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**How can we improve pupil involvement
through the collaborative learning strategy
of 'think, pair, share' in a Foundation
Phase classroom?**

The issue that interested me was collaborative learning. Donaldson (2015) suggests that children should be provided with many opportunities to work collaboratively in the classroom. The new curriculum in Wales (Successful Futures) places strong emphasis on collaborative learning for both pupils and staff. Knowing this and with my interest in collaborative learning I wanted to determine whether the collaborative learning (CL) strategy of 'think, pair, share' is effective in improving pupil involvement in activities in the Foundation Phase classroom. This is because research on the 'think, pair, share' strategy seems to have a greater focus on Key Stage 2 children rather than children in the Foundation Phase (Saunders, 2008).

During this placement I was in the Foundation Phase, so therefore my research partner and I decided to carry out this research.

Our research question is 'How can we improve pupil involvement through the collaborative learning strategy of 'think, pair, share' in a Foundation Phase classroom?'.

My research partner and I were on placement together and shared a classroom with a total of 54 children aged 4-6. The children were divided into 4 different groups. These groups were based on the children's abilities. I decided to carry out the research with the second highest ability group of children. The children in this group were aged between 4 and 5. Within this group there are 15 children. Some of the children in the group are very dominating and within a lesson take over answering questions and are highly involved. This then effects the quieter children in the group. There are a few of these children within the group who are very unlikely to take part in class discussions and are very often in a daydream. I believe the 'think, pair, share' strategy will have a positive effect on this group of children as I hope they will all be involved and engaged

with listening, speaking and thinking. This will be carried out when the children clarify and contribute their ideas with their peers. Spendlove (2009, p48) suggests that the 'think, pair, share' strategy 'releases the teacher to be more effective through planned strategic intervention with small groups of individuals rather than reactive with dominant individuals'.

I decided to look further into this by carrying out research through reading books, journal articles, and online materials. This showed me that some authors believe collaborative learning has many positive effects. Some of these are improved engagement, improved relationships, improved skills, improved learning and achievements, and classroom resembling real life situations (Watkins et al, 2007).

The Collaborative learning strategy of 'think, pair, share' was developed by Frank Lyman (1981). This strategy was designed to provide pupils with the time to think and devise individual ideas and understanding about a certain subject or topic before then pairing with a peer and then sharing their ideas and thinking with the group or class.

According to Ogden (2013) collaborative learning requires interaction between children as they share ideas and opinions to conclude what they want to achieve. They suggest that through research they have established that children working in pairs in reception and in year 1 demonstrate similar levels of involvement thorough collaborative learning. However, older children have a greater capacity to use the collaborative learning strategies. They also suggest that older children displayed better responses and have a higher ability to collaborate.

Millis (2010) suggests that 'Think, pair, share is a powerful cooperative learning structure because it employs the principle of simultaneous interaction' (p21). All students become involved because they talk to each other in pairs and then feedback

to the group. 'Think, pair, share' causes a positive student exchange. Simon (2019) supports Millis (2010) as they suggest that the collaborative learning strategy of 'Think, pair, share' is to create differentiation for students, providing them with time for thinking on a specific topic or lesson. This gives the students the opportunity to develop ideas as individuals and then share and develop these ideas further with a peer. This learning strategy aims to improve involvement and participation as it promotes a high level of student response. It also gives all children the opportunity to give input and share their ideas. Simon (2019) also suggests that 'think, pair, share' is a good tool for assessment for learning as the teacher can sit back and listen and then respond accordingly.

However, Johnson and Johnson (1997) suggests that not all group work involves collaborative learning. They suggest that it depends on group size, who is in the group and how the group is structured. The Education Endowment Foundation (2018) suggests that when pupils work in small groups, collaborative learning is more effective. Some collaborative learning techniques place together mixed ability groups, so pupils encourage and support each other. This can also boost the effectiveness of the collaborative learning. Collaborative learning is typically positive and effective. However, group size can have an impact on collaborative learning (Education Endowment Foundation, 2018). Cowling (2017) suggests when working in smaller groups it will make the more introvert pupils feel safer when speaking in small groups instead of speaking in front of the whole class.

Cornell University (2019) suggests that collaborative learning leads children to have deeper-learning. They suggest that there are many advantages to collaborative learning. One of which is that it develops the children's higher-level thinking, leadership

skills and communication skills. It also promotes involvement and exposes children to an understanding of other opinions and perspectives.

According to Johnson and Johnson (1999) cited in Sampsel (2013) collaborative learning is 'face-to-face promotive interaction'. They suggest this means the pupils can assist each other, encourage each other and to challenge each other's ideas. The pupils also give feedback and motivate each other to reach their goal. They believe that collaborative learning is 'individual accountability and personal responsibility'. This is the idea that each pupil is responsible for their own learning and they are obliged to their group and their efforts toward the mutual goal. This is so the pupil is accountable and ensures that the pupil is responsible for their contributions. This stops pupils from avoiding work and stops individuals to allow other members of the group to make more of an effort than they do.

According to Laister and Koubek (2001) there are some disadvantages to using collaborate learning within the classroom. They suggest that sometimes when teachers use collaborative learning strategies within lessons they feel as if they are losing control over what learning is taking place and its process. Therefore, this may result in their contribution to the children's process of learning diminishing. They also suggest that collaborative learning may put a large amount of pressure on the more introverted pupils. This may cause them not to be involved at all within the collaborative learning strategy and even more reduce their readiness for future learning and their levels of self-esteem. This reading made me rethink our research question as I became concerned that the lower involved pupils may not want to join in. However, Laal and Ghodsi (2011) suggests that cooperation and collaborative learning reduces anxiety. They also suggest that collaborative learning provides children with the opportunity to model and practice cooperation.

According to Cowling (2017) it is best if a teacher models the strategy of think, pair, share with either a volunteer, teaching assistant or pupil beforehand so the group or class know what they are doing.

To answer our question my research partner and I are going to use lesson study. Lesson study is when groups of teachers meet and design, implement, test and improve a 'research lesson'. These lessons have a goal and an outcome that they want to achieve. The research lesson is then recorded for reflection and analysis (Clivaz, 2018). This is what we will be carrying out during our research lesson. Lesson study is very beneficial as it gives us the opportunity to see pupil learning taking place at a much deeper level and first hand. It also helps us cover any bias we may already have as we can see what is happening. As researchers we can find out how to carry out effective learning in the future to match the pupils needs. At the end of carrying out the research we can change our teaching to support the children's learning (Dudley, 2014).

For our lesson myself and my research partner decided on monitoring the pupil's involvement through using the Leuven Scale for Involvement (See Appendix 1). We decided to use this as the Leuven Scale (LIS-YC Scale) is very important when observing a child's level of involvement during a lesson or set task. The LIS-YC scale is made up of a five-point scale. Scale rate 1 (extremely low): this is when a child is considered to be non-active or is not involved in the activity at all. Scale rate 2 (low): this is when the pupil has interrupted involvement or lack of activity. Scale rate 3 (moderate): the child is involved in the activity. Scale rate 4 (high): this is when a child is involved in the activity with some intense moments. Scale rate 5 (extremely high): this is when the child's involvement is sustained and intense throughout the activity (Laevers and Heylen, 2003).

Within the collective group of 15 children we decided to use a sample size of 3 to focus upon; one who is usually high involvement, one who is moderately involved, and another who is usually low involvement. We wanted to determine if the children who are usually low involvement would show higher levels of involvement through the collaborative learning strategy of 'think, pair, share'.

To record the levels of involvement we used the observational technique of event sampling. We decided to use this observational technique as we are looking to observe an 'event'. This event is when the sample children are showing involvement during 'think, pair, share'. It is our role to record the pre-determined behaviour when it occurs. This is important when a researcher is trying to identify what triggers the event. This can make reflection and analysis easier. However sometimes this observation technique can be lacking in detail (Palaiologou, 2009). Qualitative and quantitative analyses were used within our observation method of event sampling to determine whether the collaborative learning strategy of 'think, pair, share' improved involvement. According to Driscoll et al (2007) there are disadvantages to using mixed methods of research. These include loss of depth and flexibility regarding just using qualitative data. However, we believe by using mixed methods of both quantitative and qualitative research it can provide us with more important information. It also gives us the possibility of triangulation. Denscombe (2007) suggests that by using triangulation in research it gives validation in terms of outcomes and findings as the researcher has used alternative methods for confirmation and accuracy.

As part of our lesson study we will be carrying out an interview. We will be carrying out this interview with a focus group and we will be asking them a set of questions to gain feedback and then we will be able to reflect upon lesson. According to Silverman (2016) focus groups are a good way to collect data using small groups of pupils. Focus

groups are an informal discussion with a specific focus on a topic. This is based upon a series of questions. A researcher's role within a focus group is to pose questions, keep talk between participants flowing and enabling all participants to engage fully. However, the researcher does not ask questions to certain members of the group. They rather facilitate the discussions reassuring members of the group to interact with each other.

According to Cohen et al (2011) when a researcher is conducting an interview, they must take on a lesser role. When discussing focus groups, previously it was said that it is the researcher's role to facilitate the interview not to lead it. Cohen et al (2011) also suggests that interviewing is an unusual method as it involves collecting data through interaction between the participants. Cohen et al compare's interviews with questionnaires. They suggest that questionnaires have more of an advantage as it is more reliable due to it being anonymous and with a questionnaire the researchers will obtain more honest data from participants whereas sometimes when carrying out interviews the participants may not want to give their honest opinion face-to-face. Subsequently this will result in biased data. Reading this information and comparing questionnaires and interviews for our lesson study, I do believe that an interview is the best method to use when working with young children. Group interviewing with children is more beneficial as it encourages interaction between the children within the group rather than the participants simply responding to questioning from the adult.

When conducting interviews, we decided on how we would record the data we received. We decided to use audio recording in the interview and then transcribe the information collected. The disadvantage of audio recording and then transcribing interviews is that there is a risk of losing data during the transcribing process. Also, this method of receiving feedback is time consuming. However, there are also

advantages to transcribing as it gives you the opportunity to listen to the focus groups feedback and you don't have the pressure of trying to write everything down (Tessier, 2012).

According to Brinkmann and Kvale (2018) when a new researcher is transcribing interviews it gives them a chance to reflect on what questions they have asked, validity of the observation and the reliability of the data that has been collected.

Within our lesson study we decided to base our reflection on Brookfield (1995) and Gibbs (1988). According to Brookfield (1995) critical reflection can be carried out through four lenses. These lenses are 'students' eyes, colleagues' perceptions, theory, and personal experience'. Student experience is seeing the lesson from the pupil's point of view. Colleagues' perceptions within the lesson study will be my research partners views on the lesson, personal experience is a personal reflection on how I feel the lesson went. Theory is various research that supports findings and helps you makes sense of the experience. As part of the personal experience lens of Brookfield's reflective model I have used Gibbs (1988) cycle of reflection to support my personal reflection. I will be able to make sense of the event and evaluate the data collected from the lesson. By using Gibbs reflective cycle, it will give me the opportunity to not only reflect upon the event but also on my feelings and thoughts on the experience. From this I can then identify implications on the lesson and use this to inform my planning in the future.

When carrying out our research within the lesson study we had to be aware of ethical considerations. To obtain results and carry out the research we must minimise the risk of harm and the research must be conducted in an ethical manner.

As mentioned previously I will be choosing 3 specific children to act as a representative sample for the research. I will be gathering informed consent from parents and assent from the participants. If this consent is approved as mentioned previously the children in the lesson study will be interviewed in a focus group. We will be following the BERA Ethical Guidelines to prevent potential risks to the participants. We will also be following the University of Wales Trinity Saint David's and the schools safeguarding policies. This is to ensure that the children within the activity and within the focus group are not exposed to any risks. If one of the sample participants does not want to take part or feels pressure to take part, they can say they want to stop at any time. I will then withdraw them from the lesson study. I will ensure the children know all of this at the start of the lesson and ensure I tell them the information I collect from them will be anonymous and kept confidential. When carrying out the interviews with the focus group I am aware that some children may feel left out which may affect their wellbeing so we are aware that these children may ask to be part of the interview process. If a child does ask to be a part of the focus group of interviews process, we need to ensure that we have received informed consent and assent. If we have received this then we will allow the child to participate but will not record any information they give. However, if the consent is not approved, I cannot allow the children to take part. Myself and my research partner will be the only ones who will be able to identify the children and their responses.

Myself and my research partner decided to plan a lesson on emotions and feelings. We used the 'think, pair, share' strategy to get children involved in talking about different emotions and feelings.

We used 'think, pair, share' strategy to see if children could understand how the bear was feeling from looking at an image of 'Albert LeBlanc' story without seeing a picture of his face.

Overall, I felt that the children understood the activity and the learning objective of understanding emotions. However, using the 'think, pair, share' strategy with such young children in a big group, did not work as effectively as we originally thought. We felt this because the children began to get very fussy and some quite argumentative. Looking at the sample participants through the observation (Appendix 2) I can see that child 1 who we predicted would be high involvement was highly involved throughout the activity. This participant was offering answers and opinions. From my research partners observation notes she suggests that child 1 takes over the activity. On ten occasions within the lesson child 1 was either high involvement or extremely high involvement. From using the 'think, pair, share' strategy I have been able to identify that even though child 1 is highly involved in the activity they sometimes struggled to involve and share their ideas with their partner. However, we were able to see they could give reasoning for their answers.

The strategy of 'think, pair, share' did not increase child 2's levels of involvement. Child 2 can sometimes be quite withdrawn from activities and interacting with other children. However, from previous lessons I would say they are moderately involved. During the 'think, pair, share' activity my research partner observed their levels of involvement and she recognised that child 2 was mostly low and moderately involved. However, on one occasion showed extremely low levels of involvement. When child 2 was moderately involved they were listening to their partners ideas, however when sharing with the group they would wait until their partner answered and then they would repeat

what their partner said. This is when they showed low levels of involvement. It was also observed that child 2 got distracted throughout the lesson.

The 'think, pair, share' strategy did not help child 3 to be involved either. In lessons child 3 gets distracted easily and is usually in a 'world of their own'. Throughout the lesson and during 'think, pair, share' my research partner observed mostly extremely low levels of involvement from child 3. From the observation I can see that child 3 put their hand up and down again and when asked a question they only gave one-word answers. From working in the Foundation Phase I have noticed children in the early Foundation Phase will put their hand up to answer even when they do not know. Also, I can see from the observation that child 3 is happy to let the other children control the activity.

Throughout the interviews (See transcript in Appendix 3) with the focus group of children child 1 was very vocal and was always first to answer the questions. When I asked the children "What did you think of the part of the lesson when you had to work with a friend? When I said discuss with your partner?". Child 1 responded to this saying "I don't know that word". From this I could see the language I used was an implication to the lesson, this may have impacted on the effectiveness of the 'think, pair, share' strategy during the lesson.

By using simple terminology that is easy to understand and to respond in lesson 2 may strengthen our results. According to Unicef (2011) children need to hear interesting and clear child-centred communication. Children at different stages have various needs and interests and every child learns in different ways.

As discussed previously myself and my research partner noticed that the children found it challenging to share. For example, with the paper plates and sharing opinions

on different feelings. According to Smith et al (2013) children younger than the ages of 7-8 fail to engage in equal sharing

In the following research lesson, my research partner and I decided she would conduct the research lesson focusing on a smaller group of children. According to Mills and Alexander (2013) working with smaller groups is more beneficial for both pupils and teacher. Working with smaller groups gives the teacher the opportunity to cater to the individual's needs. They also suggest that working in smaller groups allows differentiation granting teachers to focus on individual's knowledge and skills and what they need to develop. If a teacher does this effectively the children will develop their subject knowledge and their academic skills such as analysis and critical thinking. Therefore, the teacher of a small group can learn from their pupils by reflecting and discussing the lesson consequently improving their own teaching practice.

Furthermore, my research partner will ensure she uses simple terminology that children can understand and relate to.

Reflecting on this, myself (Appendix 4 reflection) and my research partner have decided to adapt the lesson plan and classroom management to see if this improves communication between children and help the 'think, pair, share' strategy. We have discussed a range of possible solutions to support the application of the 'think, pair, share' strategy. This includes reducing the class size. This will hopefully increase the involvement of the 3 focus children as a result of the strategy. Also, within the focus group interviews my research partner highlighted my use of prompting words that I was not aware I was using. By using prompting questions and words within interview could have caused biased results, and the results may not be a true representation of the learning strategy outcome.

Lesson 2 of the lesson study myself and my research partner felt positive about the modification we had decided to make in reflection on the previous research lesson.

The children within the second lesson were in the highest ability group and in year 1 while in yesterday's lesson the participants were in reception and were a middle ability group.

Within lesson 2 we could see that because we had reduced the class size it was easier for the participants to discuss and communicate their ideas and thoughts while working in pairs. Also, the participants felt more comfortable sharing with the group.

My research partner informed me of the focus children, and I observed the children using qualitative and quantitative analyses. Reflecting on the observation results (Appendix 5) myself and my research partner observed that child 1 who is always usually involved in all activities was involved with both the lesson and their peers. They contributed their ideas during 'think, pair, share' and they listened to other pupils' opinions before answering. However sometimes they became overpowering wanting their opinions to be heard above others.

Child 2 who is usually moderately involved showed throughout the 'think, pair, share' moderate and high levels of involvement. However, they also showed signs of low involvement because they were getting distracted by another child. They also went to the toilet half way through the lesson, so they became disconnected with the lesson. When they returned, they gave their opinions and shared ideas with the group using reasoning.

Child 3 is very quiet and struggles to discuss ideas or work with members of staff and when in the classroom environment tends not to involve themselves with others. During the 'think, pair, share' activities they were distracted by other children in the

group. However, on two occasions they were moderately involved with another pupil discussing the question. After this they put their hand up to answer but then put it down again. When child 3 was asked a question, they would answer with one worded answer and when ask to give reasoning they did not respond.

From observing my research partners lesson I could see that the reduction of class size and the terminology used was simpler for the children to understand. This impacted on the children's level of question response and the quality of these responses.

From lesson 1's focus group interview transcription, we noticed that I tended to use prompting words which may have impacted the responses received from the sample participants. So, within lesson 2's interviews my research partner made an effort to ensure she did not use prompting words.

Within interviews and transcription from lesson 2 we were able to identify the questions my research partner used were not specific enough, because of this we found the children were giving answers that were not relevant to the question. For example, my research partner asked, "was there anything else you liked doing?" and child 1 responded by saying "going to sleep and going to school" (See Appendix 6 for lesson 2 transcript).

Within the interviews, child 3 with the lowest involvement withheld from answering the questions and contributing to the focus groups discussion. When discussing and reflecting with my research partner after the lesson and interviews she said she found it difficult to refrain from prompting child 3 which I also found during the interviews.

However, by my research partner not prompting the participants we were able to get a true representation of the observed results during the lesson study.

Throughout our lesson study we were able to find out that the collaborative learning strategy of 'think, pair, share' does improve children's involvement in the Foundation Phase classroom. However, we did come to realise that this is only the case depending on group size, ability group and terminology used.

As stated in my literature review our research agreed with Ogden (2013) as they suggested that collaborative learning works better with older children as they have a larger capacity to use these strategies responding and working with others at a higher level. However, I do believe that when working in smaller group the strategy 'think, pair, share' can be beneficial to younger children in the Foundation Phase.

From our research I was also able to see how the 'think, pair, share' strategy does improve involvement within the lesson as this was proven from my research partner's lesson with child 2 especially. Saunders (2008) suggests the 'think, pair, share' strategy takes pressure off the children who find it difficult to share ideas in class usually as they have a chance to discuss in small groups. This then makes them feel more comfortable to voice their ideas.

In relation to my literature review as Simon (2019) suggested I have been able to identify that 'think, pair, share' is a good tool for assessment for learning for teachers especially if they are working in small groups. This is supported by Mills and Alexander (2013) as they suggest working with smaller groups is more beneficial for both pupils and teacher as it gives the teacher the opportunity to assess and cater for individual needs.

As stated previously within the essay, the class myself and my research partner were in had a total of 54 children. Because of this, sometimes to work in small groups in a calm environment can be quite challenging. Also, I am currently in a Reception/ Year

1 class but mostly work with Reception children. From the research undertaken during this lesson study we have determined that the collaborative learning strategy of 'think, pair, share' is better with older children so I may find using this strategy difficult in such a large class of young children.

Throughout the lesson study I have been able to identify various strengths and limitations within my research. Reflecting on the methodology used throughout the lesson study I have seen that one strength throughout the research has been monitoring the sample participants levels of involvement through using the Leuven Scale. By using this scale, we were provided with various stages in which we could measure the children's levels of involvement at which worked very effectively throughout the observations. Subsequently giving us positive and clear results.

When using the Leuven Scale to measure the participants' level of involvement we used the observational method of event sampling to record and collect the data. As mentioned previously within this observation technique we were using quantitative and qualitative research. I found this to be a great strength within the research agreeing with Denscombe (2007) we have identified that, by using triangulation in research it has given us validation in terms of outcomes. In addition, we have been able to confirm what level of involvement the participant was at and the time in which they displayed this.

From examining my own research lesson, I have come to realise perhaps the data collected in the interview I carried out with the focus group may not be reliable. This is because once reviewing the audio recording to complete the transcript I could see I had been asking prompting questions. For example, within the transcript this one occasion stood out to me significantly.

Child 2: (put her hand up)

L.J: You liked it did you Child 2 name? Why did you like it?

Child 2: (looked unsure and didn't answer)

After reviewing this I could see that I may have stopped child 2 from answering because I ask a direct question and said their name. According to Danby (2011) at times the quality of collected data depends on the researcher's interaction between the participants and themselves. An interviewer must be skilled while undertaking the interview and they must adapt their approach to the situation and to the levels of the children's engagement during the duration of the interview process. In reflection this may be because I did not pilot the lesson or interview before hand. According to Breen (2006) pilot studies are important as they give the researcher the opportunity to collect comments on how the interview questions came across to the participants in the focus group for example checking if the question is too open ended. Another advantage to piloting the interview before hand is to gain knowledge on your effectiveness as a researcher, for example in the case of my interview I was using prompting questions which had a negative effect on the research, this may have been avoided if I had completed a pilot interview. They also suggest that piloting an interview gives the researcher the opportunity to see if the questions within the interview are effective or not. If not, they can be taken out or modified.

When in my next school experience, I would carry out this lesson study again however I need to pilot the interview beforehand and be aware of the implications we have faced during this lesson study.

Moving forward, if I was to do this lesson again as stated above, I would pilot the methodology used within this lesson study beforehand. I would practice questioning

within a focus group. From reflection I have realised that perhaps if I had piloted the collaborative learning strategy of 'think, pair, share' beforehand the younger children may have understood in more depth what they had to do. Referring to my literature review, Cowling (2017) suggested that it is best if a teacher models the strategy of think, pair, share' to the group so they know what they are doing. From reading this I should have modelled and piloted the strategy beforehand knowing what Ogden (2013) suggested about young children and their capacity for collaborative learning. I will identify this if I was to implement this lesson study again. I would like to carry it out again due to what I have learnt this time. Playing to the strengths I identified and improving the weaknesses and implications faced during this research.

Furthermore, carrying out this lesson study has made me realise that when conducting any research, you must be interested in the topic. This drives the study and is crucial to move forward with your findings. Thus, the research question should not be too narrow or too broad (Balakumar et al, 2013). From carrying out the literature review within this lesson study I have been able to identify that collaborative learning is well documented. However, there is not much focus on the strategy of 'think, pair, share' in the Foundation Phase which I found difficult when trying to find authors' views.

I believe the lesson study myself and my research partner carried out was ethical to all participants and ourselves. Nevertheless, our methodology was strong and detailed. Thus, through reflection I have been able to identify that we would have acquired more reliable results if we had piloted the strategy and questions previously.

Recommendations for my future practice is before carrying out the collaborative learning strategy of 'think, pair, share' I need consider group size, the terminology I use as a teacher and the age of the children I am working with. In addition, from this

lesson study I have identified that 'think, pair, share' does improve pupil involvement within the Foundation Phase classroom as long as you consider other factors to ensure it is benefiting the children's learning.

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