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Contents page:

<u>Main Section</u>	<u>Subheading</u>	<u>Page number</u>
Aim, focus and purpose		2
Research context		2
Literature review		3
Methodology		5
	Lesson study	5
	Observation	5
	Reflection	6
	Focus group	6
Ethical considerations		7
Results and analysis	Lesson study 1	8
	Lesson study 2	9
Limitations		12
Conclusion		13
Reference list		15

Aim, focus and purpose of the research

Lesson study allows aspiring teachers to build and evaluate pedagogical content knowledge in a real life context (Dudley, 2015). This research delves into the use of active learning strategies and student engagement in the Foundation Phase classroom. The research seeks to evaluate its effectiveness drawing from the perspective of both the teachers' and pupils' viewpoint adopting Brookfield's (1998) model of reflective practice. Prince (2004) suggests active learning is an umbrella term for pedagogies focusing on student activity and student engagement in the learning process. Thus, active learning strategies may be defined as any instructional method in which students work together in small groups towards common goals (Prince, 2004: 223). The active learning strategies implemented within this lesson study are: (1) Think-Pair-Share (TPS), (2) jigsaw puzzles and (3) odd one out. Within this research, the three strategies will be used to try to create an environment where learning is accessible to all learners (Tanner, 2013).

Axelsson & Flick (2010) reflect that few terms in the lexicon within the field of education is utilised more frequently than the word 'engagement'. Although Wolf-Wendel, Ward & Kinzie (2009) contribute to the literature that seek to understand the term 'engagement' within educational research, Kahn (2014) advocates that the reasons for student engagement are yet unclear being 'weakly theorised'. However, Reschly & Christenson (2012) suggests research within this field is to enhance learning. The purpose of this study is to identify the effects of active learning strategies and student engagement and the impact it may have on pupil's learning.

Research context

The study was carried out in a large primary school in South Wales. According to the Estyn report, that will not be cited so that the school remains anonymous, the school's current performance was rated good with the school's prospects of improvement equally so. The school prides itself of student development, with 87.5% of children achieving the Foundation phase indicators for learning whilst 93.9% of children were achieving the benchmark within the core subjects in Key Stage Two. The school caters for children aged between the ages of three and eleven years; within this proportion, just over one-third of the children are entitled to free school meals. The research took place in two classes. Lesson study 1 took place in a Reception/Year 1 split class which consisted of 31 pupils whilst Lesson study 2 took place in a Reception class which consisted of 29 pupils.

Literature review

Settles & Craven (2008) reflects that active learning gives learners a degree of control whilst providing teachers the foundation to get children to engage in the teaching practices within the classroom (Hammond & Richardson, 2009). By employing active learning strategies it promotes deep learning moving away from surface learning (Eison, 2010). The premise behind an active learning process is that it makes learners 'active sense makers' who seeks to build coherent and organised knowledge (Mayer, 2004:14). This has become critical with Roehl, Reddy & Shannon (2013) positing that teachers who adopt active learning strategies are better engaging the students of modern day.

Active learning strategies reflect social constructivist theories in the role of communication and structured intervention in thinking and problem solving (Bartlett & Burton, 2016). This is because pupils discuss with others what ideas and concepts mean to them with further thinking developed by creating links between ideas (Bartlett & Burton, 2016). Interestingly, Roehl, Reddy & Shannon (2013) suggest students are gravitating towards group activity and towards the more social aspects of learning. This more social constructivist approach to learning within the classroom advocates Chickering & Gamson's (1987: 3) perspective that "learning is not a spectator sport". The underlying assumption is that learning is an active process in which learners are 'active sense makers' in building their knowledge (Mayer, 2004: 14). Thus, by utilising active learning strategies it can incorporate social interaction and collaboration and draws upon the social nature of classroom life (Watkins, Carnell & Lodge, 2009) to motivate learners to engage within the classroom.

Active learning strategies offer the opportunity for collaborative learning which has been suggested to stimulate elaboration of conceptual knowledge (Van Boxtel, Van der Linden & Kanselaar, 2000). Isohatala, Jarvenoja & Jarvela (2017) identified that social interaction within collaborative learning allowed more active task-focused interaction. Laal & Ghodsi (2012) suggests it allows for higher order thinking to take place within the classroom with children working towards a common goal allowing them to grasp concepts better by groups having higher productivity. This would, in turn, promote student engagement within the classroom.

Furthermore, it may be said that active learning strategies promotes student meta-cognition (Tanner, 2012) which may be which children being encouraged to engage and develop within their own learning (Bartlett & Burton, 2016). Active learning strategies allow teachers to scaffold learning by making pupils think for themselves and support them to develop a greater understanding (Bartlett & Burton, 2016: 254). This is particularly pertinent within the foundation phase where the teachers' role can be get children to create meaning from their learning even within the cognitive demands within varied levelled learners (Adey et al, 2007). Thus, it may be proposed active learning strategies envisage Bloom's taxonomy in developing learner understanding (Krathwohl, 2002) by approaching learning on a number of levels to develop understanding that may be deeper and meaningful (Knight

& Wood, 2005). Knight & Wood (2005) highlight that interactive participation with the learning objectives allowed for more student learning gains. Thus, active learning is having an experience and the means to transform and make sense of what they are experiencing in order to create knowledge (Watkins, Carnell & Lodge, 2009).

A number of teaching strategies have been identified to help student's thinking (Fisher, 2005) and promote active engagement. Tanner (2013) suggests using a variety of active learning strategies provides more entry points that create learning environments that may be more conducive for all learners to be able to access the material. Although this study uses three active learning strategies, to illustrate active learning strategies and its role on student engagement, the Think-Pair-Share will be discussed briefly below to demonstrate their intertwined nature within education.

'Think-Pair-Share (TPS) is a collaborative, active learning strategy, in which students work on problems posed by the instructor, first individually, then in pairs or groups and finally with the entire class' (Kothiyal, Majumdar, Murthy & Iyer, 2013: 138). It allows children to verbalise their thoughts about concepts transforming the classroom into a more participatory environment (Tanner, 2013). It is a widely used and highly effective form of brief structured interaction (Eison, 2010). Kothiyal, Majumdar, Murthy & Iyer tested TPS within a large class (2013) and found that 83% had sustained engagement. The foundations of TPS this is that it is based on social interactions in the classroom along with personal critical thinking (Powell & Kalina, 2009). It changes the general dynamic of the classroom shifting the emphasis to all children engaging rather than having just a few participating within the lesson (Tanner, 2013). Additionally it affords children thinking time that is not normally afforded within typical teacher questioning (Azlina, 2010). Thus, the strategy allows children to take an active role in their learning and provide opportunities to construct their own knowledge.

'Children need to be active participants in the learning process' (Donaldson, 2015: 69). Thus within education, a shift from a teacher centred paradigm toward a learner centred paradigm must be taken (Roehl, Reddy & Shannon, 2013). This is particularly important with Donaldson's Successful Futures (2015: 65) reflecting that pedagogy reflects that 'good teaching and learning means employing a blend of approaches including those that promote problem solving, creative and critical thinking'. In so doing, Prince (2004) suggests core elements of active learning therefore is student activity and engagement in the learning process.

Methodology

Explanation of lesson study design

The methodology used within this research is Lesson Study (LS) which has been suggested to be a highly specified form of classroom action research focusing on the development of teacher practice knowledge (Dudley, 2014: 1). It is an active form of examination to the practice of teaching where two or more teachers work collaboratively to improve a particular aspect of teaching and learning within an area of focus (Department for education, 2009). The methodology behind LS involves joint planning of learner needs before teaching and observing the lesson. This would then allow the reflection of the lesson and adjusting the lesson to improve its effectiveness before re-planning and implementing a second lesson with these changes (Department for education, 2009). Thus, it is a way to refine a pedagogical approach to improve pupil's learning within the classroom (Dudley, 2014). However, increasingly it can be seen as a way to apply knowledge about pedagogy to a real-life context where it is taking place to help real pupils in a real class (Dudley, 2015). Additionally, it therefore helps teachers learn how children are learning within their classrooms which may lead to profound changes in the future (Dudley, 2015). However, Dudley (2015:5) reflects that reflection must only take place for professional development rather than 'simply to innovate for innovation's sake'. Within this study, the joint planning of one lesson will be taught and analysed in order to refine the technique for a second lesson.

Methods of data collection

Observation

Observation is more than just passively seeing what is around us (Fawcett & Watson, 2016). It allows us to understand child development in context, evaluate them and use them as tool to study a group of children (Fawcett & Watson, 2016: 18). When observing children, we tried to remain objective and unbiased which meant that when writing observations, we tried to do it in a detached and impartial manner (Hobart & Frankel, 2004: 8). What is important within lesson study, however, is that the observer is observing pupils learning in the context its being taught and reflecting on the ways that they understood the task, the ways the pupils interpreted the lesson's content and the way they behaved (Dudley, 2015). Thus, it was a non-participant observation.

The study took place in the children's natural setting; this was advantageous making the observer unobtrusive and children less likely to alter behaviour (Sharman, Cross & Vennis, 2007) with myself and my research partner based on placement within this school prior to the study. Although carrying out an observation may make a difference to the way that a child may behave, with a whole class

observation and children familiar with our presence which may have reduced observer effects (Sharman, Cross & Vennis, 2007).

In this study, we have adopted Leuven's scale of well-being and involvement (Laevers & Heylen, 2003) to construct an observational table (Appendix Two & Three) of learner participants within the lesson. This will allow us to reflect on the use of the three active learning strategies within the lesson being used within the introduction, main activity and plenary stages of the lesson. This approach was implemented because it is a measured design to use with young children (Lenaerts et al, 2017) and studies such as Howard & McInnes (2013) have adopted this method and found it appropriate within their childhood research.

Reflection

Within this study, reflective practice is being used as a source of analysis. Reflection notes are appropriate because many recognise it as being essential to good teaching (Leitch & Day, 2000). The new curriculum Successful Futures is moving towards the 'subsequent growth of teachers as reflective practitioners' (Donaldson, 2015: 71) with some scholars recognising it encourages teachers to develop their professional knowledge (Cornish & Jenkins, 2012). Thus, it will enable the analysis of what has been taught and evaluations can be made to suggest how the technique may be refined.

To carry out the reflection, we have adopted Brookfield's (1998) reflective model which disseminates the four lenses within the study (Appendix Two & Three). These are the autobiographical lens, the students' perspective, the colleagues' views and the theoretical lens. However, within the autobiographical lens, I will additionally reflect using an assisted reflective conclusion (ARC) form that is attached within the appendices (Appendix Six). This multi perspective reflective model has been chosen because it allows a deeper understanding of the multi-faceted nature of learning and will develop the awareness of the various perspectives within the classroom (Dimitrov & Haque, 2016).

Focus group

A focus group semi-structured interview will take place after each lesson. A focus group is a group who come together to discuss a given topic (Dilshad & Latif, 2013) and is a qualitative technique for data collection. The focus group consists of three children; convenience sampling method was utilised to try select children that represented the whole class (Etikan, Musa & Alkassim, 2016). Thus, within this research the focus group consisted of three children for each lesson study. In lesson study one there was a Year 1 boy and a Year 1 girl as well as a girl in reception. In lesson study two (Reception) there were two boys and one girl; all the children between the two focus groups were different levels of ability within the class.

A semi structured interview was used because it offers flexibility to explore the views of the learners and create meanings from their own experiences (Rabionet, 2011). With this approach, it allowed

deductive and inductive approaches to be implemented, with some interview questions developed prior to the interview whilst allowing spontaneous questions to develop qualitative findings within the study (Hyde, 2000). Thus, the nature of this method allows the exploration and development of learner perspectives to develop a deeper insight into their responses. Additionally, by carrying out a focus group, it will provide the opportunity for children's voice being an active member within the research progress (Donaldson, 2015). In particular, it refers to United Nations Convention on the rights of the Child (UNCRC) (Unicef, 1989) particularly establishing articles 12, 13 and 16 (Hobart & Frankel, 2004: 2).

An audio recording of the interview will be carried out so that it may be a further source of analysis and evaluation; Rabionet (2011) suggests this would be the most suitable method to record the interview. Thus, prior to the interview, the audio recording equipment was tested and the most suitable area within the school was chosen prior to the interview being carried out.

Ethical considerations

There are ethical considerations that must be adhered to when carrying out any piece of research. In order to carry out the research, University Ethics & integrity code of practice (2018) and BERA (2018) ethical guidelines were thoroughly examined. Prior to the research being carried out, an ethics form was submitted (Appendix One). Any research carried out follows important ethical guidelines within the school's policies and university regulations.

In terms of confidentiality, the names of all teachers and children have been excluded from the observation; this is so that they remain anonymous (Denscombe, 2007). Furthermore, the name of the school will not be stated within this report. Children that form the focus group will not be named given pseudonyms (Walford, 2005); these children will be referred to as Child A, Child B and Child C. This is to ensure confidentiality within the research process (Kaiser, 2009). The selection of these children was discussed with the teacher within the class to ensure that children would feel comfortable within the research process.

Consent was gathered prior to any research being carried out. Consent forms attached within the appendices (Appendix Five) were sent home to the children's parents/guardians to give consent. Additionally, an information sheet was orally read to the children with child friendly language so that the purpose of the research may be understood and to uphold ethical guidelines (Appendix Four). This was crucial in stating the right to withdraw from the research at any point. Furthermore, any risks to the investigator or participants were considered. This research ensured that any participants would not miss any learning opportunities by contributing to this study.

Lesson Study: Results and Analysis

Lesson Study One:

I think that overall children were actively engaging within the lesson through the active learning strategies implemented within this lesson. I think this is reflected within the focus group reflection and the observational table that will be discussed in greater detail below (appendix Two). The lesson plan has been attached within the appendices (Appendix Seven) to highlight the activities and lesson objectives within this lesson study to provide context to the discussion below.

Within the introduction, the TPS activity allowed children to discuss their prior knowledge of the lesson. I think that the children thought about their ideas and wanted to share within peer and whole class discussion. It seems interesting that Child A only wanted to briefly discuss ideas before putting her hand up to share ideas with the whole class. This is further reflected by restricted pair engagement within the next teacher questioning, opting again to think individually before wanting to share their ideas through the whole class discussion. This is not mirrored, however, by Child B who seemingly enjoyed the pair discussion eliciting ideas within a group of three making a few comments. This willingness then did not transpire into the class discussion where they remained quiet but listened intently. Child C interacted with all three stages of TPS becoming very discussion orientated with their partner about the questions posed by the teacher and put their hand up to develop ideas within the class discussion. I think that all children achieved the lesson goal within the introduction because all were willing to share ideas whether that by within their pairs or whole class discussion. Although Child A limited their input to whole class discussion, I think that it demonstrates her engagement with the activity and her self- reflection of learning (i.e. her thoughts and ideas).

The main activity which consisted of the jigsaw puzzle had the highest levels of observed engagement within the lesson. It is reflected that all children were engaged in looking for the intruder clues and that, when piecing the puzzle together, all children were very engaged. With this activity being carried out as a group becoming an oracy activity that invites children to make predictions and discuss ideas, it was evident children were engaged collaboratively with one child remarking 'team work makes the dream work'. The children discussed each piece of the puzzle, eliciting what they could visually see and predicted what it could be. Children took turns taking a piece of the puzzle and would invite other children to discuss their piece of the puzzle. It may be said that children were so engaged that they talked over each other wanting to share ideas, wanting to elicit ideas to the group.

The plenary which was the third and final active learning strategy utilised was the odd one out; this strategy reflects interesting levels of engagement. It seems that all children were on some level engaged with the activity but their approach within their thinking/engagement differed. Child A preferred to put her hand up and wait for the opportunity to share ideas with the whole class whilst child B did the opposite choosing to discuss ideas with her partner but was less willing within the

whole class discussion. Child C who was observed to have the highest level of engagement however discussed ideas with their partner before putting their hand up to contribute to whole class discussion. The observational notes reflect that all children were engaged with the activity but with varied approaches (whether that is with the pair and/or whole class discussion).

The focus group allowed us to ascertain points of development within the lesson. The children reflected that they enjoyed the lesson and enjoyed discussing ideas within a group. Interestingly, they reflected that they would like to find the puzzle pieces and then put them together rather than finding clues that would result in the award of the puzzle pieces. The children reflected that they would like more puzzles in the future and potentially on a larger scale within the hall where it can become a whole class activity involving collaboration with all the children to solve the activity. Equally, they reflect that they enjoyed the odd one out and would like this strategy to be utilised to a higher degree within lessons. However, they reflected their desire in all having the opportunity to have a turn on the interactive whiteboard to cross the odd one out. For the next lesson, we are taking on board the children's ideas and making the hunt for the puzzle pieces the objects that the children need to find. Additionally, we have tried to provide more time for odd one out so that more children have the opportunity to use the interactive whiteboard.

Lesson Study Two:

I think that there were high levels of engagement within the lesson through the active learning strategies implemented within this lesson. I think this is reflected within the focus group reflection and the observational table that will be discussed below (Appendix Three). The lesson plan has been attached within the appendices (Appendix Seven) to highlight the activities and lesson objectives within this lesson study to provide context to the discussion below.

Within the introduction, the TPS strategy got all children to think and engage with the lesson from the outset. Children A and C were particularly engaged from the beginning of the lesson, making predictions about what the animal could be and wanting to share ideas. Once TPS was implemented, child B sat quietly and quite reserved. From teacher prompting they began to verbalise their ideas and put their hand up to share with the whole class. Thus, observation reflects that child B was engaged with the teacher questioning but only wanted to elicit ideas to the whole class whilst Child A and C were discussing with their peers and wanted to contribute to class discussion. Thus, children responses to TPS may denote that children A and C were keen to pair share whilst all three children wanted to class share. In so doing, this suggests that all children were engaged within this strategy wanting to contribute their ideas.

The main activity which consisted of the adapted jigsaw puzzle had high levels of observed engagement. All children were engaged throughout the task. However, the particularly interesting aspect within this strategy is that children were keen to share ideas with the teacher to a higher degree than with their peers when working within this strategy. Thus, observations reflect that Child A engaged with the activity on a more individual basis rather than group orientated in order to piece together the jigsaw whereas Child B was more oracy based in making predictions for the pieces of the puzzle and was inviting discussion from the teacher. Child C, on the other hand, carried out the activity with a mixture of both Child A's and Child B's approaches to the activity by wanting to construct the puzzle and make predictions. Although these predictions were prompted by the teacher, they became willing to share ideas and become more involved within the activity. Furthermore, with the adapted jigsaw puzzle the pieces required needed to be hidden once more for the next group. The children were thoroughly engaged within this, working collaboratively to hide the pieces as a group. Although the children's behaviour may have reflected different approaches within this strategy, it can be said that all children engaged within the main activity to complete the task.

The plenary exhibited interesting behaviour from the children. The focus children were always the children sat quietly with their hand up as the teacher requested within this strategy. All children were observably keen to want to share their ideas. This is reflected from the outset of this strategy being implemented, with Child C expressing their insight of what the strategy may entail in order to complete the task and being the only child verbalising the task. As the strategy went on, Child A was observed to be more enthusiastic to join in with the activity and was seen to be more actively responding to teacher questioning. The engagement levels within this strategy were increased by the implementation of the interactive whiteboard and children's willingness to want to physically cross off the incorrect object within the pictures.

The focus group allowed reflection of the lesson to take place; feedback from the children highlighted interesting concepts. Having changed the main activity so that children had to find the puzzle pieces, all children reflect that it was 'good' they found the puzzle pieces in order to do it with Child A stating they 'wish they could do it 100 times'. Additionally, Child C who was perceived to have the highest level of engagement in the main activity remarked that they enjoyed figuring out the puzzle. The children reflect that it was easy. However, we as teachers reflect that the puzzle may have been too challenging to piece together. This conflict of opinion is an interesting notion because our observation reflects that children were engaging more independently to work the puzzle out. Although all children engaged, it would have interesting if it would have become easily with better collaboration within the activity.

The children reflect that they enjoyed odd one out with Child C postulating that it made them think about it with 'sometimes we got them right and sometimes we got them wrong'. Again, similarities

can be drawn from the focus group interviews with all children reflected that they enjoyed and/or wanted to have a turn on the interactive whiteboard in order to cross to distinguish the odd one out.

Overall, it was encouraging that all children reflected positive opinions of the lessons with children using adjectives such as fun to describe how they felt the lesson went. Additionally, the focus groups made it apparent that they would like similar lessons in the future that particularly applied to the puzzle and odd one out strategies where they could work collaboratively and develop their thinking skills. Within this experience, children reflect that it made them focus more by actively exploring rather than simply be given an activity to do. This was particularly pertinent within the puzzle active learning strategy where children saw the puzzle as a reward.

Discussion of research findings

Tanner (2013) advocates that active learning strategies may be best in ascertaining engagement from the individual variations that may be within a class. As it became evident, all children approached the strategies with varied levels of observed engagement. However, the varied approaches demonstrate that the learning environment may have been accessible to all students (Tanner, 2013). This is because children made an active process in building their knowledge within the lesson (Mayer, 2004) with all children able to demonstrate understanding whether that by through pair discussion or wanting to contribute to whole class discussion.

It was interesting that children (especially from lesson study class 1) denoted the social constructivist approach to the activities in wanting to collaboratively work in order to complete the task within my class. As Van Boxtel, Van der Linden & Kanselaar (2000) posit social interaction stimulates elaboration of conceptual knowledge. Children were able to verbalise their understanding and discuss their ideas with one another; active learning strategies that seek to develop a constructivist environment provide students to benefit from collaboration and social interaction (Powell & Kalina, 2009). This became evident within lesson one with children enjoying co-constructing knowledge and developing knowledge through discussion and working together to complete the activity.

I think that the activities allowed children to develop a deeper level of learning within the classroom. I think that children were evaluating their knowledge throughout the lesson and built upon ideas and concepts to develop a greater understanding. Evidence for this is highlighted within children making predictions and re-evaluating their evaluations as the lesson progressed. Children became critical thinkers through reflection and began to develop higher order thinking skills as highlighted by Bloom's taxonomy (Krathwohl, 2002). This is reflected in Gokhale's (2012) research who found collaborative learning performed more significantly on the critical thinking aspects within the study.

The reflection from the focus group reflects that they were more focused within the lesson as a result of the active learning strategies which agrees with Kothiyal, Majumdar Murthy & Iyer's (2013) research where they found the implementation of active learning strategy led to high levels of sustained engagement. A possible explanation may come from Fishers' (2005) insight who posits that active learning strategies may be seen as a game and make lessons fun. This seems to be reflected within this study with children from the focus group stating their general agreement of enjoyment for the lesson.

Within lesson study 1, Child A was perceived to have the lowest engagement within the active learning strategies as depicted by the ratings within the observational table. This is interesting when greater consideration within the children's independent learning opportunities where they developed the construction of the intruder developing a poster that developed the ideas from the main activity by firstly drawing the intruder and then writing a description based on the discussion. Additionally, their independent writing that highlighted key skills within the writing across the curriculum strand in the literacy and numeracy framework such as *communicating purposefully in writing, e.g. may be supported by a drawing* (Welsh Government, 2014). This highlights that the child engaged with their learning and developed their knowledge outside of the activity. However, their level of engagement may not have been visible to the observer with more internal thinking taking place. Thus, although the observational table may have perceived the child as moderately engaged, the child may demonstrate higher levels.

Limitations of the study

Any findings within this study can only draw tentative conclusions with lesson study research usually carried out over a longer period of time and more lessons reflected and analysed upon (Dudley, 2015). Additionally, with this being a snapshot it may only show limited awareness of the approaches within the study and the learner needs providing a limited insight into ways to improve our teaching (Dudley, 2015). However, the value to my personal teaching experience and my pedagogical content knowledge () may be more valuable being at the start of my teaching journey to support pupils' learning successfully in the future (Dudley, 2015: 133).

With the study focus group reflection taking place after lunch rather than straight after the lesson to accommodate the daily routines within the school and children not missing out on their playtime, this may have impacted the interview process especially for the second focus group who were younger. With the interview taking place in the afternoon, children reflected they were tired which may have restricted their responses reducing the effectiveness of the focus group and they were taken out of 'playtime' (independent learning opportunities). However, to ensure validity within this research, this approach was carried out on both days of research.

One strength within this study was that the data collection methods provided the opportunity to have a multitude of perspectives in which to evaluate the lesson. In particular, it provided children with a voice; O'Neill (2014: 220) postulates this is important within educational because it allows 'to understand the phenomenon of education better and to improve educational provision and experience for those involved'. Thus, by children being active participants within the research process, it is only them that can provide their opinion of educational knowledge and experiences (O'Neill, 2014). Raffety (2015) outlines the idea that children should have a voice and the agency (to participate, change and shape their world) to impact on their education. Within this study, I think that we listened to the children's perspectives and tried to implement their ideas to the next lesson where applicable within the constraints of the study having one day to address suitable changes before the next observation.

A strength of this study is the semi structured interview because it allowed the exploration of ideas to be elaborated by the children through the use of follow up questions (Kallio, Pietila, Johnson & Kangasniemi, 2016) based on the children's responses and providing rich source of the children's experiences within the lesson (Gill, Stewart, Treasure & Chadwick, 2008). Equally, it was important to have some pre-conceived questions to provide guidance to the interview (Gill, Stewart, Treasure & Chadwick, 2008) so that the key areas within the study may be explored. Before the interview began, we tried to build a rapport with the children so that the children felt comfortable conversing with us (Taylor, Bogdan & De Vault, 2015).

Prior to the research being carried out, an in-depth discussion of the Leuven rating (Laevens & Heylen, 2003) was executed that included a pilot study of the observational table. This was important because it allowed the evaluation of consistent practices to be carried out and identify any areas of refinement within the observational table to ensure integrity within this research (Leon, Davis & Kraemer, 2011). It allowed the testing of procedures to identify the appropriateness of the method (Vogel & Draper-Rodi, 2017) which would have impacted on the findings of the study.

Conclusion

In conclusion, the study delved into active learning strategies and engagement within a foundation phase classroom. The study demonstrated that children reflected positively to active learning strategies in aiding their learning. In particular reflections ascertain the use of collaborative work and engagement supported children's learning within this classroom setting. Reflections extrapolated from Brookfield's (1998) model within this study suggested that the strategies implemented made learning accessible to all learners within the class and allowed the varied learners within the class to achieve the lesson objective.

Taking this forward into future teaching practices, the importance of active learning within the classroom highlights that effective learning takes place when children are constructing their own knowledge within the lesson. Equally, rich stimulating opportunities will enhance children's opportunities and create an environment that place children at the centre.

Further research may want to address shortcomings within this study by carrying out more lessons which will provide a richer source of knowledge within this field of research. Additionally, further research may want to explore ideas expressed by the children. In particular, such research may want to adapt the active learning strategies within this study by carrying out the jigsaw puzzle on a greater scale. Furthermore, developing ways in which children will have greater opportunities to engage physically within the odd one out strategy may be one avenue that could be examined to develop the learning process within the classroom. In so doing, it would place the value of the pupil's voice which is central to the new curriculum (Donaldson, 2015) and allow research to blossom from real life educational contexts.

Reference list

- Adey, P., Csapo, B., Demetriou, A., Hautamäki, J. and Shayer, M. (2007). Can we be intelligent about intelligence?: Why education needs the concept of plastic general ability. *Educational Research Review*, 2(2), pp.75-97.
- Axelson, R.D. and Flick, A. (2010). Defining student engagement. *Change: The magazine of higher learning*, 43(1), pp.38-43.
- Azlina, N. N. (2010). CETLs: supporting collaborative activities among students and teachers through the use of think-pair-share techniques. *International Journal of Computer Science Issues (IJCSI)*, 7(5), pp.18-29.
- Bartlett, S., and Burton, D. (2012). *Introduction to education studies*. 3rd ed. London: Sage.
- British Educational Research Association. (2018). Ethical guidelines for educational research. Retrieved from <https://www.bera.ac.uk/researchers-resources/publications/ethical-guidelines-for-educational-research-2018>.
- Brookfield, S. (1998). Critically reflective practice. *Journal of Continuing Education in the Health Professions*, 18(4), pp.197-205.
- Chickering, A. W. & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin*, 39(7), pp. 2-7.
- Cornish, L. and Jenkins, K.A. (2012). Encouraging teacher development through embedding reflective practice in assessment. *Asia-Pacific Journal of Teacher Education*, 40(2), pp.159-170.
- Darling-Hammond, L. and Richardson, N. (2009). Research review/teacher learning: What matters. *Educational leadership*, 66(5), pp.46-53.
- Denscombe, M. (2007). *The Good Research Guide for small scale social research projects*. Maidenhead: McGraw Hill.
- Department for Education. (2009). Improving subject knowledge pedagogy through lesson study: Handbook for leading teachers in mathematics and English. Retrieved from https://moodle.uwtsd.ac.uk/pluginfile.php/133343/mod_resource/content/1/2018%20Improving%20subject%20pedagogy%20through%20Lesson%20Study.pdf
- Dilshad, R.M. and Latif, M.I. (2013). Focus Group Interview as a Tool for Qualitative Research: An Analysis. *Pakistan Journal of Social Sciences (PJSS)*, 33(1). pp 191-198.

- Dimitrov, N. and Haque, A. (2016). Intercultural teaching competence: a multi-disciplinary model for instructor reflection. *Intercultural Education*, 27(5), pp.437-456.
- Donaldson, G. (2015.) *Successful futures: Independent review of curriculum and assessment arrangements in Wales*. Retrieved from
<file:///C:/Users/User/Downloads/Donaldson%20Report%20-%20Successful%20Futures%20-%20Independent%20Review%20of%20Curriculum%20and%20Assessment%20Arrangements%20in%20Wales.pdf>.
- Dudley, P. (2014). *Lesson study: A handbook*. Retrieved from
<http://disde.minedu.gob.pe/bitstream/handle/123456789/5017/Lesson%20Study%20a%20Handbook.pdf?sequence=1&isAllowed=y>.
- Dudley, P. (2015). *Lesson study: Professional learning in our time*. London: Routledge.
- Eison, J. (2010). Using active learning instructional strategies to create excitement and enhance learning. pp. 1-20.
- Etikan, I., Musa, S.A. and Alkassim, R.S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), pp.1-4.
- Fawcett, M. and Watson, D. (2016). *Learning through child observation*. London: Jessica Kingsley Publishers.
- Fisher, R. (2005). *Teaching children to think*. 2nd ed. Cheltenham: Nelson Thornes.
- Gill, P., Stewart, K., Treasure, E. and Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal*, 204(6), pp.291-295.
- Gokhale, A. A. (2012). Collaborative learning and critical thinking. *Encyclopedia of the sciences of learning*, pp.634-636.
- Hobart, C. and Frankel, J. (2004). *A practical guide to child observation and assessment*. London: Nelson Thornes.
- Howard, J. and McInnes, K.. (2013). The impact of children's perception of an activity as play rather than not play on emotional well-being. *Child: care, health and development*, 39(5), pp.737-742.
- Hyde, K. F. (2000). Recognising deductive processes in qualitative research. *Qualitative market research: An international journal*, 3(2), pp. 82-90.

- Isohatala, J., Jarvenoja, H. and Jarvela, S. (2017). Socially shared regulation of learning and participation in social interaction in collaborative learning. *International Journal of Educational Research*, 81, pp.11-24.
- Kahn, P.E. (2014). Theorising student engagement in higher education. *British Educational Research Journal*, 40(6), pp.1005-1018.
- Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative health research*, 19(11), pp.1632-1641.
- Kallio, H., Pietila, A.M., Johnson, M. and Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, 72(12), pp.2954-2965.
- Knight, J.K. and Wood, W.B. (2005). Teaching more by lecturing less. *Cell biology education*, 4(4), pp.298-310.
- Kothiyal, A., Majumdar, R., Murthy, S. and Iyer, S. (2013). Effect of think-pair-share in a large CS1 class: 83% sustained engagement. In *Proceedings of the ninth annual international ACM conference on International computing education research*. pp. 137-144.
- Krathwohl, D.R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, 41(4), pp.212-218.
- Laal, M. and Ghodsi, S.M. (2012). Benefits of collaborative learning. *Procedia-social and behavioral sciences*, 31, pp.486-490.
- Laevers, F., & Heylen, L. (2003). *Involvement of children and teacher style: Insights form an international study on experiential education*. Leuven University Press.
- Leitch, R. and Day, C. (2000). Action research and reflective practice: Towards a holistic view. *Educational action research*, 8(1), pp.179-193.
- Lenaerts, F., Braeye, S., Nguyen, T.L.H., Dang, T.A. and Vromant, N. (2017). Supporting Teachers in Vietnam to Monitor Preschool Children's Wellbeing and Involvement in Preschool Classrooms. *International Journal of Early Childhood*, 49(2), pp.245-262.
- Leon, A.C., Davis, L.L. and Kraemer, H.C. (2011). The role and interpretation of pilot studies in clinical research. *Journal of psychiatric research*, 45(5), pp.626-629.
- Mayer, R.E. (2004). Should there be a three-strikes rule against pure discovery learning?. *American psychologist*, 59(1), pp.14-19.

- O'Neill, J. (2014). Voice and the ethics of children's agency in educational research. *New Zealand Journal of Educational Studies*, 49(2), pp.219-232.
- Powell, K.C. and Kalina, C.J. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, 130(2), pp.241-251.
- Prince, M. (2004). Does active learning work? A review of the research. *Journal of engineering education*, 93(3), pp.223-231.
- Rabionet, S. E. (2011). How I learned to design and conduct semi-structured interviews: An ongoing and continuous journey. *The Qualitative Report*, 16(2), pp. 563-566.
- Raffety, E.L. (2015). Minimizing social distance: Participatory research with children. *Childhood*, 22(3), pp.409-422.
- Reschly, A.L. and Christenson, S.L. (2012). Jingle, jangle, and conceptual haziness: Evolution and future directions of the engagement construct. In *Handbook of research on student engagement* . pp. 3-19. Springer, Boston, MA.
- Roehl, A., Reddy, S.L. and Shannon, G.J. (2013). The flipped classroom: An opportunity to engage millennial students through active learning strategies. *Journal of Family & Consumer Sciences*, 105(2), pp.44-49.
- Settles, B. and Craven, M. (2008). An analysis of active learning strategies for sequence labeling tasks. In *Proceedings of the conference on empirical methods in natural language processing*. pp. 1070-1079. Association for Computational Linguistics.
- Sharman, C., Cross, W. and Vennis, D. (2007). Observing children and young people. London: Continuum.
- Tanner, K.D. (2012). Promoting student metacognition. *CBE—Life Sciences Education*, 11(2), pp.113-120.
- Tanner, K. D. (2013). Structure matters: twenty-one teaching strategies to promote student engagement and cultivate classroom equity. *CBE—Life Sciences Education*, 12(3), pp.322-331.
- Taylor, S. J., Bogdan, R., & DeVault, M. (2015). *Introduction to qualitative research methods: a guidebook and resource*. 4thed. London: John Wiley & Sons.
- University of Wales Trinity Saint David (2018). Research ethics & integrity code of practice. Retrieved from <https://www.uwtsd.ac.uk/media/uwtsd-website/content-assets/documents/research/research-ethics-integrity-code-practice.pdf>.

- Unicef (1989). United nations convention on the rights of the child. Retrieved from https://www.unicef.org.uk/wpcontent/uploads/2010/05/UNCRC_united_nations_convention_on_the_rights_of_the_child.pdf.
- Van Boxtel, C., Van der Linden, J. and Kanselaar, G. (2000). Collaborative learning tasks and the elaboration of conceptual knowledge. *Learning and instruction*, 10(4), pp.311-330.
- Vogel, S. and Draper-Rodi, J. (2017). The importance of pilot studies, how to write them and what they mean. *International Journal of Osteopathic Medicine*, 23, pp.2-3.
- Walford, G. (2005). Research ethical guidelines and anonymity. *International Journal of research & method in education*, 28(1), pp. 83-93.
- Watkins, C., Carnell, E., & Lodge, C. (2009). Effective learning in classrooms. London: Sage.
- Welsh Government. (2014). National literacy and numeracy framework. Retrieved from <https://learning.gov.wales/resources/browse-all/nlnf/framework?lang=en>.
- Wolf-Wendel, L., Ward, K. and Kinzie, J. (2009). A tangled web of terms: The overlap and unique contribution of involvement, engagement, and integration to understanding college student success. *Journal of College Student Development*, 50(4), pp.407-428.