



How can we improve the level of independence in learning through the use of mixed attainment grouping?

Word count - 6291

### **Aim, focus and purpose of the research**

The purpose of the research was to work collaboratively with a research partner to conduct a small-scale study focusing primarily on mixed attainment grouping within the education system. The research aimed to investigate how levels of independence can be improved and supported through the use of mixed attainment grouping within the classroom. During a lesson observation of mine, it was suggested to me that it may be more beneficial to organise the children in mixed attainment grouping rather than grouping the children by attainment, which interested me and led to my influence to investigate this with a class of a lower age. It has been suggested that mixed attainment grouping benefits both the learner and the teacher.

According to the Plowden Report (1967) mixed attainment teaching and grouping provides pupils with equal access to a common curriculum and promotes the matching of learning to suit the needs of the individual learner (DES, 1978). Similarly, a review by Slavin (1990) found that during mixed attainment teaching, pupils are treated more equal during lessons and there is less chance of discrimination between pupils. This review, however, is primarily based on secondary education.

### **Research context**

The research took place within two primary school settings in the county of Neath Port Talbot. Both schools are partnership schools with University of Wales Trinity Saint David. As stated by BERA (2018) researchers must recognise the participants' right to privacy and must accord them their rights to confidentiality and anonymity. Therefore, I will never use the names of participants or the name of the school, to ensure the privacy and confidentiality of the participants are respected at all times. In order to respect the anonymity and confidentiality of the school, staff and pupils, the schools will be referred to as *School A* and *School B*. *School A* is a green school which caters for a variety of children from different backgrounds. The school has 217 pupils on roll aged between 3 to 11 (Estyn, 2018). Estyn (2018) reports that the average proportion of pupils who are entitled to free school meals (FSM) at school A is 27%, which is 8% higher than the national average of 19%. Similarly, the percentage of

pupils identified as having additional learning needs (ALN) is even higher, with a figure of 38% (Estyn, 2018).

*School B*, however, has been categorised as a yellow school. The school caters for 130 pupils aged 3 to 11 years. At the time of inspection, around 18% of pupils were eligible for FSM, which is below the national average of 19% (Estyn, 2014). Similarly, the number of pupils with ALN is about average for Wales with a figure of 19%

### **Short overview of relevant literature**

Throughout education, the effect of attainment grouping in the classroom has been researched for many years. There is a long tradition of attainment grouping throughout primary schools in the UK (Hallam, Ireson and Davies, 2013). Early studies comparing the achievements and standards of children taught in both mixed attainment groups or in more standardised attainment groups tended to reach a similar and simple conclusion, being that grouping by attainment had no clear effect on pupil achievement (Barker Lunn, 1970; Borg, 1965; Hartill, 1936).

Throughout England, primary schools have used and experimented with all of the possible approaches to attainment grouping and organisation (Whitburn, 2001). Following the Primary School Report of 1930 (Hadow Report, 1930), a vast amount of primary schools placed importance on streaming within the classroom, which was widely accepted throughout education until the 1960s. In an early 1960s research study conducted by Jackson (1964), findings revealed that 96% of primary schools across England and Wales chose to organise their students on the basis of their attainment, and in 74% of these schools, children were organised by attainment from the young age of seven years-old. Jackson (1964) later criticised these findings for several reasons. Some of these criticisms being that the classification of the children by their teachers could be seen as unreliable and inaccurate to people on the outside; and that social factors were seen to influence the classification of children, with children of lower socio-economic backgrounds being placed in lower attainment groups.

Following the introduction of the Education Reform Act (1988), the 1990s saw the application of the National Curriculum in schools and saw the application of an

emphasis on raising standards (Hallam, Ireson and Davies, 2013). Attainment grouping and attainment setting was seen as a technique to raise attainment levels in education and all primary schools were encouraged to introduce the technique into their classroom organisation (DfE, 1993). This concept was supported further by the White Paper *“Excellence in schools”*, which emphasised the concept that setting could be far more beneficial in raising standards

*“setting should be the norm in secondary schools. In some cases, it is worth*

*considering in primary*

*schools”* (DfEE, 1997

P.38). Primary schools

use a range of

structures grouping

techniques, some of

which are displayed in

Figure 1. A number of

different attainment

grouping practices in

education are described

and discussed in

literature including

streaming, setting and

within-class grouping

(Taylor *et al.*, 2017). In

primary schools, the

most commonly

|                                                          |                                                                                                                                                                                                      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Streaming<br>(tracking)                                  | Pupils are placed in classes on the basis of a test of their general ability. They remain in their streamed class for most subjects.                                                                 |
| Banding                                                  | Pupils are placed in two, three or four bands on the basis of a test of their general ability. Each band contains a number of classes and pupils may be regrouped within the band for some subjects. |
| Mixed ability<br>(heterogeneous grouping)                | There is no attempt to group together pupils of similar ability or attainment.                                                                                                                       |
| Setting<br>(regrouping)                                  | Pupils are grouped according to their attainment in a particular subject. Setting may be imposed across a whole year group, across timetable halves, within a band or across mixed-age classes.      |
| Within-class grouping                                    | Pupils are grouped within the class on the basis of ability or in mixed-ability groups. They may be regrouped within the class for different subjects.                                               |
| Cross-age or vertical grouping<br>(Cross-grade grouping) | Pupils in two or more year groups are placed in the same class, for all or part of the curriculum. They may be regrouped by setting or within-class grouping or taught as a mixed-ability class.     |

**Figure 1: Types of ability grouping, taken from Hallam, Ireson and Davies (2013).**

practiced grouping is within-class attainment grouping, where children are organised into “attainment tables” within a class of a variety of different attainment levels (Marks, 2013). In direct contrast with this organisation and these groupings, mixed attainment groups are set up to create and support teaching and learning groups with a range of prior attainment (Taylor *et al.*, 2017).

Much of the research on attainment grouping and setting has been undertaken to determine whether levels of student attainment are higher with different types of grouping and the impact this grouping has on the attainment levels of particular

groups of pupils (Hallam, Ireson and Davies, 2013). The majority of experimental research has focused primarily on whether grouping in education should be of similar or mixed attainment (Baines, Blatchford and Kutnick, 2002). Supporters of attainment grouping in education argue that organising students into attainment groups give teachers the opportunity to challenge and stretch the most 'able' students and therefore, present them with more time to support students who may be struggling (DfES, 2005). It has, however, discussions have taken place regarding the gain in achievement made by children in higher attainment groups being the clear result of the more challenging curriculum and teaching they receive in their education, and it has also been discussed that if the course content is kept the same throughout, then the gain these pupils experience will disappear (Whitburn, 2001). From existing research and literature, the supporters of grouping children by attainment identify a number of positives from the organisation method. Whitburn (2001) states that when children are grouped by similar abilities, faster pupils are not held back by slower and less able students, resulting in the children maintaining an interest in a subject and increasing their motivation levels. Similarly, the pace of learning can be adapted to suit the needs of the group in focus.

Nevertheless, it is well-researched that attainment-based grouping and organisation has very little, if any, overall benefit with student achievements (Burris and Welner, 2005; Higgins *et al.*, 2015; Ireson, Hallam and Hurley 2005). Research indicates that while small gains with achievements may be made by higher attainment students, the impact on students placed in lower attainment groups is mostly negative (Boaler and Wiliam, 2001; Burris and Welner, 2005; Chambers, 2009). This ranges not just to academic attainment, but also to the experience's student experience, with students placed in lower attainment groups report that they are unhappy with being set in certain groups (Boaler, Wiliam and Brown, 2000; Zevenbergen, 2005) and evidence shows that some develop poor self-confidence (Bartholomew, 2000). Adding to this, Boaler, Wiliam and Brown (2000) point out that organising children by attainment is negative for students in high attainment groups, as well as those in lower attainment groups. Findings demonstrate that students in higher attainment groups have reported negative experiences in their groups, such as feeling under pressure and lacking confidence in their work (Taylor *et al.*, 2017). Researchers who support mixed attainment teaching have identified a number of positives to this organisation method. Whitburn (2001) stated that pupils in lower attainment groups are deprived of

opportunities for learning from the answers, explanations and discussions of pupils of a higher attainment. By organising children in mixed ability groups, lower ability children are able to learn from their peers. Similarly, within-class ability grouping alters the normal environment of the class and may negatively affect the feeling of community within the classroom (Whitburn, 2001).

Although there is relevant literature available which presents both benefits and limitations of the different types of grouping, it fails to identify accurate and valid results specifically on the Foundation Phase.

### Explanation of the lesson study design

The research used a lesson study approach. A lesson study is defined as a form of practical development for education professionals where teachers and practitioners work collaboratively to create a

lesson plan, teach the lesson and observe aspects of the lesson in order to successfully collect data on the students' learning, and use this data to further develop and refine their lesson (Stepanek, 2007). It has been described as a process that professionals engage and contribute in to learn more about the effective practices within education, and developing effective practices

that improve learning outcomes for all students, not just a select few

(Stepanek, 2007). The lesson study process is illustrated in Figure 2. Lesson studies are regarded as a window on the view of education shared by the group of teachers. During the lesson, one teacher teaches the lesson, while the remaining teacher(s) make detailed records of the learning and teaching as it unfolds. This data is later shared and used to reflect on the teaching and learning more broadly (Lewis, 2002b; Lewis, Parry and Murata, 2006). Peter Dudley introduced the development of

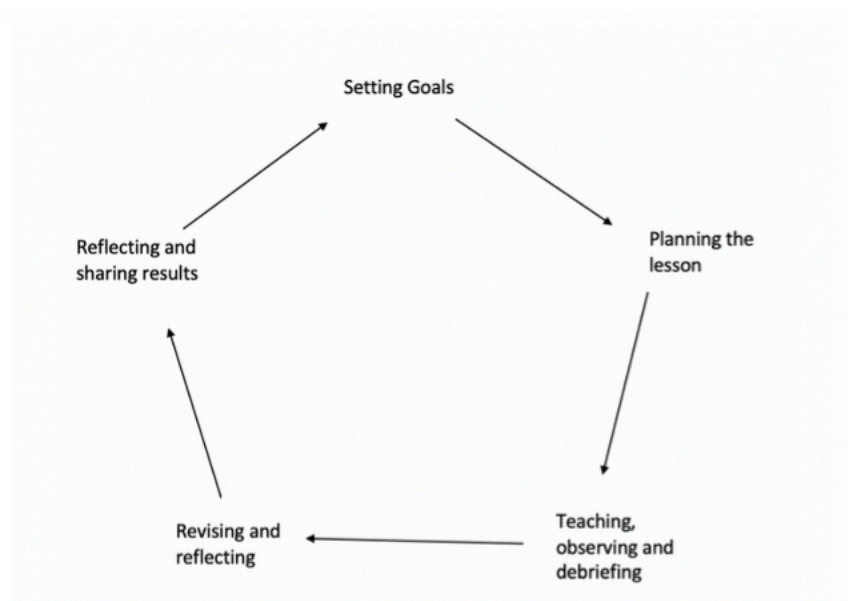


**Figure 2: The Lesson Study Process**

lesson study to the UK in 2001, and its presence has increased since (Dudley, 2015; Stepanek, 2007).

During the lesson study, the research tools being used are: observation of learner participants in the lesson, teacher reflective notes and semi-structured focus group interviews. For the purpose of the research, qualitative research methods were chosen. Kumar (2014) suggests that the main focus within most forms of qualitative research methods is to understand, explore, discover and clarify certain situations, a variety of feelings and the beliefs of a specific group of individuals. With qualitative research, the researcher seeks validity and accuracy by collecting information from multiple sources (Drew, Hardman and Hosp, 2008). When resulting the collected results, researchers opting for qualitative methods will tell the story in narrative form, which will describe the whole setting and broad scope of the study in order to present a more understandable picture (Drew, Hardman and Hosp, 2008). Semi-structured focus group interviews were chosen as the most effective method of data collection for this research due to the interviews being completed with Foundation Phase children. According to Thomas *et al* (1995, P.655), a focus group interview is a research method that uses “*in-depth group interviews in which participants are selected because they are a purpose*”. Within semi-structured interviews, the researcher is fully aware of the area in which they wish to explore but are given the freedom to explore it exactly how he or she wants (Menter *et al.*, 2011). Previous research has indicated that focus group interviews are one of the most common and most popular methods of qualitative data collection throughout academic research (Bloor *et al.*, 2001; Krueger and Casey, 2000). Krueger and Casey (2000) pointed out that focus group interviews are used as they may make a group if participants feel more comfortable in the interview environment, and therefore, may provide more valid data in the research. Focus group interviews have the potential to provide information about wide range of ideas and feelings that participants may have about particular issues and topics, as well as highlighting the differences in perspectives between a group of individuals (Rabiee, 2004). In order to collect relevant data, a semi-structured focus group interview was conducted with 3 children in order to gain their opinions on certain aspects of the lesson. During the interviews, a range of scripted questions were asked, but some of the questions however, were stimulated from the responses of the participants. Through the use of face to face interview

questions with a group, it was effective to observe the children as they answered the questions as we were able to see whether a child was influenced by another response.

Children have been viewed as “*the best sources of information about themselves*” (Docherty and Sandelowski, 1999. P.177), but the importance of the researcher being able to enter the world of a child and childhood culture to be able to see the situation through their eyes has been highlighted by Cohen, Manion and Morrison (2011). Therefore, alongside focus group interviews, observations of learners in the lesson took place in order to see the lesson through the eyes of a child. Throughout educational practice, observations have been considered to be essential in good practice. It has been highlighted that it is through observations that you get to know the children and are, therefore, able to use this knowledge to improve future practice (Barber and Paul-Smith, 2012). The distinctive feature of observations as a research method is that it offers the researcher the opportunity to gather live data from natural environments (Cohen, Manion and Morrison, 2011). As stated by Robson (2002) what people do in a natural environment may differ from what they say they do, and therefore, an observation provides a reality for researchers. Also, the approach the researcher takes to the observation is crucial. With carefully prepared recording schedules, researchers are able to record their findings as soon as they see them happen, rather than recording the event in hindsight and misunderstanding or misinterpreting a situation (Cohen, Manion and Morrison, 2011). In order to conduct the observation, myself and my research partner used and adapted the Leuven Scale to suit our research. We adapted the scale to mark the children on multiple different aspects of the lesson in order to identify the level of independence the children showed during the lesson. During the observation, each child was given a mark on the level of independence shown, the level of engagement shown, and the level of understanding shown as the lesson progressed. These marks were then analysed by myself and my research partner to conclude how the level of independence can be improved in education.

As well as the above, the research involved reflective practice. Reflective practice is an active process of thinking about something, but some may define it a crafted and precise practice that has specific meaning and associated action (Loughran, 2002).

The necessity for individuals to develop their understanding about their work and the understanding to demonstrate their skill through their work, has been a critical method in informing the profession about important and specific aspects of the practice (Loughran, 2002). There has been recognition that reflection is essential in sustaining professional health and competence and has recognised that the ability to exercise professional judgement on a lesson is informed through reflection on practice (Day, 1999). In regard to teacher education, reflective practice became popular following Schön's (1983, 1987, 1992) reminders of the clear importance of the link between reflection and practice.

Brookfield (1995) suggests that, in order to successfully become critically reflective, teachers should examine and critique their practice through four lenses. This model of reflection reflects from the views of yourself, the views of a peer, the views of the learner and the views of relevant literature. I have identified this model of reflection to be the most effective for my research as I am investigating the views of students as well as the views of relevant literature, peers and myself.

During the research, myself and my research partner taught and observed a class of year 2 students which has been allocated by the schools, to investigate how the levels of independence in learning can be improved through the use of mixed attainment grouping. When teaching, 3 children in each class were chosen as target children by myself and my research partner and later took part in a semi-structured focus group interview. These 3 children were identified as a representative of the population of the class as there is a selection from each attainment group.

### **Ethical considerations**

Throughout the research process, the ethical guidelines set out by the British Educational Research Association (BERA, 2018) were followed and respected at all times. Denscombe (2010) indicated that it is essential to gain ethical approval from an Ethics Committee before anyone starts any type of research. In order to gain ethical approval, an ethics form was completed and approved by the Ethics Committee at University of Wales Trinity Saint David ([appendix 1](#)). Once ethics were approved and finalised, consent forms were sent to the parents of children who would be taking part

in the research in order to gain “*informed voluntary consent*” (BERA, 2018. P.9) ([appendix 2](#)). Additionally, the assent of participants was gained through the use of an ‘opt-in or opt-out’ method by children using a ‘smiley face’ to show they are willing to participate and a ‘sad face’ when the children wanted to leave the group interview (BERA, 2018) ([appendix 3](#)). Under the guidelines presented by BERA, it is essential and critical for researchers to take the fundamental steps to ensure participants understand the research process and the structure of the research fully. This understanding includes the reasons for their voluntary participation, how the data from the research will be used and stored, and how and to whom the results and findings will be reported (BERA, 2018). All of the required information was presented on consent forms and discussed with the children.

Additionally, participants were aware of their right to withdraw from the research at any time and were informed that if they decided to withdraw from the research, all information and data regarding the participant would be destroyed (BERA, 2018).

Similarly, throughout the research, the confidentiality and privacy of all participants was respected at all times. Pseudonyms were used throughout the research process to hide the identity of participants and the participating setting. BERA (2018, p.21) states that “*the confidential and anonymous treatment of participants’ data is considered the norm for the conduct of research*”. Thus, the names of participants and name of the school were changed.

### **Lesson study 1**

The first Lesson Study was conducted in *School B*. The session took place in the library, with a group of seven children. The group was originally going to be bigger, but due to absences within the class, numbers were lower than expected. In the beginning of the session, the children re-visited a book that they read in a previous lesson and focused on the directional language they identified in the book. Once the children were confident with the book, they took it in turns to create sentences using the directional language used in the book and wrote these questions on paper.

During the session, a small sample of target children were marked on their levels of independence, levels of engagement and levels of understanding during the session. These marks are presented in Figure 3 and again in Figure 4.

| Observation   | Child 1(B) | Child 2(B) | Child 3(B) |
|---------------|------------|------------|------------|
| Independence  | 4          | 1          | 3          |
| Engagement    | 3          | 1          | 3          |
| Understanding | 4          | 2          | 2          |

**Figure 3: Target children's observation marks**

During the session, Child 1(B) was marked highest on all aspects of the scale. He spent most of the session answering questions that were opened up to the group and spent a vast amount of time helping other children. Child 1(B) needed very little assistance during the set task and did not need instructions to be repeated, which is the reason for his level of independence being marked with a 4. Similarly, Child 1(B) was marked a 3 on level of engagement as he was busy with the activity for the majority of the time. He stayed on task but was easily distracted by others on few occasions. Lastly, Child 1(B) was marked a 4 for his level of understanding during the session. He completed most of the work to a good standard and spent his time assisting other children with spelling and sentence formation and gave good ideas throughout discussions.

Child 2(B), however, was marked considerably low on all aspects of the scale. In regard to independence levels, the child was marked with a 1 as he continuously needed assistance from an adult and/or other students in the group, and instructions needed to be repeated multiple times to keep the child on task. Similarly, Child 2(B) was very quiet during the whole session. He stated he did not want to complete the work once he found out there was writing involved but showed higher levels of independence and engagement in the online quiz. In correlation with the child's level of understanding, a slightly higher mark of 2 was given. The child seemed absent from the task and displayed no energy. He spent time looking around the library, lost concentration multiple times and spent a lot of time seeing what other children were doing.

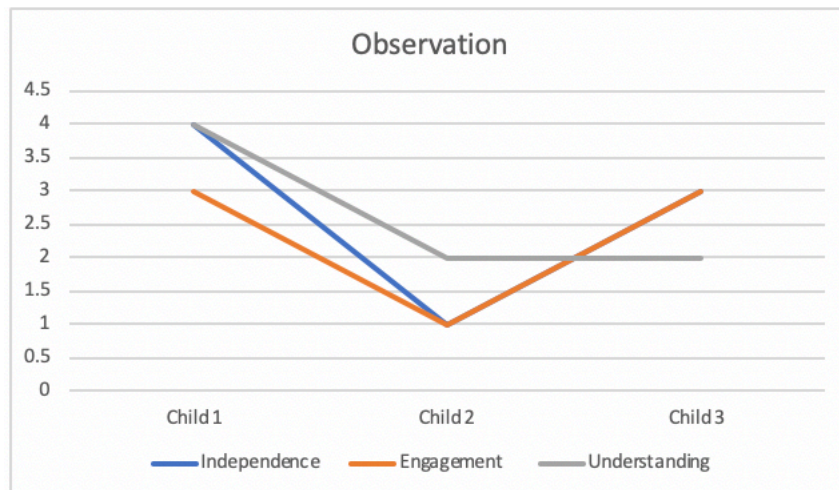


**Figure 4: Target children's observation marks**

Child 3(B) was marked average on levels of independence and engagement but was marked considerably low on level of understanding in the session. The child was very quiet during the session but knew what she wanted to say when asked a question, which demonstrated she was listening to other students throughout the session. She asked for no support with the task but looked distracted throughout and showed she was struggling with the work. Throughout the activity, it was evident that progress can be made with the child's learning, but the child was easily distracted no needed to be kept on task.

At the end of the lesson, a semi-structured group interview was conducted with the target children. The questions asked during the interviewed can be found in [appendix 4](#). During the group interview, Child 1(B) was enthusiastic about the lesson and he enjoyed working with different materials such as *Kahoot*. When asked whether the children preferred working in his normal group or mixed ability groups, he stated he preferred the mixed ability group as he enjoyed helping other children and enjoyed receiving support from other children. He also stated that he preferred to sit in a group around a table rather than sitting in rows as it provided the students with opportunities for discussion and opportunities to share ideas. The child also asked whether mixed ability groups could be introduced to the organisation of the classroom, as he found it beneficial to work with children of different abilities.

When asked the same questions, Child 2(B) expressed their enjoyment of the lesson by stating it was fun to take part in the quiz and do something different during a lesson. He also stated that he preferred to work in a mixed ability group as this gave him the opportunity to learn off his peers with spelling, as this is something he is not confident with and struggles to ask for help. Although Child 2(B) expressed he preferred to work in mixed ability groups, when asked would he rather sit with friends or students who could support him, he answered with friends, but gave no reason for this.

During the same interview, Child 3(B) expressed enthusiasm about the lesson, but was unable to give a reason for this answer, demonstrating the child may have copied the answers of other children. In the interview, Child 3(B) sat quietly and did not answer many questions. However, when the child did answer, the answer was largely influenced by the responses of other children.

From the results of the lesson study, it was evident that changes needed to be made in the second lesson study in order to collect valid and reliable results. Although the children expressed their enjoyment and preferred learning arrangements, observations demonstrated that some of the children were struggling in the environment. In order to overcome this, children may have benefitted from working directly with a partner to provide opportunities to learn off others.

## **Lesson study 2**

The second Lesson Study was conducted in *School A*. For the sake of this lesson study, changes were made from the original plan. Instead of working with a small group, the session took place in the classroom with the whole class. During the lesson, the lower ability groups were mixed with the higher ability groups to provide support and discussion to peers, with a child from a higher ability group supporting another child from the lower ability groups. This meant each child had a partner with them who was able to support them with their work. The lesson focused on a sense's poem all about Wales. At the start of the lesson, the children took part in a recap of a previous lesson discussing the 5 senses and defining adjectives as a class. The children were then sent to tables in new groups, to write a senses poem about Wales with the use of adjective mats and other students for support. As well as resources,

the children were given a success criterion to follow to ensure they were producing a good standard of work.

As is stated above, during the session a small sample of target children were marked on their levels of independence, levels of engagement and levels of understanding during the session. These marks are presented in Figure 5 and again in Figure 6.

| Observation   | Child 1(A) | Child 2(A) | Child 3(A) |
|---------------|------------|------------|------------|
| Independence  | 3          | 2          | 4          |
| Engagement    | 4          | 2          | 5          |
| Understanding | 4          | 2          | 5          |

**Figure 5: Target children's observation marks**

Throughout the session, Child 1(A) was marked higher than average on all aspects of the scale. During the introduction on the carpet, Child 1(A) was eager to answer questions that were opened up to the class. When working in the mixed ability groups, Child 1(A) accepted help that was given by a partner and worked well in the group environment. The child was engaged in the lesson for the majority of the time and completed the work to a good standard. At some points, however, the child waited for their partner to share good ideas about adjectives and what they think would work well in the poem. During the task, the child followed the instructions that were given, but sometimes these instructions needed to be given multiple times in order to stay on task.

Child 2(A), however, was marked relatively low on all aspects of the scale. During the session, the child assisted their partner to come up with ideas for their poem but required a high level of support from the additional adult to instigate those ideas. The child used the resources provided to assist with the task, and therefore, was able to generate discussion with their partner. However, although there was a success criterion for the children to work from, Child 2(A) needed to be reminded by an additional adult of how the poem needed to be set out and continued to set out the poem incorrectly. To add to this, at some point during the session, the pair were not engaged and were spending their time looking around the classroom or getting out of their seat.

Receiving the highest marks in all aspects of the scale, was Child 3(A). The child was willing to answer questions during the introduction on the carpet, which demonstrated a high level of understanding with poems and adjectives. As the groups moved to their groups, the child assisted his partner well with ideas, provided support with spelling and continuously reminded their partner exactly how the work needed to be organised. Similarly, Child 3(A) used the resources to provide ideas for their partner and to demonstrate how particular words are spelt. The child was engaged throughout the task and continuously made their partner aware of the success criteria to ensure everything was achieved to the highest standard. At some points in the session, however, Child 3(A) could have taken a step back in the task and allowed their partner to think of their own ideas rather than telling him what they thought was a good idea.

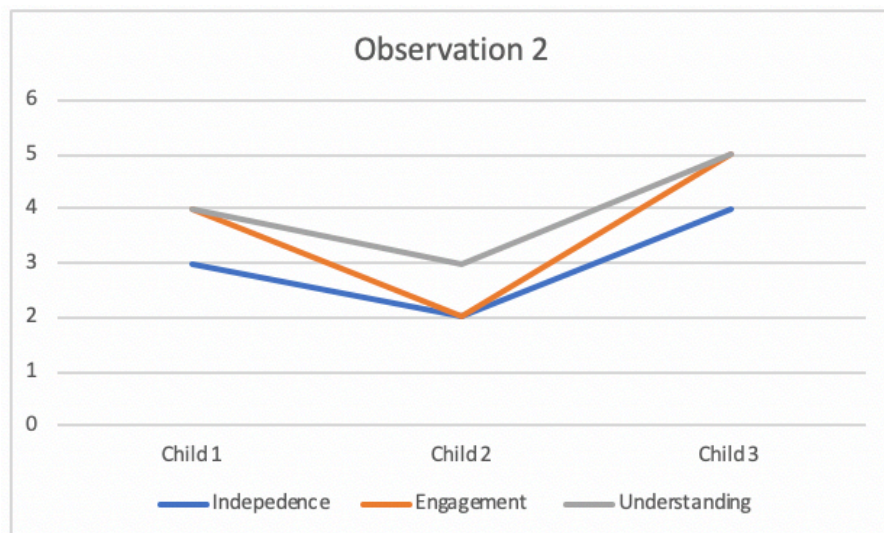


**Figure 6: Target children's observation marks**

As is stated above, at the end of the lesson, a semi-structured group interview was conducted with the target children. The questions asked during the interview can be found in [appendix 4](#). During the interview, Child 1(A) answered all questions confidently. When asked whether the children enjoyed the surgery, all children were happy with the lesson and all children displayed the 'smiley face'. Child 1(A) stated that he enjoyed the lesson because he liked receiving the support from other students rather than an additional adult. When asked about having the choice to work with normal groups or the mixed ability groups, the child preferred the normal groups but failed to give a reason for their answer. Similarly, the child would prefer to

work with friends over children who could provide help and support but, again, failed to give reasons for this.

Child 2(A) was asked the same questions but gave different responses. When asked whether the children enjoyed the lesson, the child presented the smiley face but did not give a reason for their answer. The child, however, stated she preferred to work in the mixed ability group as it gave her the opportunity to help other children and she enjoyed receiving support from her peers. In contrast with this answer, however, Child 2(A) stated that the new group arrangement resulted in an increased noise level and therefore, led to the children not being able to concentrate on the task in hand.

When answering the same questions, Child 3(A) stated that he enjoyed the lesson because he liked helping other children and enjoyed being able to help them to improve their learning. He stated that he was able to concentrate during the task, despite the noise levels, but would prefer to work in the normal groups because he can concentrate more in groups of a similar ability.

From the results of the final lesson study, it was evident that the arrangement of the lesson was more effective than one mixed ability group. The more able children were able to support the less able students in areas in which they found difficult. There are, however, limitations of this arrangement. The higher ability children may be held back by the lower ability children and may not produce as high-quality work.

## **Discussion of research findings**

During the observations, interviews and reflection notes ([appendix 5](#)) it is clear that strengths and limitations can be identified in correlation with the use of mixed attainment grouping to increase the level of independence in education as well as strengths and limitations of the chosen methods.

As is stated in the literature review, Whitburn (2001) stated that children of lower abilities learn from their high ability peers in mixed attainment grouping. This was evident during the lesson. Child 1(A) is a member of a lower ability group and Child 3(A) is a member of the highest ability group and has been identified as a More Able

and Talented (MAT) child. When paired together during the task, the work of Child 1(A) improved considerably from the support of Child 3(A).

Research on ability grouping throughout primary schools indicate that while streaming may not provide gains in achievement over all, other types of grouping and organisation have positive academic effects on pupils. In particular, attainment grouping that are formed to provide teachers with the opportunity to target specific areas of the curriculum can raise attainment in pupils, providing they are implemented appropriately and professionally within the classroom (Ireson and Hallam, 2001).

Nevertheless, Whitburn (2001) states that when children are grouped by similar abilities and attainment levels, the faster and more able talented children are not held back by the slower and less able students. This was not the case in this lesson study. When working with the lower ability children, it was clear that the higher ability children were not working to their full potential which could continue to have negative effects on their attainment levels. For many years, importance has been placed on the aspect of allowing children to determine the pace of their development and placed on ensuring that children who are more capable of learning and working at a faster pace are allowed to do so, without being held back by those who need further support (Whitburn, 2001). This attitude to organisation is more encouraging of levels of diversity in attainment and it is associated with a variety of teaching approaches such as small group work, or individualised learning.

Although the study presented a variety of results, there were some evident difficulties with the chosen research methods. Throughout schools, the academic and affective outcomes of grouping are not coherent in size, over time, in curriculum subjects or with different teachers (Ireson and Hallam, 2001). Classrooms are active environments with multiple factors affecting the learning outcomes. These factors include interactions between grouping strategies, teaching methods, the attitudes of the adults, the subject being taught and the overall ethos of the school (Ireson and Hallam, 2001). Therefore, the observation of the lesson may not provide reliable and valid data, as the results would change if one or more of these factors are more influential to certain individuals.

## Conclusion

From the results, it is clear that mixed attainment grouping does have a positive effect on children and does increase the level of independence children have in the classroom. However, as is stated above, classrooms are active environments with a range of factors that can affect the learning outcomes of the children. Although mixed attainment grouping provides the children with extra support in their learning, it can also present obvious limitations linked to distractions, students falling behind and people continuing to struggle with their work. Before a concise conclusion can be made, further research needs to be conducted on the topic to represent every subject, in all areas of the curriculum.

The use of qualitative methods in this research has presented both strengths and limitations to the research. As is stated above, a focus group interview is a method of research that uses *“in-depth group interviews in which participants are selected because they are a purpose”* (Thomas *et al.* (1995, P.655). A major strength of using group interviews in research is its adaptability to a variety of topics (Menter *et al.*, 2011). Bell and Waters (2014) state that a skilful interviewer and researcher will be able to follow up ideas to questions, probe responses and investigate the feelings of the participants by studying their body language, tone of voice, facial expressions and hesitation with answering questions. These skills may provide a researcher with information that a written response may not show (Bell and Waters, 2014; Menter *et al.*, 2011). This was evident in the research, where the body language and facial expressions of the 3 target children were observed to establish whether the child felt the way they stated, or whether they were answering something because a peer answered the same.

There are, however, some problems with using group interviews as a qualitative data collection method. All forms of interviews can be seen as highly subjective, with a high risk of bias in the research (Bell and Waters, 2014). Interviews are also time-consuming both before and during the process as questions need to be composed and piloted (Bell and Waters, 2014).

The use of observations also presents strengths and limitations within research. Observations are powerful tools that can be used to gain insight into specific situations. The use of observations allows the researcher to record notes as soon

after the event as possible which overcomes possible problems of reliability within research (Cohen, Manion and Morrison, 2007). However, observations, like interviews, have high chances of researcher bias. The children may see the observer, and act in a different way to normal. Even low interference observations are highly selective and present levels of researcher bias (Cohen, Manion and Morrison, 2007). Also, the length of the observation needs to be taken into consideration. Within this research, the observation lasted for one lesson. Although this may be a strength as it allows the researcher to focus on one particular aspect, it also identified as a limitation to the research. Some may state that one lesson is not enough time to establish whether mixed attainment grouping can improve the level of independence in learning (Bell and Waters, 2014).

As the research presented some interesting findings about the children's perceptions of mixed ability grouping, and their marks on the adapted Leuven Scale, I will use mixed attainment grouping in my next school experience. From marking the children's work in previous lessons and reading the work the children completed in this lesson, it is obvious that the mixed attainment grouping was beneficial to the children in this class. Some of the children were able to use a wider range of vocabulary in their work, their spelling had improved, and they seemed to concentrate on the set task a lot better than when they work in their original groups.

## **Recommendations**

If I were to plan and undertake this lesson again in order to help me move forward, I would group specific children into a mixed ability group and focus on this specific group for a period of time. This would enable me to observe and examine the children's progression in a certain subject and compare it with the progression other groups are presenting in regard to the same subject. Through the use of a longitudinal study, which are "carried out regularly" (Ruspini, 2002. P.3), researchers are able to highlight and focus on similarities, differences and changes over time in respect of one or more factors or participants (Cohen, Manion and Morrison, 2007). This would enable a concise conclusion to be made in correlation with the use of mixed attainment grouping and improving independence in learning.

## References

- Baines, E., Blatchford, P. and Kutnick, P. (2013) 'Changes in grouping practices over primary and secondary school', *British Educational Research Journal*, 28(2)
- Barber, J. and Paul-Smith, S. (2012) *Early Years Observation and Planning in practice*. London: Practical Pre-School Books.
- Barker Lunn, J. (1970) *Streaming in the Primary School: a longitudinal study of children in streamed and non-streamed junior schools*. Slough: National Foundation for Educational Research.
- Bartholomew, H. (2000) 'Negotiating Identity in the Community of the Mathematics Classroom', Paper presented at the Annual Conference for the British Educational Research Association, Cardiff, September 7–10, pp.21–24.
- Bloor, M., Frankland, J., Thomas, M. and Robson, K. (2001) *Focus Groups in Social Research*. London: SAGE.
- Boaler, J., and Wiliam, D. (2001). 'Setting, Streaming and Mixed-ability Teaching.' In *Becoming a Teacher*, edited by Dillon, J. and Maguire, M. 2nd ed, Maidenhead: Open University Press.
- Boaler, J., Wiliam, D. and Brown, M. (2000) 'Students' Experiences of Ability Grouping-disaffection, Polarisation and the Construction of Failure', *British Educational Research Journal* 26(5) pp.631–648.
- Borg, W. (1965). *Educational Research: an introduction*. London: Longmans.
- Burris, C. and Welner, K. (2005) 'Closing the Achievement Gapy by Detracking', *Phi Delta Kappan*, 86(8), pp.594-598.
- Chambers, T. (2009) 'The Receivment Gap: School Tracking Policies and the Fallacy of the Achievement Gap'. *The Journal of Negro Education* 78(4), pp.417–431.

Cohen, L., Manion, L. and Morrison, K. (2007) *Research Methods in Education*. 6<sup>th</sup> edn. Oxon: Routledge.

Cohen, L., Manion, L. and Morrison, K. (2011) *Research Methods in Education*. 7<sup>th</sup> edn. Oxon: Routledge.

Day, C. (1999) Researching through reflective practice. In Loughran, J. (Ed) *Researching teaching: Methodologies and practices for understanding pedagogy*. London: Falmer.

Denscombe, M. (2010) *The Good Research Guide for Small-Scale Social Research Projects*. (4th edn.) Maidenhead: Open University Press.

Department for Education (1993) *Improving primary education*. London: DfE.

Department for Education and Employment (1997) *Excellence in schools*. London: DfEE.

DfES (Department for Education and Skills). (2005) *Higher Standards, Better Schools for All: More Choice for Parents and Pupils*. London: HMSO.

Docherty, S. and Sandelowski, M. (1999) 'Focus on Qualitative Methods – Interviewing Children', *Research Nursing Health*, 22, pp.177-185.

Drew, J., Hardman, M., and Hosp, J. (2008) *Designing and Conducting Research in Education*. London: SAGE.

Dudley, P. (2015) *Lesson Study: Professional learning for our time*. Oxon: Routledge.

Estyn (2014). Available at:

[illegible]

Estyn. (2018). Available at:

<https://www.estyn.gov.wales/sites/default/files/documents/██████████.pdf>. (Accessed 26-12-2018).

Great Britain Board of Education (1930) *Hadow Report: The Primary School*. London: HMSO.

Hallam, S., Ireson, J. and Davies, J. (2013) *Effective Pupil Grouping in the Primary School: A practical guide*. London: Routledge.

Hartill, R. (1936) *Homogeneous Groupings as a Policy in the Elementary Schools of New York City*. New York: Teachers' College Press.

Higgins, S., Katsipataki, M., Coleman, R., Henderson, P., Major, L., Coe, R. and Mason, D. (2015) *The Sutton Trust – Education Endowment Foundation Teaching and Learning Toolkit*. London: Education Endowment Foundation.

Ireson, J. and Hallam, S. (2001) *Ability grouping in education*. London: SAGE

Ireson, J., Hallam, S. and Hurley, C. (2005) 'What are the Effects of Ability Grouping on GCSE Attainment?' *British Educational Research Journal* 31(4) pp.443–458.

Jackson, B. (1964) *Streaming: an education system in miniature*. London: Routledge.

Krueger, R. and Casey, M. (2000) *Focus Groups: A Practical Guide for Applied Research*. 3<sup>rd</sup>edn. California: SAGE.

Kumar, R. (2014) *Research Methodology: a step-by-step guide for beginners*. 4<sup>th</sup> edn. London: SAGE Publications.

Lewis, C. (2002b). *Lesson study: A handbook of teacher-led instructional change*. Philadelphia: Research for Better Schools.

Lewis, C., Perry, R. and Murata, A. (2006) 'How Should Research Contribute to Instructional Improvement? The Case of Lesson Study', *Educational Researcher*, 35(3), pp.3-14.

Loughran, J. (2002) 'Effective Reflective Practice: In Search of Meaning in Learning about Teaching', *Journal of Teacher Education*, 53, pp.33-43.

Marks, R. (2013) 'The Blue Table Means You Don't Have a Clue: The Persistence of Fixed-ability Thinking and Practices in Primary Mathematics in English Schools' *FORUM*, 55(1), pp.31-44.

Menter, I., Elliot, D., Hulme, M, Lewin, J. and Lowden, K. (2011) *A guide to practitioner research in education*. London: SAGE.

Plowden Report (1967) *Children and their Primary Schools: a report of the Central Advisory Council for Education*, London:HMSO.

Rabiee, F. (2004) 'Focus-group interview and data analysis', *Proceedings of the Nutrition Society*, 63, pp.655-660.

Robson, C. (2002) *Real world research: a resource for social scientists and practitioner researchers*, 2<sup>nd</sup>edn, Oxford: Blackwell Publishing.

Ruspini, E. (2002) *Introduction to Longitudinal Research*. London: Routledge.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.

Schön, D. A. (1992). *The reflective turn: Case studies in and on educational practice*. New York: Teachers College Press.

Slavin, R. (1990) 'Achievement effects of ability grouping in secondary schools: a best evidence synthesis', *Review of Educational Research*, 60(3), pp.471-499.

Stepanek, J. (2007) *Leading lesson study: a practical guide for teachers and facilitators*. California: Corwin Press.

Taylor, B., Francis, B., Archer, L., Hodgen, J., Pepper, D., Tereshchenko, A. and Travers, M-C. (2017) 'Factors deterring schools from mixed attainment teaching practice', *Pedagogy, Culture & Society*, 25(3), pp.327-345.

Thomas, L., MacMillan, J., McColl, E., Hale, C. & Bond, S (1995) 'Comparison of focus group and individual interview methodology in examining patient satisfaction with nursing care'. *Social Sciences in Health* 1, pp.206–219.

Whitburn, J. (2000) *Strength in Numbers: learning maths in Japan and England*. London: National Institute of Economic and Social Research.

Zevenbergen, R. (2005) 'The Construction of a Mathematical Habitus: Implications of Ability Grouping in the Middle Years', *Journal of Curriculum Studies* 37(5) pp.607–619.