, Hallam et al. (2003) in their survey found that there are many factors which influence how classes are grouped, such as size of the year groups, space and layout of classrooms. Hallam et al.'s (2004) findings also support that of the earlier work of Hallam et al. (2003), as they found that funding and other resources are an important part of grouping and often determine group size. Considerations also include the number of teaching and support staff available to assist teaching and learning within the classroom.

In further examination of ability grouping practices and the reasons for their formation, Ireson, Hallam and Hurley (2005) found that some schools reported grouping for non-academic reasons such as social and behavioural problems. Therefore, pupils may be moved to lower sets for behavioural reasons rather than academic reasons. Indeed, in these classrooms, the pace is generally slower and classes are smaller (Hallam et al., 2004). It has also been suggested that national testing and targets are largely responsible for ability grouping and the reason why some children get moved to lower sets for behavioural reasons (Hallam et al., 2004). Furthermore, location and the size of a school can influence how head teachers and governors decide how the children in their school should be grouped for certain subjects. Larger schools are more likely to adopt some form of setting; with more pupils they are able to adopt ability grouping by year group, rather than mixed ability in one or more year groups (Hallam et al, 2004).

Teachers' beliefs and preferences can influence which type of grouping is used within their classroom. Chorzempa and Graham (2006) supported this notion, suggesting that teachers in favour of mixed ability grouping are so because they believe that more able pupils can help increase their own knowledge and understanding of a topic, as well as benefiting lower ability pupils with good role modelling. Chorzempa and Graham (2006) also found that teachers felt that mixed ability grouping helped higher ability pupils to develop tolerance and understanding of others' needs. Ireson, Hallam and Plewis (2001), also supported by Chorzempa and Graham (2006), found that both teachers and pupils believed that higher attaining pupils when paired with lower attaining pupils can help advance the knowledge and understanding of the lower attaining pupil when solving problems involving higher level reasoning. However, being exposed to lower levels of cognition can have a negative effect on more academically advanced pupils (Chorzempa & Graham, 2006). Although this may be

the case for some children, it is argued that this is not necessarily the case for all, as many do find grouping to be of benefit, providing that the spread of attainment is not too great (Gillies, 2003).

The government is keen to promote ability grouping, particularly in secondary schools because of numerous benefits both pedagogically and socially for all who teach and engage in these practices: “*Grouping students can help build motivation, social skills and independence; and most importantly can raise standards because pupils are better engaged in their own learning*” (DfES, 2005, p. 38).

A recent UK investigation into the effects of pupil grouping in schools at Key stage 2 and 3 was called ‘Grouping Pupils for Success’ (Kutnick, et al., 2006). In this investigation, it was found that grouping was not always used effectively in schools. For example, whilst children were often seated in pairs or groups, they were often instructed to work alone. It was also found that even though a classroom may be promoted as mixed ability, children were often seated around a table with others of a similar ability. When examining how pupils were grouped, secondary school children in higher ability sets were more likely to spend time working in small groups and lower ability pupils were more likely to spend time in whole class instruction for many tasks. It was found that the work given to higher and lower sets was markedly different and children in lower ability sets were rarely given the opportunity to interact with each other in small groups or pairs. This study was unable to establish whether gender manipulated groups were beneficial in terms of attainment gains or were solely used as a method by teachers to improve behaviour and social control within the classroom. With regards to specific curriculum subjects, mixed ability grouping tended to be used for subjects classified as humanities, such as drama. Subjects that tended to favour set ability groups were

subjects such as mathematics. Although the 'Grouping Pupils for Success' report found no evidence to suggest that either mixed or set ability grouping advanced academic attainment, there were many reported benefits of working in groups.

Not everyone would agree that ability grouping has a positive effect on pupils. Hallam et al (2004) found that pupils in lower ability groups often spend more time involved in non-instructional activities and are less likely to ask critical comprehension questions in class. Furthermore, in literacy activities, pupils in lower ability groups are given fewer opportunities to select their own reading material. In addition, there can be detrimental effects on social and personal outcomes for some children. However, quality of the teaching seems to be the most important factor in determining pupil outcomes (Blatchford, Hallam, Kutnick & Creech, 2008).

Research has also found that children with special educational needs, and in particular boys, are over represented in the lower ability classes (Kutnick et al., 2006). Ireson et al (2001) found that pupils of low achievement benefited from participation in heterogeneously formed groups based on achievement compared to participation in homogeneously low-achieving groups. Pupils of average achievement were the only group not to benefit from interaction with others of higher or lower achievement; average achievers were found to do better in homogeneous groups of average achievers.

Although the evidence is mixed, it is suggested that ability grouping does not have a strong influence on attainment across the curriculum. Recent research in English schools indicates that there is an effect of setting on progress in mathematics, but not in English or science. In mathematics, pupils attaining higher levels at Key Stage 2 tend to make more progress in

sets, whereas lower attaining pupils, it is suggested, make more progress in mixed ability classes (Hallam, Ireson, & Davies, 2004). In spite of the government being keen to promote ability grouping, Blatchford et al. (2008) have suggested there are no consistent effects of structured ability grouping in the research literature.

There appear to be complex interactions between grouping, teaching methods, teacher attitudes, the pacing of lessons and the ethos of the school. The grouping of pupils is only one of several factors affecting the learning environment of the classroom (Ireson & Hallam, 1999). Despite a wealth of research investigating ability grouping, Hallam et al. (2004) found that few schools change their grouping practices directly based on research findings into grouping, despite information being widely available and accessible to teachers.

Research indicates that careful consideration needs to be given to each type of ability grouping before implementation, considering the activity and, most importantly, the needs of the children. Indeed, Ireson, Hallam and Hurley (2005) suggested that incorrect placement in primary school could have damaging long-term effects both academically and socially.

Research in this field has found that the way children are grouped can influence how teachers and parents perceive the child's ability, and how children perceive themselves, which in turn can lead to a self-fulfilling prophecy (Hallam, 2011). However, there is very little research examining how ability grouping relates to motivation. This was examined in the present study, in the context of literacy.

Success for All

Success for All (SFA) is a unique programme in which children are taught in ways that are argued to improve and develop a whole range of literacy skills. It can also be considered as quite an extreme example of ability grouping, as children are grouped for literacy lessons solely on their attainment levels rather than their chronological age. Therefore a six and nine year old child may be taught together for their literacy instruction (if their reading skills are at the same level), but will receive all their other teaching in their year group. SFA is a literacy programme which has been adopted in several schools within the UK and is specifically designed for children from the age of 3 up to 11 years.

This program has been developed from work on cooperative learning by Robert Slavin and initially began in the US in 1987. It was originally designed to help children in more disadvantaged areas with their literacy skills. Schools currently participating in SFA in the UK include schools in Nottingham, London, Leeds, Essex and Hull (Slavin, Wordsworth & Jones-Hill, 2005). A number of longitudinal studies have examined different aspects of SFA, and have consistently reported significant gains in children's literacy development in comparison to other reading programs and strategies that have been adopted by the government and schools (Slavin & Madden, 2000; Borman & Hewes, 2003). However, despite some evidence of its success, more research is necessary to systematically compare SFA against other literacy programmes to fully examine the efficacy of this approach. Ongoing longitudinal research in the UK is drawing comparisons between SFA and control schools (non-SFA) on the effectiveness of SFA (Tracey, et al., 2011).

The intention of SFA is to use strategies obtained from research to contribute to children's learning to ensure that children begin to succeed in their early school years and then build on

this success throughout their time in primary school (Slavin, Wordsworth, & Jones-Hill, 2005).

SFA is argued to have a record of preventing literacy failure in schools facing challenging circumstances, as they work to address the diverse needs of children most at risk. The programme is designed to prevent failure by laying strong foundations in both oracy and literacy with nursery and reception children. SFA goes on to provide systematic literacy teaching throughout the primary years, offering a systematic and structured approach to teaching. Children in SFA are assessed every 8 weeks and following each assessment children may remain at the same level or move up or down a level/ability set. These assessments ensure that children are being taught at the right level and that any children who have developed significantly, have an opportunity to advance their reading and writing skills with children who are of the same ability, so that children are continually stimulated and challenged. In this programme, children in Years 1- 6 typically participate in a 90 minute literacy lesson, and are organised into teaching groups determined by their reading level. This often results in children of different ages working together, ensuring that the full 90-minute lesson is at the correct instructional level for all the children in the group.

The SFA (UK) programme is split into 3 levels: Foundation (Reception), Roots (Year 1) and Wings (Years 2-6). In the foundation stage the teacher selects a book every 1-2 weeks to read with the class, building upon new concepts and vocabulary within a wide range of activities, which span the literacy curriculum. A wide range of classroom activities are used, such as small group work and other structured activities to build upon existing vocabulary, and enable the children to speak in complete sentences. The children are also taught to read basic

text in a way which is engaging. Writing skills are also developed through writing short sentences whilst engaging in texts and writing sessions.

Children in Years 2-6 develop their reading and writing with a wide range of literacy based materials, using a wide range of non-fiction and fiction texts supported by appropriate resources and learning materials. Children are encouraged to work in a number of groupings (individual, pairs, small groups and whole class). Similar to the roots stage of the program, children in the wings stage are also taught to develop their writing skills through construction of sentences individually and as a whole class, but this is at a more advanced level (i.e. more complex sentences with greater detail):

The curriculum followed through SFA is very good as is the organisation of pupils to achieve maximum learning. Pupils work in small groups within which all are of similar ability regardless of age. This is having a very positive effect on pupils' attitudes to learning, the quality of their learning and the progress they are making (OFSTED, 2003).

An evaluation of SFA in pilot schools in the UK stated that:

We found learning behaviour inside schools had improved. Children were learning how to problem solve and work in groups and were able to transfer these skills to other curriculum areas. One result, which has excited researchers, is that boys were making as much progress as girls, despite conventional research and national trends, which branded boys slower.

(Fischer Family Trust, 2012).

Despite the need for further research, there are those who argue that this approach is very effective. For example, Russ and Harris (2005) examined data from the SFA programme as

well as interviewing pupils, teachers and parents and concluded that there were overwhelming benefits of the SFA programme. Pupils, teachers and parents believed that the programme met the needs of their children. For example, teachers believed that the programme was a holistic approach to teaching literacy, which the government recommended programme did not offer. In addition to literacy teaching, the programme has a strong behavioural element that teaches children how to behave and supports behavioural management, which can be encompassed across the curriculum. Teachers have also stated that children have made significant progress and gains in their SATs as a result of implementing the programme (Jolliffe, 2006). Teachers using the programme believed that it made their children more critical readers and thinkers. In addition, teachers believed that children who were involved in the programme advanced significantly in their personal development and interpersonal skills, not only in literacy, but in other areas of the curriculum. Russ and Harris (2005) also found that parents believed that the programme had made their children more confident in reading, and as a result they were more willing to read independently. Therefore, it is argued that the benefits of this programme outweigh the costs of implementing it. However, Russ and Harris (2005) stated that teachers did voice one criticism of the programme; they believed some resources were not challenging enough for their pupils, but overall the programme was been argued to be successful.

Educationalists who support SFA argue that it is very effective at improving literacy. However, government recommended programmes are relatively inexpensive in terms of financial support needed and the number of hours which are required by teachers to be involved in the programme in order to make it successful (Jolliffe, 2006). Therefore, the cost effectiveness of this approach should also be considered when weighing up the advantages and disadvantages of this method of reading instruction. Nevertheless, the SFA approach

provides an excellent opportunity to study ability setting within the context of the primary school classroom.

Reading Skill

Many people in different countries fail to reach even basic levels of literacy. This severely hampers their individual circumstances and lowers national productivity (Department for Education and Employment, 1999). As a result, children's literacy development has attracted the attention of teachers, researchers, parents and society.

England has what has recently been termed a 'literacy crisis'; too many children leave primary school unable to read or write well enough (Harrison, 2010). Former Head of OFSTED, Christine Gilbert stated that "*Standards of reading and writing among many 11-year-olds fell stubbornly short of achievable levels*" (Harrison, 2010). It has also been stated by the Department for Education and Skills (DfES) that 1 in 5 are not at the level expected for English at age 11 in the UK (Harrison, 2010). As a result, there is a substantial body of research investigating how best to raise pupil attainment. This body of research has examined financial constraints, resources and group size amongst many others (Kutnick et al., 2002; Hallam, 2004).

Literacy skills can also influence how an individual feels about themselves, and the value they place upon such skills and activities like reading. Literacy skills are often good predictors of future employment and economic status (Madden, 1993) and are important both at school and in wider society (Wang, 2000). It is argued that it is important that numerous literacy activities are embedded and integrated into the curriculum that will help children transfer the skills learnt at school to their home and other social environments (Wang, 2000).

In recent years, the government has suggested that the best way to teach children to read is through using well-structured programmes and a curriculum that focuses primarily on teaching children how to read and write using phonics (Harrison, 2010). Indeed, recently the coalition government announced that they wanted children to be taught to read using phonics, and that they should be able to do so by the age of 6 (Harrison, 2010). In addition, the government announced plans to introduce a simple reading test for 6 year olds to help identify those who need extra help (Harrison, 2010).

In terms of reading at an appropriate level, Carver and Leibert (1995) found no consistent evidence that pupils in a summer reading program, who read library books appropriate for their reading ability for 6 weeks gained in their reading level, vocabulary, rate or efficiency.

McNamara (2001) found that when children have background knowledge of the subject being taught this makes a significant difference in how they understand the topic as it plays a significant role in helping to form an organised, coherent, mental representation of the text. Research by Campbell, Voelkl and Donahue (1997) suggested that children who read daily for their own enjoyment do better academically on reading comprehension texts and reading assessments than those children who report reading less often. This is further supported by Guthrie, Wigfield, Metsala and Cox (1999) who illustrated that the amount of reading a child engages in predicts their reading comprehension, even after statistically controlling for past reading achievement, prior knowledge, reading self-efficacy and reading motivation.

Reading Motivation

Motivation and engagement are essential for effective learning. One way of distinguishing these two concepts is that: “Motivation is about energy and direction, the reasons for behaviour, why we do what we do. Engagement describes energy in action; the connection between person and activity” (Russell, Ainley, & Frydenberg, 2004, p. 2).

One long standing theory which is commonly cited in order to explain children’s motivation to read is that of expectancy-value. This theory was designed to explain children and adolescents’ performance and choice of academic activities (Eccles, Wigfield, & Blumenfeld, 1993). Theorists who support this idea argue that an individual’s choice, persistence and performance can be explained by their beliefs about how well they will do in the activity (expectancy) and the extent to which they value the activity (value).

Fundamentally, this theory can be summarised by two questions: 1) Can I do the task? 2) Do I want to do the task? With regard to literacy, expectancy refers to when a child is motivated to read because they believe they are good at it and expect to do well, in other words their expectations of success or failure in reading are what motivates them. Value refers to valuing reading as an activity which is enjoyable, useful and important. In regards to the domain of reading, Eccles, Wigfield, Harold and Blumenfeld (1993) have illustrated that these components of motivation are distinct, as students have been found to differentiate between their self-concept and value beliefs.

In general, expectancy (often used interchangeably with terms such as efficacy, competency beliefs or self-concept) is consistently found to be closely associated with children’s reading skill (Chapman & Tunmer, 1997; Morgan & Fuchs, 2007; Wigfield & Eccles, 2000). It is

thought that an individual's competency beliefs are shaped largely by their success previously, and are further shaped by the views and opinions of their peer groups (Eccles et al., 1983). Reading value, on the other hand, has been found to be a stronger predictor of engagement in reading activities (Wigfield & Eccles, 2000).

Gambrell, Palmer, Coding and Mazzoni (1996) developed a Motivation to Read Profile to examine these two dimensions of reading motivation. Gambrell et al. (1996) further stipulated that motivation to read was based primarily on four factors: prior experience, social interaction, access to and choice of books. Furthermore, Pintrich (2003) suggested that there are several factors which could motivate a child to read, including self-efficacy beliefs as well as personal interest and contextual factors, such as classroom activities and environment.

Many theorists have built their research around the expectancy-value theory of motivation (Eccles et al., 1983). For pupils to be actively engaged in education, they must value their learning, achievement and accomplishments, even when topics and activities are not of interest to them. Valuing comes from internalisation and integration of skills, achievements and accomplishments (Ryan & Stiller, 1991). In other words, the pupil has to see that the activity or skill is advantageous, and envisage how it can be beneficial to them in order to succeed.

Self-efficacy therefore relates strongly to motivation. Self-efficacy is defined as a person's belief in his or her ability to succeed in a particular situation and, as mentioned previously, is similar to the idea of self-concept or competency beliefs (Chapman, Tunmer & Prochnow, 2000).

During the early years of primary school, pupils generally have a positive view of themselves and their abilities. Pintrich (2003) suggested that children have a broad sense of what it is to be 'smart' and 'dumb' from a young age which becomes more refined as they develop their competency skills. The development of children's self-concept not only has importance in terms of a child's growth, but also impacts on the child in educational settings (Pintrich, 2003). As children progress through years 3 to 6 they begin to perceive distinctive differences between themselves in relation to their academic, social and physical selves. As they reach the end of primary school and enter secondary school, their perceptions of themselves become less positive (Blatchford, 1997).

It has been suggested that whether children believe that ability or effort is required to be successful in an activity can influence how they approach it. Miserandino (1996) suggested that children often have the perception that ability is more important for success in mathematics, whereas other factors, such as effort, may be more important for success in reading, spelling and languages.

In terms of age related changes in motivation to read, Kush and Watkins (1996) examined the long-term stability of children's attitudes towards reading using two surveys; one for academic activities and one for recreational activities. The results showed that initially children's attitudes towards reading were positive, but were less positive in the 3 year follow up for both recreational and academic activities.

Wigfield and Eccles (2000) also examined changes in children's and adolescents' ability beliefs, expectancies for success and subjective value (enjoyment) for different curriculum areas. They found that children's ability-related beliefs and values generally became more

negative with increasing age. It was also found that children who believed they were less competent in activities, often valued those activities less.

Chapman and Tunmer (1997) found that the association between children's reading skill and reading self-concept increased steadily over a period of 3 years. It was further found that the children's reading ability was stable over the 3 years; however, their reading self-concept was not. Several researchers suggested that the declines in motivation observed as children proceed through school are due to changes in school and classroom environments (Wigfield, Eccles, & Pintrich, 1996). Wigfield et al. (1996) suggested that motivation may be reduced by numerous factors such as past experiences, ability grouping, too much teacher control and discipline, and limited opportunities for student decision making and choice.

McKenna, Kear and Ellsworth (1995) have debated whether a positive attitude toward reading influences achievement or whether achievement influences pupils' reading attitudes. It is generally accepted that children who have a more positive attitude towards reading tend to do better academically. Morgan and Fuchs (2007) suggested that there is a bidirectional relationship between children's motivation to read and their reading skills. However, Russ (1989) pointed out that not all poor readers who find reading difficult have a negative attitude towards reading; many maintain positive reading attitudes despite limited skills.

Schumk and Zimmerman (1997) found that pupils with high reading self-efficacy perceive difficult tasks as a challenge, and therefore worked harder to master them using their knowledge and cognitive strategies. They went further to suggest that pupils who were self-efficacious, were more aware of the cognitive strategies they used, and were more able to self-regulate their reading comprehension. More recently, Anmarkrud and Braten (2009)

examined whether perceived reading efficacy and reading task value uniquely predicted the comprehension of a text, after controlling for variables such as gender, achievement in reading, topic knowledge and reading strategy. Anmarkrud and Braten (2009) found that motivation (value) was a significant predictor of reading comprehension after taking into account these variables.

Aim of the current study

The study sought to examine the relationship between reading skill, reading level/ ability set and reading motivation. The school selected in this current study used the programme Success for All (SFA), where children are grouped on the basis of ability for their literacy lessons, regardless of their chronological age. This provides an opportunity to specifically examine the influence of ability grouping on reading motivation.

Hypothesis

1. Children's reading skill will correlate significantly and positively with their expectations of success in reading and, to a lesser extent, their value of reading.
2. Children's school reading level (i.e. SFA ability set) will correlate significantly and positively with their expectations of success in reading and, to a lesser extent, their value of reading.
3. With increasing age, children will value reading less and have lower reading expectancy.

Method

Participants

The participants were children from a school in the UK, which uses a literacy programme called Success for All (SFA). In total, 109 children participated in the study (52 males and 57 females). The children were aged between 7 and 11 years (Mean age 9 years 8.4 months, 1.16 SD) and were in Years 3 to 6 of primary school. In Year 3 there were 28 children (26%); Year 4, 26 children (24%); Year 5, 28 children (26%); and Year 6, 27 children (25%).

Whilst this was not an aim of the study, data was also gathered with regard to number of children with English as an additional language (EAL). There were 44 children (41%) who had EAL (Mean age 9 years 6 months, 1.17 SD). Therefore additional analyses were also carried out to examine possible differences between children with and without EAL.

Materials and procedure

The researcher contacted three schools in Hull that were using the Success for All programme. The researcher was invited to visit two schools adopting the programme and carry out observations of the programme being implemented into the classroom with different ability groups. The researcher also met with teachers who provided details of the resources used to teach literacy. It should be noted that in both schools, there were a high number of children with English as an Additional Language, which was not foreseen prior to starting this project into ability setting. It may be that this characteristic of the school population means that head teachers and teachers within the school seek out alternative literacy programmes that they feel may better suit their pupils' needs.

Following the school visits and observations, one school agreed to take part in the present study which required pupils to complete a questionnaire measuring reading motivation and a standardised reading assessment. In addition, information was required from the school regarding the child's assigned reading level at three different points throughout the year.

Ethical approval was sought and granted from the Department of Psychology Ethics Committee, University of Hull. Permission was required from the head teachers, class teachers and parents prior to children's assessments. Only those pupils that received consent participated in this study. All assessments were carried out in the child's classroom.

Information was collected from the teachers on children's reading ability set in Term 1 (start of the year - Autumn), Term 2 (middle of the year - Spring) and Term 3 (end of the year -

Summer). The assessments given to children for this study (reading skill and motivation) were given during Term 3 and are therefore concurrent with Term 3 reading level.

In this study the researcher is using reading level at the start of the year (Term 1) and reading level at the end of the year (Term 3) to measure change over time in reading level/ability set.

Assessments

Group Reading Test II Form A/B or C/D (Macmillan Test Unit, 2000)

This reading test (GRT II) was used to obtain a standardised assessment of children's reading comprehension skill. In accordance with manual guidelines, children in Year 3 and 4 were either given Form A or B and children in Year 5 and 6 were given Form C or D based on where they were seated. This was to avoid copying. This test uses sentence completion to assess reading comprehension. An example of a statement is: "The _____ was filled with hay", with children being given the following options: play, idea, barn, horse, table. Children were required to select from the five possible options, the best word to fit the sentence. Children were encouraged to guess if unsure, and were informed that they would not lose any marks for giving an incorrect answer. The children were encouraged to complete the assessment. This was an untimed assessment but took approximately 20 – 25 minutes to complete. This reading test (GRT II) was chosen by the researcher as it allowed them to test whole classes of children at a time. This was very important as the researcher was limited in the amount of time they could spend testing the children due to timetabling and curriculum constraints.

Reading Motivation to Read Profile(Reading Survey) (Gambrell, Palmer, Codling, & Mazzoni, 1996)

Children completed the Motivation to Read Profile (Reading Survey) (Gambrell, Palmer, Codling & Mazzoni, 1996). This 20 item questionnaire has two subscales: Self-concept as a reader (10 items) and value of reading (10 items), based on Eccles et al., (1983) expectancy-value theory of motivation. Expectancy refers specifically to a child's expectations of success or failure at reading, whilst value refers to the extent to which children value reading as an activity which is enjoyable, useful and important. To measure this, children are required to read the initial part of a statement and then select, from four options, the end to the statement that best represents their viewpoint. For example: My friends think I am.... a very good reader; a good reader; an OK reader; a poor reader. This measures reading self-concept. An example of a statement to measure reading value is: Knowing how to read well is.... not very important; sort of important; important; very important. The Reading Motivation Questionnaire was group administered and took children approximately 15 minutes to complete.

Results

Initially, descriptive statistics are provided, these illustrate mean and standard deviation values for all assessments, these are also split by EAL. Reading level 1 is the data provided by the school based on 12 national curriculum reading levels ranging from 1C- 4A for each child in term 1 (start of the academic year). Reading level 3 is the data provided by the school in term 3 (end of the academic year). The data in term 3 is concurrent with the assessment data in this current study.

Table 1. Mean and standard deviations raw scores for all participants on all assessments (also split by EAL).

	All		English as a First Language		English as an Additional Language	
	Mean	SD	Mean	SD	Mean	SD
Motivation Expectancy	30.37	4.51	30.08	4.65	30.80	4.30
Motivation Value	31.03	5.28	30.73	5.47	31.46	5.03
Reading level 1	6.25	2.51	6.62	2.30	5.68	2.72
Reading level 3	7.34	2.43	7.61	2.26	6.95	2.65
Change level 1-3	1.09	.772	.98	.67	1.24	.89
Reading Skill (SS)	92.4	9.38	93.21	9.23	91.15	9.56
Age	9.70	1.16	9.77	1.16	9.64	1.21

Multivariate analysis of variance was carried out and it was found that children with English as an additional language did not differ significantly from those that had English as a first language on reading skill, level or motivation, $p > .05$ (see Table 1).

Following this, a comparison examining changes in reading level between children with EAL and without EAL was made (see Table 2).

Table 2: Percentage of children changing in reading level from Term 1 to Term 3

Reading level changes from Term 1 to Term 3	Percentage of children in overall sample	Percentage of children without EAL	Percentage of children with EAL
Down 1 level	2%	2%	2%
At same level	14%	20%	5%
Increased 1 level	64%	60%	68%
Increased 2 levels	17%	16%	18%
Increased 3 levels	3%	2%	5%
Increased 4 levels	0%	0%	0%
Increased 5 levels	1%	0%	2%

Note: All N=108; Without EAL N= 64; EAL N= 44

The table shows the change in reading scheme levels as a total percentage for all children in the sample, percentage of children without EAL and percentage of children with EAL.

Overall, children with EAL were more likely to increase in their reading level throughout the period of one year, than children without EAL.

Following this, correlations were carried out to examine how children’s reading motivation correlated with their age and performance on a standardised reading assessment.

Table 3: Correlations between standardised reading assessment (GRT II), motivation (expectancy), motivation (value) and age.

	1	2	3	4
1	---			
2	.38**	---		
3	.13	.49**	---	
4	.01	-.32**	-.40**	---

Note: 1= GRT II, 2= Motivational expectancy, 3= Motivational value, 4= Child age. ** $p < .01$

Children’s reading skill based on a standardised reading assessment (GRT II) correlated significantly with their motivation expectancy, but not motivation value. Children’s expectancy and value components of reading motivation correlated significantly with each other. Finally, children’s reading motivation correlated with their age; both expectancy and value components of motivation decreased with increasing age. Due to age related changes in motivation, age was controlled for in the subsequent analysis. In addition, as chronological age would also correlate with reading level (i.e. ability set), this was an additional reason to control for age.

Table 4. Partial correlation, examining reading levels, standardised assessment of reading skill (GRT II), reading motivation expectancy and reading motivation value, co-varying for children's age.

	1	2	3	4	5	6
1	---					
2	.92**	---				
3	-.23*	.16	---			
4	.71**	.72**	.02	---		
5	.38**	.38**	.00	.42**	---	
6	.04	.11	.18	.20*	.43**	---

Note: N = 102. 1 = Reading level T1, 2 = Reading level term T3, 3= Change between T1-3, 4 = GRT II, 5 = Motivation expectancy, 6 = Motivation value. ** $p < .01$, * $p < .05$

Children's reading level at T1 was highly correlated with their reading level at T3. In addition, reading level at T1 and T3 was significantly correlated with reading skill on a standardised assessment of reading. Children's reading level at T1 and T3 was significantly correlated with their expectations of reading success (motivation expectancy) but not related to their value of reading. On the other hand, their change in reading level from T1 – T3 was not related to their expectations of success, but was more closely related to their value of reading, although this was not significant. Similar to the results presented in Table 3, after accounting for age, children's reading skill was related to their expectancy of reading to a greater extent than their value of reading.

Finally, separate analyses were carried out by splitting children by EAL status to examine whether this was a factor influencing children's reading ability or the relationship between reading skill, ability set and motivation.

Table 5. Partial correlations for EAL and non EAL children between assessed reading levels (school), standardised assessment of reading skill (GRT), reading motivation expectancy and reading motivation value, taking into account children's age.

	1	2	3	4	5	6
1	---	.91**	-.33*	.64**	.39*	-.05
2	.93**	---	.08	.64**	.36*	-.04
3	-.07	.30*	---	-.08	-.07	.09
4	.78**	.81**	.18	---	.44**	.24
5	.44**	.42**	.01	.47**	---	.51**
6	.14	.23	.25	.19	.38**	---

Note: N = 102. 1 = Reading level term 1; 2 = Reading level term 3; 3= Change between term 1-3; 4 = GRT II , 5 = Motivation expectancy; 6 = Motivation value. Upper right quadrant = scores for children with EAL (n = 41), lower left quadrant = scores for children with English as a first language (n = 61).

Children with and without EAL did not differ in many of the correlations (see Table 5). It can be seen that children who spoke English as an additional language did not differ in the relationship between their reading skill/level and reading motivation from children who had English as a first language. One point to note is that for children with English as a first language, the correlation between their assessment on the standardised reading test and

placed reading level ($r = .81$) was stronger than for children with English as an additional language ($r = .64$).

Discussion

The present study sought to examine the relationship between reading skill, reading level/ability set and reading motivation. In line with the hypotheses, children's reading skill and reading level (ability set) correlated more closely with their expectations of reading success than their value of reading. In addition, children's value of reading and expectations of reading success declined with increasing age. However, change in reading level was unrelated to expectations of reading success, but related (to some extent) to value of reading.

One unanticipated finding when examining the participant data in the study was that almost half of the children had English as an additional language (EAL). However, analysis of the data using a partial correlation comparing children with and without EAL, showed that they did not differ in many of the correlations (see Table 5). Perhaps surprisingly, it was found that the children in the study with EAL did not differ in their reading skill, reading level or reading motivation, when compared to non- EAL children. In fact, this is consistent with a large scale study by McKenna, Kear and Ellsworth (1995), who similarly did not find any significant differences in reading attitudes between children who had EAL and children who did not.

In addition, the two groups did not differ significantly in the correlations between reading skill, reading level and reading motivation in this study, and therefore these groups were kept together in the analyses. Whilst based on a small sample size, this result is encouraging, as it suggests that children learning to read in a language that is not their first are no less motivated to read (see also McKenna et al., 1995). On the other hand, one aspect in which the groups did differ, to some extent, was on the placement into ability groups by their

teachers. Children with English as a first language were more likely to be placed into ability groups that correlated more closely with their reading skill on a standardised reading assessment.

Correlational analyses further supported previous research, as it has suggested that a child's reading skill is significantly correlated with their motivation expectancy (i.e. how well they expect to do in reading), more than their value of reading (Chapman & Tunmer, 1997; Morgan & Fuchs, 2007; Wigfield & Eccles, 2000). It was also found that how well they expect to do decreases significantly with increasing age. This research finding is supported by the previous research of Eccles et al. (1993) and Wigfield et al. (1997), who demonstrated that children's ability-related beliefs for reading also declined with age.

Children's reading level at T1 and T3 was significantly correlated with their expectations of reading success (motivation expectancy) but not related to their value of reading. This research finding is similar to that of Hallam, Ireson and Davies (2004) who found that the ability group which children were placed in did not affect their attitude toward school; children placed in low ability groups were still able to see value in what they were taught. On the other hand, it was found in the current study children's change in reading level from T1 – T3 was not related to their expectations of success, but was more closely related to their value of reading.

The fact that children's value of reading was not affected by their school assigned reading level suggests that assigning children to a low reading group is not damaging to their value of reading. Furthermore, Ireson and Hallam (2009) suggested that the position children were

placed into in ability groups influenced children's self-concept. Children in higher ability groups had a higher self-concept, than children placed in lower ability groups.

With regard to age related changes, research by Wigfield and Eccles (2000) has offered some suggestions in their research for the negative changes in children's achievement-related beliefs and value. One explanation is that children become much better at understanding and interpreting the evaluative feedback they receive, and engage in more social comparisons with their peers. As a result of these processes, many children become more accurate or realistic in their self-assessments, so that their beliefs become relatively more negative. A second explanation is that the school environment changes in ways that makes evaluation more noticeable. Many schools group children in year 5 and 6 based solely on their ability (Hallam et al., 2004). Due to grouping practices, both between and within class grouping, children are more able to judge their own attainment against each other in their class and, as a result, lowering some children's achievement beliefs (Wigfield, Eccles, & Pintrich, 1996). It could be that the school environment, layout of the classroom and activities, naturally lends children to make comparisons between themselves and others in their class.

Limitations

There are limitations of the current study which need to be noted. The current study was only carried out among primary school children, aged 7 to 11 years. Future studies may wish to consider including adolescents in secondary and further education and/or younger pupils. Indeed, ability setting is more common in secondary schools, particularly for core curriculum subjects. In addition, the participants were from a single school in the UK which had adopted a very specific literacy programme, therefore it is not possible generalise these findings to other schools. In addition, the motivation questionnaire was a self-report measure, which may not be an accurate reflection of children's motivation. Nevertheless, self-report questionnaires are common in this type of research. However, the use of different assessment methods, such as observations or interviews with teachers and children may have been useful to obtain additional measures of children's reading motivation. The current study focused only on ability setting and motivation in the area of literacy. Therefore these findings cannot be generalised to other aspects of the curriculum. A final limitation of this study is that the analysis was correlational; therefore questions concerning causality cannot be answered.

Implications for education

Reading skill and school reading level are related to motivation expectancy, but not motivation value: Teachers should consider that whilst pupils' self-confidence and expectations of success may be closely related to their reading skills and level, their value of reading is not. This is encouraging and suggests that even poor readers may value reading as an activity and therefore should be encouraged to engage in reading activities.

Changes in reading level were more closely related to motivation value than motivation expectancy, but not significantly so. Nevertheless, teachers should be aware of the influence of reading levels and that changing a child's reading level over time may influence their value of the activity.

EAL and non EAL children had the same level of reading skill and reading motivation which is encouraging. However, EAL children's reading level was more weakly associated with their performance on the standardised reading assessment. Teachers may need to consider more carefully the ability set that children with EAL are placed into and whether this is based on standardised performance or perceptions of ability/oral language skills.

Further research

As research suggests age related changes in reading motivation, future research may consider why children's reading motivation declines and whether there are some interventions that may be successful at maintaining high levels of reading motivation and engagement.

A large proportion of schools that implement the SFA program are in areas of high social deprivation and face all of the challenges and limitations of aspiration and achievement associated with this. Research has shown that the SFA programme has made an impact on the percentage of children achieving age-appropriate National Curriculum levels. However, there is very little systematic research comparing SFA schools with schools adopting more common types of reading instruction (e.g. government recommended approaches). Further research in this area would be of interest. In addition, future researchers may consider trialling the SFA program in high attaining schools to discover whether similar impacts on attainment are found as in lower attaining schools.

More research would also be important to further understand whether there are any differences between children with English as a first or an additional language. It is arguably surprising that children with English as a additional language did not differ in their reading skill or reading motivation from those with English as a first language (although this is based on a small sample). Due to demographic changes within the UK, it will become increasingly important to understand whether there may be some methods of literacy teaching that may be more appropriate for additional language learners. In fact, the SFA program in particular may be appropriate as children are learning literacy at an appropriate level regardless of their age (which may be more appropriate if they start to learn the English language later in

childhood). In addition, more research is necessary to examine the relationship between children's reading skills and placement into reading groups and whether teachers may be poorer at correctly placing second language learners into correct reading ability sets.

Through observations carried out by the researcher as children were engaging in different literacy activities, it was evident that some children were more effective at engaging in the literacy group work activities than others. As the Success for All programme requires children to cooperate and collaborate within their ability set, it would be useful to further understand the processes involved in group work and children's attitudes to group work activities.

Conclusion

The findings of this study have highlighted that children's reading motivation (in particular their expectations of success in reading) is associated with their reading skill and school assigned reading level. However, children's value of reading is not associated with their reading skill or the reading set into which they are placed. Furthermore, children who had English as an additional language did not differ from children with English as a first language in their reading skill or motivation to read, although this result is based on a small sample. Teachers and practitioners should draw on this research and may wish to investigate further why reading motivation decreases with age and what can be done to reduce it. Indeed, the extent to which a child's reading motivation is influenced by their learning environment is yet to be fully understood.

CHAPTER 3: GROUP WORK

Abstract

This study investigated primary school children's attitudes to group work activities, focusing on reported enjoyment of group work, participation in group work and perceived benefits of group work. The study investigated the characteristics in children which may make them more inclined to work in groups or show a preference for working in groups. These characteristics were sex, age, ability and personality. The results of this study indicated that there were no sex differences in enjoyment or benefits of group work, but that girls reported higher levels of participation in group work. Age was not associated with attitudes to group work. Finally, whilst ability was related to enjoyment and benefits of group work (those with higher ability reported less enjoyment and benefits), personality characteristics were related to participation in groups. The results of this study are discussed in terms of implications for group work activities in the primary school classroom.

Introduction

As discussed in Chapter 2, a number of surveys have been carried out to discover which type of grouping practices schools implement across England (Hallam et al., 2003). Hallam et al (2003) in their survey found that there are many factors which influence how classes are grouped, such as size of the year groups, space and layout of classrooms. Hallam, Ireson and Davies (2004) also supported the work of Hallam et al (2003), as they found that funding and other resources are an important part of grouping and often determine group size. These restrict the number of teaching and support staff available to assist teaching and learning within the classroom, as there are often a number of financial and practical constraints of implementing grouping.

There has been research to suggest that there are changes in grouping practices with pupil age (Baines, Blatchford, & Kutnick, 2003). Baines et al. (2003) reported that primary school age children were most likely to work on individual work either alone or with the support of an adult. Extra adult support in classes reduced as pupils got older. However secondary school age pupils were more likely to engage in peer interaction than primary age children. As pupils increase in age, they are increasingly likely to experience whole class ability sets for core curriculum subjects, as well as more formal row/pair seating arrangements.

Hallam et al. (2004) suggested that the introduction of Standard Attainment Tests (SAT), the frequency of testing in England required by the government and various literacy programmes to support and raise attainment levels, has led schools to focus more on attainment level grouping in order to meet government targets both locally and nationally. Pollard, Triggs,

Broadfoot, McNess & Osborn (2000) stated that the pressure on schools and teachers to raise attainment and meet both local and nationally set targets has led to more emphasis on teaching a subject broadly, rather than topics within that subject area in more depth.

Group work

In almost every classroom setting, group work takes place; whether groups are based on age, ability, gender, type of task, or to meet the needs of the classroom layout. Group work is often utilised in classrooms to help teach curriculum subjects and project work. It teaches children not only how to communicate with their peers, but also gives them the skills they will need in society, such as active listening, turn taking and sharing ideas, amongst many more (Kutnick, Blatchford, & Baines, 2002). Group work can be used for a wide range of learning activities as well as the development of social skills (Kutnick et al., 2002). Recently the focus of group work seems to be not only on academic attainment but also on the social development of the child (Kutnick et al., 2002).

When examining social development, good interpersonal and communication skills are the building blocks of any relationship in order to function in school, in classrooms and in wider society. Children are not naturally born with these skills and therefore it is necessary that they are taught. For many children, school is the first opportunity where they learn how to communicate with children their own age and also to communicate with adults outside of their family. It is therefore wrong to assume that children already have these skills before they enter the school system. Research has found that children's ability to work in groups is often poor (Bennett & Dunne, 1992; Blatchford, Kutnick, Baines & Galton, 2003). It has been argued that this could be due to a number of factors, such as their age, developmental milestones, because they are not taught group work skills, or a combination of the aforementioned factors. As a result, teachers need to set time aside in the school day to teach children these skills if they are going to use them successfully to participate in activities, such as group work (Blatchford, Kutnick, Baines & Galton, 2003).

Before and since the work of Bennett and Dunne (1992), a number of researchers have examined how best to implement group work and how to improve children's ability to work in groups. Research has shown that groups work best when they have to work together and communicate to reach a common goal and when achievement is rewarded as a group, and not individually, but each individual is made accountable within the group for their own learning (Slavin, 1983). A further study by the same researcher found that group work makes diversity in classrooms an asset rather than a problem. It is said to have a positive effect on social relationships with pupils and their classmates. Integrating children with special educational needs and those with a low general academic ability into group work and cooperative learning is said to raise the academic achievement of these children significantly in comparison to other primary schools that do not use cooperative learning as the main approach (Slavin, 1995). However, more research is needed on the effects of cooperative learning, particularly with pupils with special educational needs (Slavin, 1995).

In recent years, researchers have been interested in how group work influences the dynamics of the classroom, interaction between pupils of both sexes and the way in which teachers plan and deliver their lessons (Kutnick et al., 2002). This interest was ignited and brought to the forefront of education in the 1980s and 1990s, as researchers began to identify gaps in education policies and research. Blatchford et al. (2003) stated that group work appears to hold little importance in the formulation of government educational policies in the UK.

Recent government legislation and advice on literacy and numeracy strategies and science at KS3 (11–14 years) rarely mentions group work. Importantly, when group work is mentioned, for example the suggested format for the 'Literacy Hour' in primary schools, it is framed in a teacher or adult led context, little different pedagogically from whole class teaching or

individual work when seated in groups (Blatchford et al., 2003). However, Baines, Blatchford & Kutnick (2003) stated that there have been recent recommendations for group work in policies on the implementation of curricula in classrooms, but these are not generally informed by research evidence on effective group work, literature or teaching practices.

Johnson and Johnson (1999) studied the benefits of group work as a form of instructional learning- whereby teachers or pupils give pupils instructions and support to complete a task. They found that pupils working in cooperative groups perform higher academically and were more motivated to achieve than they were if they worked alone. It was suggested that their knowledge was strengthened when they shared ideas and collaborated using existing information to formulate new knowledge and perspectives.

In order to discover how and when teachers use grouping within their classroom and the social pedagogy surrounding it, Kutnick et al. (2002) carried out a large scale UK project, co-designed with teachers, to increase the likelihood of high quality group work in everyday classrooms in both primary and secondary schools. Kutnick et al. (2002) investigated whether the initial set up of the classroom is disruptive to class time, pupil learning and behaviour. Teachers report that the greatest problem initially with cooperative learning is the additional training and preparation needed to teach lessons involving cooperative learning in groups. However, only a small number of teachers reported these difficulties. Many of the teachers that reported using cooperative learning did so because they found it to be beneficial to both them and their pupils' learning when implemented correctly.

The findings of Kutnick et al. (2002) suggested that teachers may not think strategically about the size and composition of groups in relation to the tasks assigned. They also

suggested some teachers may not be comfortable or be supportive of group work and that pupils may not be confident in their ability to interact. This was supported by more recent research by Gillies (2010) which found that teachers were reluctant to use group work in their classroom, although they could see its potential benefits. Some of these potential anxieties can be overcome when teachers and pupils are prepared for group work

A number of studies have reported teachers' concerns about group work. These include the loss of control, increased disruption and off task behaviour (Cohen & Intilli, 1981), beliefs that children are unable to learn from one another (Lewis & Cowie, 1993), beliefs that group work is overly time consuming and that assessing children when working in interactive groups is problematic (Plummer & Dudley, 1993). A particular concern held by many teachers is that it is only the more academically able who profit from group work or that they get held back by having to work with pupils who have more ground to make up. Teachers also hold the view that some pupils, particularly boys, will misbehave during group work and that this will adversely affect others, the quality of group work and the outcomes. These aforementioned concerns were also expressed when examining the literature on ability groups and may influence teachers' preference and choice of grouping (Chorozempa et al., 2006).

These views contrast with research which suggests that both sexes and all ability groups benefit from cooperative and collaborative group work (Palincsar & Herrenkohl, 1999; Slavin, 2003).

Despite the uncertainties that teachers have about the effectiveness of group work and the reported difficulties with implementing it in the classroom, Blatchford et al. (2002) investigated the benefits of group work on children's learning and how to maximise children's academic and social potential through its use. They argued that when children work cooperatively together, they learn to give and receive help, share ideas and listen to other

students' perspectives. They also seek new ways of clarifying differences and resolving problems. Gillies (2005) supported Blatchford et al. (2002), finding that many studies have reported benefits of using cooperative learning as a teaching strategy. In an earlier study, Gillies (2003) also found that group activities and learning are more effective when they are well planned, have a good structure, clear learning objectives and outcomes. Gillies (2003) further found that pupils in structured groups (as opposed to unstructured groups) were more likely to be cooperative and give verbal help and assistance to each other within the group. The results suggested that structured small group work was more enjoyable and gave the members of the group the opportunity to produce good quality work together.

In light of research suggesting that group work is beneficial under the right conditions, Blatchford, Baines, Davies, Bassett and Chowne (2006) examined whether all types of pupils benefited equally. Blatchford et al. (2006) suggested that all pupils benefit academically from group work regardless of prior attainment or gender. Research by Brigman and Webb (2007) also found that when pupils are given help and support in using group work effectively, this can help to improve academic and social outcomes for pupils in the short and long term. Shacher and Sharon (1994) found that increased participation in cooperative small group discussion resulted in more frequent use of cognitive strategies and greater ownership of the material being discussed; it was these conditions that contributed to higher levels of achievement. Although the majority of children generally benefit from working in cooperative group work structures, it is important to recognise that, due to individual differences, not all children do. Researchers are aware that a large part of the success attributed to group work is largely dependent on the children wanting to participate and displaying behaviour that is necessary for effective communication and engagement. Webb and Mastergeorge (2003) explored pupil behaviours that are necessary for effective help

seeking and giving, as well as the responsibilities of teachers in establishing classroom conditions that bring about effective helping behaviour. It has been suggested that unless pupils are taught how to seek the appropriate help needed when working in a group, they will not benefit from explanations if these explanations are not specific or detailed enough to help them problem solve or build on their previous knowledge. In addition, if explanations are not given in a timely fashion, pupils may even become frustrated working in a collaborative group work structure.

More recent research studies have evaluated the quality of verbal communication and collaborative learning in maths and science, but as many previous researchers have stated, this method of learning can only be of substantial benefit when properly guided and organised by teachers (Littleton & Howe, 2010).

Roseth, Johnson and Johnson (2008) conducted a meta-analytic review of 148 studies involving students aged 11-15 and concluded that cooperative learning has positive effects overall on academic achievement, although not all pupils will benefit from being taught in this way. This is supported by Cantwell and Andrews (2002) who found that students reporting a preference for individual learning were more likely to report discomfort when learning in a group context. They were distinguished by higher levels of social anxiety, lower levels of sociability and with some indication of a lower level of metacognitive awareness. They also found that students who reported both mastery and performance goals were more likely to express a preference for group learning. This suggests a relationship between personality characteristics and preference for group work activities. Cantwell et al. (2002) also suggested that some pupils may not like to work in groups for fear that their knowledge or understanding will be exposed or questioned and, as a result, these pupils may feel

threatened in a group work situation. The inconsistencies in reported findings across studies, such as Blatchford et al.'s (2006) and the more recent meta-analysis by Roseth, Johnson and Johnson (2008) could be accounted for by differences in research design and methodology. Many of the studies investigating group work use self-report measures or observations which can be very subjective or biased and open to interpretation by the pupils or researchers.

The research literature highlights that pupils need to be taught how to participate in groups effectively and to think autonomously and independently of their teacher. In addition, teachers need to think in more depth about the groupings they create and their effectiveness (Blatchford et al., 2003). Kutnick et al. (2003) highlighted that there may be a lack of knowledge about, or a lack of self confidence in, approaching teaching and learning through a collaborative group work approach (Kutnick et al., 2006). This lack of knowledge or understanding to plan and use group work effectively meant that teachers often did not take into consideration the social context in which the group work was undertaken. This is partly to do with a lack of training in how to use group work effectively in both pre-service, in-service and post-service teacher training (Kutnick et al., 2003). The government is now tackling this problem by incorporating group learning activities in both pre and in-service training (Kutnick, et al., 2006). In light of these findings, the government and researchers have collaborated together to make informative handbooks to promote group work in the classroom (Baines, Blatchford, Chowne & Berdondini, 2009). Baines et al. (2003) make additional suggestions for further work in this field, as very little research on groupings in classroom contexts has focused on how grouping practices change over primary and secondary education. However, experimental research and developmental theory emphasise that there are large changes in children's social, cognitive and communicative development over this period which have implications for children's ability to work in groups. Gillies

(2003) supported the need for further work in this field suggesting where the gaps lie, by stating that few studies have reported on what actually happens in groups that facilitates learning. Fewer still have reported on pupils' perceptions of their cooperative learning experiences. Understanding what happens as pupils work in small groups and how they perceive their small group learning experiences is critical to understanding the processes involved in cooperative learning (Gillies, 2003).

Personality

There are many theories and models of personality that aim to encapsulate the traits that form an individual's personality; one of the most commonly used is the 'Big Five' (BF) (Goldberg, 1990). The Five Factor Model has attracted much interest over the past two decades (Marley, Markey, Tinsley, & Ericksen, 2002). According to this model, five relatively independent, extremely broad dimensions of the BF explain individual differences in personality (Block, 1995). These dimensions are agreeableness, conscientiousness, openness to experience, extraversion and neuroticism. In an educational context, these are often used to study the relationship between personality and academic attainment (Poropat, 2009).

Personality traits in adulthood are understood with greater clarity than those in childhood. Developmental researchers have questioned whether and how far the traits found in adults map on to those of children's trait characteristics (Barbaranelli, Capara, Rabasa & Pastoreli, 2003). Nevertheless, standardised assessments have been created and normed on child and adolescent populations, with evidence of good reliability and validity (e.g. Five Factor Personality Inventory – Children: McGhee, Ehrler, & Buckhalt, 2007).

Researchers and educationalists recognise that children's temperament and personality characteristics play an important role in their development and interaction with other people and the world around them. Recent research in education is beginning to recognise the importance of personality traits in childhood and adolescence and how these traits relate to teaching and learning (Costa, et al., 2000; Poropat, 2009).

There is very little research that has examined links between personality characteristics in children and different learning contexts at school. It is becoming widely recognised by researchers and teachers that group work activities can be an effective method of facilitating learning, but there is little research examining the association between children's attitudes to group work and their personality traits.

Researchers are aware that a child's personality can affect their attainment and success at school and influence how children engage with one another (Halverson, et al., 2003). As a result researchers have now begun to investigate personality characteristics more thoroughly than previous research has done. For example, a recent meta-analysis (Poropat, 2009) demonstrated a relatively robust relationship between personality traits (in particular conscientiousness, agreeableness and openness to experiences) and academic attainment. However, the vast majority of this research has been carried out among college or university students. Indeed, of the 135 studies used in the meta-analysis studying the relationship between personality and academic attainment (Poropat, 2009), only eight studies included children in primary education. Therefore, the study of personality traits and how they relate to primary school children's learning and development is arguably still in its infancy.

In addition to attainment, it has been shown that there is a relationship between personality and behavioural and emotional difficulties. For example, Ehrler, Evans and McGhee (1999) found very close associations between personality traits and problem behaviours. Of the Big Five personality traits, conscientiousness, agreeableness and openness to experiences were the most consistently negatively associated with problem behaviours (e.g. anxiety, attentional problems, conduct problems, hyperactivity, social problems etc). More recently, Halverson et al. (2003) found that these three personality traits were associated with different child

behaviour and temperament scales. For example, conscientiousness, agreeableness and openness to experiences were found to be most closely (and positively) associated with attention focusing and inhibitory control and most closely (and negatively) associated with impulsivity. Halverson et al. (2003) also found that children with higher levels of conscientiousness were able to generate strategies for handling social conflicts. Therefore, there is good reason to predict that these personality traits will also be associated with children's ability to participate and co-operate effectively in groups.

Asendorph and Aken (2002) studied personality in a 9 year longitudinal study using the Big Five (BF) personality traits. The researchers asked teachers and parents to rate the children on the personality traits identified. Children were rated at age 4 to 6 by their teachers, at 10 by their parents and 12 years of age by their friends and parents on all of the BF traits. The findings of Asendorpf and Aken (2002) suggested that conscientiousness up to the age of 10 years was a good predictor of academic attainment; it predicted deviations from expected grades and cognitive self-esteem.

In terms of the characteristics that make an effective group, Mulryan (1994) found that children's perceptions of a co-operative group included qualities such as a good or fun atmosphere, a group where everyone works well together, where group members like each other and everybody does equal work, where the group works on the task and there is no fighting or 'messaging around'. Therefore, whether a group works co-operatively together will depend, to some extent, on the personality traits of group members. Of the Big 5 personality traits, three may be more likely to be associated with positive engagement in group work activities: conscientiousness, agreeableness and openness to experiences. For example, a trait such as conscientiousness, which is associated with qualities such as being well behaved and

disciplined, will be useful for children to stay on task and work hard. In addition, traits such as agreeableness and openness to experiences, which include qualities like trustworthiness, kindness, honesty and openness to other people's feelings and actions, will be important to maintain a positive atmosphere within the group.

Sex differences

Sex is a strong predictor of human conduct, and many differences have been documented between the attitudes, behaviours and achievements of males and females (Block, 1976).

Past theory has suggested that girls mature at a much faster rate than boys, particularly cognitively (Maccoby & Jacklin, 1974) and that they have better communication skills, so they are able to communicate their thoughts and feelings and verbalise what they understand and do not understand in an educational context (Brownmiller, 1984).

Sex differences within primary school education are of increasing concern, with boys, in general, underachieving compared to girls (Department for Education, 2011). This has led to growing concern regarding boys' underachievement and efforts made to raise boys' attainment (Department for Education and Skills, 2005). In addition to differences in attainment, sex differences in school motivation and attitudes to school are often found (Gentry, Gable & Rizza, 2002; Logan & Johnston, 2009), although sex differences in attitudes and motivation vary across different curriculum subjects. For example, whilst girls report higher value in reading and music, boys report higher value in sport (Eccles, Wigfield, Harold & Blumenfeld, 1993). In a large scale study of pupils in Grade 3 – Grade 8, Gentry et al. (2002) investigated sex differences in levels of interest, challenge, choice and enjoyment of classroom activities. Gentry et al. (2002) found that girls, on average, rated their classroom activities as more enjoyable, but no sex differences were found in levels of challenge or choice; sex differences in levels of interest were small and less consistent than those found in enjoyment. Therefore, in order to reduce sex differences in educational attainment and school enjoyment, it is important to identify the type of learning environment that both boys and girls enjoy, such as the use of group work activities within the classroom.

Previous research by Logan (2009) examined sex differences in children's preferred learning environment (whether working alone, in a group, or as a whole class). Compared to boys, girls reported a greater preference to work alone in class. Boys on the other hand, reported a preference to work in groups. However, these differences were not significant, but rather represented trends in terms of preference.

In order for groups to work effectively together, the group composition (i.e. mix of pupils of different sexes, ability etc) needs to be considered. Webb (1984) found that both sex and ability differences within a group influences group interactions and learning. Webb (1984) found that in groups in which sex and ability were balanced, boys and girls had similar interaction patterns. However, in sex-imbalanced groups, girls' experiences were not particularly beneficial; they tended to be ignored in majority male groups. Whilst boys received information from both boys and girls within their group, girls were less likely to receive explanations from boys. In addition, girls were generally more responsive to requests for help than boys and were more responsive regardless of sex, whereas boys responded more to other boys rather than girls (particularly in sex-imbalanced groups with only one girl). Interestingly, despite boys and girls being of similar ability in both majority-male and majority-female groups; boys obtained higher learning outcomes than girls. This suggests greater benefits to boys from working in groups. In a similar study investigating sex composition of groups, Underwood, McCaffrey and Underwood (1990) studied pairs of primary school aged pupils on a computer task, in which children received no instruction on how to work together. The results illustrated that same-sex pairs were more productive than mixed-sex pairs: same-sex pairs were found to work by discussion and agreement with each member of the pair contributing, whilst mixed-sex pairs tended not to work by discussion, but rather divided the task between them. Kutnick and Kington (2005) found that girls working

in friendship pairs performed at a higher cognitive level than girls working in acquaintance pairs, whereas the reverse was true for boys; boys worked better when working with an acquaintance than with a friend.

More recently, Pryor (1995) investigated sex differences in group work with computers, as he suggested that boys are more likely to use and be confident in using computers. His study found that girls are more likely to ask boys for help when it comes to questions about computers. Interestingly, this study also demonstrated that personality characteristics and ability were important when working in groups. Girls who were equally assertive and had equal ability were able to work together, whereas boys of equal ability and assertiveness were not. Finally, Hallam, Ireson and Davies (2004) found that teachers were more likely to create mixed sex groups to promote more conscientious work and keep boys on task; girls were regarded as a calming influence on boys that would ensure higher levels of group effectiveness.

Taken together, these studies illustrate differences in how boys and girls work in groups and the benefits they gain from group work. These differences may be due, in part, to differences between boys and girls in dominant personality characteristics. Whilst girls are more likely to identify with more feminine characteristics such as compassion or warmth, boys are more likely to identify with masculine traits such as competitiveness or dominance (Boldizar, 1991; McGeown, Goodwin, Henderson & Wright, 2011) which may influence the way in which they interact in groups.

After much work in the research field of group work, Gillies (2003) stated that the most effective groups are those which are gender balanced and composed of no more than four

people of mixed ability. These group compositions often work, particularly when instruction is structured and tailored to meet the needs of the group and more so when teachers are trained in how to implement small group work in their classrooms.

Ability

Compared to personality traits, one area that has received considerable research concerning group work practices is the level of ability of the pupils, with a substantial body of research examining the advantages and disadvantages of ability setting and same versus mixed ability groups (Hallam, Ireson & Davies 2004; Hallam, Ireson, Lister, Chaudhury & Davies 2003). Students' academic ability is often taken into account when forming groups for classroom activities. It is generally considered that more able children are better placed to facilitate the completion of group tasks and lead a group towards higher level outcomes (Hallam et al., 2004). This would suggest potentially greater academic benefits to less able children from working in groups. However, there is very little research that reports on children's attitudes to group work, comparing children of different abilities. In an interview based study where children could freely report on small group work practices, Mulryan (1994) found that when contrasting high and low achievers, high achievers had a more complex understanding of cooperative small group work compared to low achievers. In addition, high achievers were more focused on attaining the correct solutions to group work tasks. An earlier study by Peterson and Janicki (1979) found that high ability students had better outcomes when learning in small groups (i.e. working cooperatively with peers) whilst lower ability students learnt better in a large group approach (i.e. when working alone but with direction and assistance from the teacher). It was suggested that the lower ability students possibly required the greater direction and support given by the teacher as they did not know the material well enough to work in a group. Furthermore, student's outcomes were related to their attitudes, as the more able students had more positive attitudes in the small group approach, whilst less able students had more positive attitudes in the large group approach.

In addition, research by Chorozenia et al. (2006) suggested that teachers in favour of mixed ability grouping mainly used this form of grouping because they believed that higher ability pupils can help increase their own knowledge and understanding of a topic, as well as the knowledge and understanding of lower ability pupils through the use of good role modelling. Chorozenia et al. (2006) also found that teachers felt that mixed ability grouping helped higher ability pupils to develop tolerance and understanding of other's needs. Ireson, Hallam and Plewis (2001) also found that both teachers and pupils believed that higher attaining pupils, when paired with lower attaining pupils, can help advance the knowledge and understanding of the lower attaining pupil when solving problems involving higher level reasoning. However, being exposed to lower levels of cognition had a negative effect on more academically advanced pupils (Chorozenia & Graham, 2006). Although this may be the case for some children, this is not the case for all and many do find grouping to be of benefit providing that the spread of attainment is not too great (Gillies, 2003).

Age

The age of a child needs to be taken into consideration when examining interactions and group work processes. As children increase in age they generally have more individuality, more self-awareness and a greater understanding of how they interact and influence their environment.

There has been research to suggest that there are changes in grouping practices with pupil age (Baines, Blatchford, & Kutnick, 2003). As discussed in Chapter 2, Baines et al. (2003) reported that primary school age children were most likely to work on individual work either alone or with the support of an adult, whereas secondary school age pupils were more likely to engage in peer interaction than primary age children. As pupils increase in age, they are increasingly likely to experience whole class ability sets for core curriculum subjects, as well as more formal row/pair seating arrangements. Baines et al. (2003) found grouping size for learning decreased as pupils got older, particularly in secondary school.

Halverson et al. (2003), when examining personality, found that there is an increase in conscientiousness scores in middle childhood (6- 12 years old). Children become more able to generate strategies for handling social conflicts and other emotionally arousing experiences. Research has demonstrated that as a child matures and develops the way they think and feel about themselves, their environment and their attitude and approach changes. Research has also shown that educationalists and teachers are aware of the changes in children as they mature and increase in age and so they differentiate their teaching materials and grouping methods (Baines et al., 2003; Hallam et al., 2004).

Aims of the research

As group work forms a significant part of pupils' school learning experiences, this study aims to examine children's attitudes to group work, focusing specifically on enjoyment, participation and perceived benefits of group work. The aim was to examine characteristics within children that may make them more likely to engage in groups, focusing on specific characteristics (age, sex, ability and personality) and how these may be associated with variation in children's enjoyment, participation and perceived benefits of group work.

Hypotheses

1. With regard to age, it is predicted that children will enjoy working in groups less with increasing age.
2. With regard to sex, it is hypothesised that girls will enjoy and participate more in group work but that boys may perceive more benefits to group work.
3. With regards to attainment, it is hypothesised that children with higher levels of attainment will be less likely to enjoy working in groups and will be less likely to find group work beneficial compared to those children with lower attainment.
4. With regards to personality, it is hypothesised that the children who have high levels of agreeableness, conscientiousness and openness to experience will be more likely to participate in group work, and find group work more enjoyable.

Method

Participants

Three hundred and ninety eight children (191 males and 207 females) from four primary schools in the UK participated in this study. The children were aged between 7 and 11 years of age (mean age 9 years and 11 months, 1.15 SD) and were in Year 3 to Year 6. A total of 224 children completed the personality questionnaire (107 males and 117 females). The children who completed this questionnaire were aged between 9 and 11 years (Mean age 10 years and 9 months, 0.59 SD).

Materials and procedure

Ethical approval was sought and granted from the Department of Psychology Ethics Committee, University of Hull. Permission was required from the head teachers, class teachers and parents prior to assessment. Only those pupils that received consent participated in this study. All assessments were carried out in the child's classroom. Children in Years 3 and 4 completed the 15 item group questionnaire (see Appendix 1) followed by Form A or B of the reading assessment (Group Reading Test II), whilst children in Years 5 and 6 completed the group questionnaire followed by Form C or D of the reading assessment and finally the 45 item personality questionnaire (Five Factor Personality Inventory).

For the group and personality questionnaires, the researcher read all the questions aloud so reading ability would not affect completion of the questionnaires. The researcher also worked

through example questions beforehand to ensure that the children understood what was required of them and understood the rating scale. The researcher also worked through the example questions on the reading comprehension test to ensure that the children understood this.

Assessments

Group Reading Test II Form A/B or C/D (Macmillan Test Unit, 2000)

This reading test was used to obtain a standardised assessment of children's reading comprehension skill. Reading skill was used as a measure of educational attainment in the current study. In accordance with manual guidelines, children in Years 3 and 4 were either given Form A or B alternately based on where they were seated to avoid copying. Children in Years 5 and 6 were given Form C or D based on where they were seated to avoid copying. This test uses sentence completion to assess reading comprehension. Children are required to select, from five possible options, the best word to fit the sentence. Children are encouraged to guess if unsure, and were informed that they would not lose any marks for giving an incorrect answer. The children were encouraged to complete the assessment. This was an untimed assessment but took approximately 20 – 25 minutes to complete.

Group Questionnaire

Group work refers to children's enjoyment of, participation in and perceived benefits of working in groups. The perceived benefits that were examined were improvements in concentration, amount of learning, opportunities to gain help from peers, making friends and improved confidence. Participation included asking others for help, helping others, working hard in a group, sharing ideas and working collaboratively. Enjoyment refers to how much children enjoy group work, how fun they believe it is, how favourably group work compares to individual work or other class work and the extent to which they would like to do more group work. This 15 item assessment was created by the researcher to have a measure of children's enjoyment, participation and perceived benefits of group work. An extensive literature search identified that there were no pre-existing published questionnaires that specifically measured these elements of group work. The questionnaire measured children's enjoyment of working in groups (Q1, 2, 8, 13, 15), the extent to which they participated in groups (Q3, 9, 10, 11, 14) and the benefits they perceived of working in groups (Q4, 5, 6, 7, 12). Cronbach's alpha was used to measure internal consistency. Overall this was relatively high: group enjoyment, $\alpha = .81$; group participation, $\alpha = .67$ and group benefits, $\alpha = .64$.

To introduce this assessment, the researcher explained that they were interested in how the children felt about working in groups at school. The children were asked to circle the number which corresponded most closely to them using a 5 point scale (1 = not at all like me, 2 = not like me, 3 = a bit like me, 4 = a lot like me, 5 = very much like me). The children were asked to be honest when giving their answers and were told that their responses would be confidential (See Appendix 1).

The Five Factor Personality Inventory for Children (McGhee, Ehrler, & Buckhalt, 2007)

The Five Factor Personality Inventory for Children (FFPI-C) is a standardised, norm-referenced self-report inventory for use with children 9 years and above (therefore only children in Year 5 and 6 completed this assessment). It was originally designed for use by mental health professionals to measure personality dispositions in children and adolescents, but now this questionnaire is used in a wide range of professional and educational settings. The aspects of personality assessed by the FFPI – C are traits specified through the Five Factor Model (FFM). Only 3 of the 5 factors were measured in this study to create a 45 item questionnaire. Factors selected were those that were deemed most appropriate for the study aims and which have been found to relate most closely to attainment: agreeableness, openness to experience and conscientiousness. It was felt the aforementioned constructs would strongly map onto and correlate with the different aspects of group work as these have more consistently been found to relate to academic attainment, behaviour and temperament (Ehrler et al., 1999; Halverson et al., 2003; Poropat, 2009). To introduce the assessment it was explained that the researcher was interested in their thoughts and feelings about different things. The 5 point scale was explained to the children and they were asked to colour in the circle to represent the answer that was most like them. As before, the children were asked to be honest when giving their answers and were told that their responses would be confidential. The agreeable construct refers to characteristics such as trust, straightforwardness, altruism, compliance, modesty and mindfulness. Openness to experience refers to characteristics such as fantasy, artisticness, to be aware of one's own feelings and those of others, to appreciate novelty, to be intellectually curious and be open to new different value systems. Conscientiousness refers to characteristics such as the ability to be sensible and effective, to

be neat and organised, to feel a sense of morality, to be achievement orientated, self-disciplined and to be careful and cautious.

Results

Analysis of variance was carried out to examine sex differences, followed by correlations to examine the strength of association between constructs and regression analyses to predict children's enjoyment, participation and perceived benefits of group work activities.

Table 1. Mean and standard deviations for all participants, males and females, on all assessments and age

	All		Males		Females	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Group enjoyment (Raw Score)	17.41	5.15	17.32	5.42	17.58	4.84
Group participation	19.20	3.83	18.78	3.95	19.61	3.67
Group benefit	17.16	4.24	17.05	4.21	17.32	4.27
Agreeableness (Standard Score)	99.84	13.86	98.23	14.45	100.57	12.80
Openness to experience	100.09	13.61	99.45	15.27	100.53	12.33
Conscientiousness	102.94	12.22	101.11	13.66	104.22	10.71
Reading Skill	94.80	11.17	94.04	10.78	95.48	11.50
Age	9.93	1.15	9.92	1.16	9.94	1.14

Note: N = 398 for group work, reading and age, N = 224 for personality

There were no sex differences in age $F(1, 391) = .26, p > .05$, reading attainment $F(1, 391) = 1.62, p > .05$, enjoyment of group work $F(1, 391) = .26, p > .05$ or perceived benefits of group work $F(1, 391) = .39, p > .05$. However girls reported significantly higher levels of

participation in group work $F(1, 391) = 4.71, p < .05$ ($\eta = .01$), but this difference was very small. In addition, there were no sex differences in any personality traits: agreeableness $F(1, 391) = 1.56, p > .05$; openness to experience $F(1, 391) = .31, p > .05$ or conscientiousness $F(1, 391) = 3.40, p > .05$.

Table 2. Correlations between age, reading skill, personality and group work constructs.

	1	2	3	4	5	6	7	8
1	---							
2	-.02	---						
3	-.21**	-.05	---					
4	-.17*	.00	.38**	---				
5	-.17*	.17*	.52**	.54**	---			
6	-.09	-.22**	.07	.05	.01	---		
7	-.07	-.06	.19**	.20**	.17**	.61**	---	
8	-.01	-.18**	.08	.07	-.02	.66**	.65**	---

Note: 1 = Age, 2 = Reading skill, 3 = Personality (Agreeableness), 4 = Personality (Openness to experience), 5 = Personality (Conscientiousness), 6 = Group enjoyment, 7 = Group Participation, 8 = Group Benefits. N = 398 for 1, 2, 6, 7 & 8; N = 224 for 3, 4 & 5. * $p < .05$, ** $p < .01$.

Age was unrelated to reading skill and children's reported enjoyment, participation and benefits of group work. However, it was negatively related to their reported agreeableness, openness to experience and conscientiousness; children reported lower scores with increasing age. Reading skill was positively related to conscientiousness and negatively related to children's enjoyment of group work and perceived benefits of group work; those children

with better reading skills enjoyed group work less and saw fewer benefits of group work.

Finally, personality characteristics were unrelated to children's enjoyment of group work and perceived benefits of group work, but were positively related to children's participation in group work; those children who were more agreeable, more open to experiences and more conscientious reported being more likely to participate in group work.

Table 3. Regression analyses examining factors predicting group enjoyment, participation and perceived benefits.

		<i>p</i>	Final β
<i>Group enjoyment</i>			
1 Gender	.004	.442	-.052
2 Age	.011	.261	-.078
3 Ability	.074	.000	-.247
4 Agreeableness		.748	.026
4 Openness to experience		.559	.047
4 Conscientiousness	.077	.775	-.025
<i>Group participation</i>			
1 Gender	.003	.567	.039
2 Age	.009	.702	-.027
3 Ability	.011	.429	-.055
4 Agreeableness		.221	.099
4 Openness to experience		.071	.147
4 Conscientiousness	.061	.715	.033
<i>Group benefits</i>			
1 Gender	.003	.461	-.050
2 Age	.008	.451	-.052
3 Ability	.061	.002	-.221
4 Agreeableness		.522	.051
4 Openness to experience		.304	.083
4 Conscientiousness	.069	.506	-.059

Note: N = 224.

Ability was a significant predictor of children's reported enjoyment and perceived benefits of working in groups, although the proportion of variance explained by ability for both elements of group work was small (approximately 6%). No other factors were significant predictors. When participation was examined, sex, age, ability and personality did not predict any variance in this factor.

Discussion

In the present study, whilst group enjoyment and benefits were inversely associated with skill, group participation was unrelated to skill. However, all personality characteristics studied were significantly and positively related to participation in group work activities, whilst skill was not related to participation. In addition, there was no association between age and enjoyment, participation or benefits of group work and no sex differences in reported enjoyment or benefits of group work. Whilst girls reported higher levels of participation in group activities, this difference was very small. It should be noted here, although the correlations were significant, they were weak.

Previous research examining sex differences in group work (e.g. Gillies, 2003; Pryor, 1995; Webb, 1984) has focused more on whether the sex composition of the group influences group interactions and learning. The current study did not examine this aspect of sex differences; therefore it is not possible to draw comparisons between this study and that of previous research. In the present study however, no sex differences were found in children's reported enjoyment and benefits of group work, however girls reported greater participation in group work activities.

It was found that age was unrelated to children's enjoyment, benefit or participation in group work. This suggests that the level of enjoyment and benefit is not affected by age, as previously suggested by (Johnson and Johnson (1999). The results also demonstrated that the age of the child did not influence their reported levels of participation (Blatchford et al., 2006). This suggests that children of all ages will participate equally in group activities. There was a negative association between all personality characteristics and increasing age,

but again the correlations were weak. Although, this could suggest that as children get older, they generally become less agreeable, conscientious and open to experiences. This finding was supported by Asendorph and Aken (2002) who suggested when participants are asked to rate different aspects of personality, such as agreeableness these ratings decrease with increasing age. For example, children are more likely to be less agreeable as they get older. However, it does contradict Halverson et al. (2003), who found that conscientiousness increased with increasing age.

The research in the current study suggested that the measured personality traits of conscientiousness, agreeableness and openness to experience are all associated with greater participation in group activities; however it should be noted that these associations were weakly related. Poropat (2009) found that these personality traits in particular were associated with academic success. Therefore, whilst these traits may lend themselves towards greater participation in group work activities, they may also lend themselves towards being proactive in other learning opportunities within the classroom.

In the present study, only conscientiousness was related to academic skill, although, again this was a weak association. This is also supported by Asendorph and Aken (2002) who suggest that conscientiousness up to the age of 10-12 years is a good predictor of academic attainment. Furthermore, of all personality traits, conscientiousness is typically the most closely and consistently related to academic success (Poropat, 2009).

The current research suggests that a child's level of ability is more likely to predict their enjoyment and perceived benefits of group work. Although, it should be noted that ability only explained 6/7% of the variance. This is also supported by research by Ireson et al.

(2001) who found that children of lower attainment generally find group work more enjoyable and beneficial as it helps support their understanding of topics being taught through peer tutoring. In addition, less able students may feel that they do better when working with others than alone, and therefore perceive greater benefits to group work. However, despite the perceived academic support of group work, research suggests that less able children may do better in large groups with more teacher support and direction than in small collaborative groups (Peterson & Janicki, 1979). Furthermore, a recent rigorous study examining the effectiveness of an intervention aimed at improving group work quality found that low, middle and high ability students similarly benefitted academically from group work (Baines et al., 2007). Therefore, it is important to note the distinction between benefits and perceived benefits, the latter of which was examined in the present study. It may be that whilst lower attainers perceive more benefits to working in groups, and higher attainers perceive fewer benefits, in reality both benefit from group work, though perhaps in different ways. In addition, less able children reported more enjoyment of group work activities. It may be that the perceived benefits from working in groups lead lower attaining children to enjoy group work more. Alternatively, perhaps higher attaining children feel they are being held back or not recognised sufficiently for their individual ability when working in groups and therefore report less enjoyment. Further research would be necessary to examine this.

Regression analyses demonstrated that the measured variables were generally poor predictors of children's attitudes to group work. Of sex, age, ability and personality, only ability predicted a minimal significant amount of variance in children's enjoyment and benefits of group work and no traits measured predicted significant variance in participation in group work. Therefore, this needs to be considered in terms of whether there are any significant implications for educational practice.

Limitations

This study only examined attitudes to group work with children of primary school age (8-11 years). Therefore, it is not possible to generalise findings to secondary school level or beyond. With regard to methodology, only a questionnaire was used to measure children's attitudes to group work. An additional or alternative method to assess group work may have also been advantageous, for example observations of children engaging in group work activities (Gillies, 2003) or interviews with children (Williams & Sheridan, 2010). In addition, the group work questionnaire only measured participation, enjoyment and perceived benefits of group work. However, there may be many other factors associated with children's attitudes to group work. Furthermore, the group work questionnaire was created by the researcher, due to lack of an appropriate instrument to test this aspect of children's classroom experiences. Reliability analysis of the questionnaire demonstrated that for participation and perceived benefits, the questionnaire failed to meet an acceptable threshold for reliability ($\alpha = .70$ is typically regarded as acceptable). Low Cronbach's alpha values are common when carrying out questionnaire based studies, particularly when few items are used to measure a construct. Whilst this value does compare with others found in the literature (e.g., Komorraju and Karau, 2005, used constructs with $\alpha = .45$), it is important that a robust questionnaire is developed to assess different aspects of children's attitudes to group work. This present study therefore provides an initial base from which to further explore children's attitudes to group work in the future. In addition, children's reading skill was used as a measure of attainment as children need to read in order to access the majority of the primary school curriculum. However, this study could have used a wider range of assessments to measure children's overall academic ability.

Measurement of personality in childhood, adolescence and adulthood are different, as mentioned briefly earlier. During the primary school years, children undergo complex developmental processes, including changes in cognitive complexity and psychological understanding which are likely to affect their ratings of their own personality and hence influence the correlation between personality and academic performance (Wellman & Lagattuta, 2004). Indeed, whilst the personality assessment was standardised and age appropriate, research suggests that the ability to accurately report (and differentiate) between the five personality traits improves with age (Allik, Laidra, Realo & Pullman, 2004).

It is important to note that this study only measured three of the five personality constructs associated with the Big 5 theory (those that have consistently been found to be more closely associated with educational attainment, behaviour and temperament in children). Due to time restrictions given by the schools involved, the 75 item questionnaire was deemed too long for children to complete, therefore only three traits were studied. However, it is likely that extraversion, which includes traits such as warmth, gregariousness and assertiveness, and emotional regulation, which includes traits such as anxiety, hostility, depression and impulsiveness, will also be associated with children's attitudes to group work. With regard to the statistical analyses, as the study mainly used correlational analysis, it is not clear in which direction the associations run or the reasons behind the associations. Finally, future studies could include a larger range of measures in order to have a more comprehensive understanding of how child specific characteristics relate to children's attitudes to group work.

Implications for education

In order for groups to work effectively within a classroom, teachers need to have a good understanding of children's attitudes to group work activities so that this information can be used to structure effective groups. Compositional factors such as ability, friendship and gender, but also class layout and size, are typically considered when composing groups (Blatchford & Kutnick, 2003). Whilst previous research has focused more heavily on sex and academic ability, the present study further highlights a consistent relationship between a number of personality traits and children's reported level of participation in group work activities. This suggests that when creating groups where participation is necessary for the success of the group, teachers should consider how children's personality traits may influence their participation.

In addition, it may be useful for teachers to consider the implementation of training programmes to increase social and relational skills among children to facilitate effective group work. These training programmes could focus, to some extent, on activities that encourage or develop positive personality traits associated with group work participation.

It is important to note that even once group compositional factors have been considered (e.g. personality traits, sex and ability), other issues such as management, resources, physical and practical constraints will be problematic in the execution of grouping within the classroom (Kutnick et al., 2002; Hallam, 2004). Therefore the implications for education should be considered within the context of these other issues.

Further research

Further research examining the influence of children's personality within education would be of interest as there is a considerable lack of knowledge and understanding of this. It would also be interesting to examine whether the pattern of results found in this study would be similar across a range of different academic subjects. In the current study, no subject was specified when pupils were asked about their attitudes to group work. However, it may be that children's perceptions of group work changes based on the specific subject. It may also be of interest to examine in further detail the long term effects of pupil grouping, in particular the effects of training pupils and school staff to use strategies which will enable them to work cooperatively together in groups (Gillies, 2003).

Conclusion

Children's personality characteristics related to their reported participation in group work activities, but not their enjoyment or perceived benefits. On the other hand, their academic ability related to their enjoyment and perceived benefits of group work, but not their participation in group work activities. It is suggested that in, addition to factors such as ability and sex, teachers should consider the personality traits of their pupils when forming groups.

Final Conclusions

The studies in this thesis examined 1) the influence of ability setting on children's motivation and 2) children's attitudes to group work, due to the expectations placed upon children to work together in ability groups. The initial research study demonstrated that children's ability set (in literacy) is related to their expectations of success in reading, but is not related to their value of reading. The second research study examining children's attitudes to group work demonstrated that children's academic ability relates to their enjoyment and perceived benefits of group work (less able children enjoy group work more and perceive more benefits), whilst their personality traits relate to their participation in group work activities. It is suggested that teachers implementing ability setting in schools consider the influence of setting on motivation (and not solely attainment) and that children's ability and personality traits are taken into consideration when forming groups.

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Appendix 1: Group work questionnaire

Questionnaire

These questions ask how you feel about group work at school. Please give the answer that is most like you, no one else will see the answers you have given.

On a scale of 1-5, please put a ring around the one that best describes you.

Name: _____ Year: _____ Circle: Boy / Girl

1	2	3	4	5
Not at all	Not like	A bit	A lot	Very much
like me	me	like me	like me	like me

1. I enjoy group work

1 2 3 4 5

2. I prefer working in a group than alone.

1 2 3 4 5

3. I ask for help when I am stuck from others in my group.

1 2 3 4 5

4. Working in groups improves my concentration.

1 2 3 4 5

5. I learn more working in a group than alone.

1 2 3 4 5

6. I feel I can ask others in my group things I would not ask the teacher.

1 2 3 4 5

7. Group work has allowed me to make more friends.

1 2 3 4 5

8. I think working in a group is fun.

1 2 3 4 5

9. I work hard when I am working in a group.

1 2 3 4 5

10. I share my ideas when working in a group.

1 2 3 4 5

11. I work well with others when doing group work.

1 2 3 4 5

12. Group work has improved my confidence in me and my work.

1 2 3 4 5

13. I would like to spend more time doing group work in class.

1 2 3 4 5

14. I help others in my group when they are stuck.

1 2 3 4 5

15. I like group work better than most other things we do in class.

1 2 3 4 5
