

ECPP7001: The Enquiring Teacher

How could we improve pupil engagement with peer assessment through the technique of 'Feedback Sandwich' in a year 3 classroom?

Aim, focus and purpose of the research

The aim of this research enquiry is to develop an understanding of assessment for learning techniques and their impact on pupils, in order to support a continued personal professional development in the future. My research focus will be on peer assessment and its impact on pupil engagement and learning. The purpose of this will be to find out how the use of a specific peer assessment tool called the 'Feedback Sandwich' affects pupil engagement with peer assessment. The reason for this is that in light of the publication of Donaldson's "Successful Futures" and the impending move towards a more skills-based curriculum where pupils are encouraged to take more ownership of their learning, the need to explore and develop the use of effective peer assessment strategies seems prudent. Therefore, the exploration of this subject is both a personal interest and an area in which I intend to further my professional development.

Research context

The two schools in which the research study will be carried out are both located in a large town in the Vale of Glamorgan. The first school (School A) is situated in an area of social and economic deprivation. There are currently around 500 pupils on roll, across 14 single-year classes and 4 nursery classes. Approximately 36% of children are eligible for free school meals, which is well above the national average. Approximately 31% of children have been identified by the school as having additional learning needs, which is again well above the national average. No children have a statement of special educational needs, and very few children are in the care of the local authority. Nearly all children are of white British ethnicity and speak English as their main language. A small number of children speak English as an additional language. No pupils speak Welsh at home (Estyn, 2017). In my class there are 30 children aged between 7 and 8, of which 13 are girls and 17 are boys. The

second school (School B) currently has around 700 pupils on roll, in 21 single-year classes and 4 nursery classes. Approximately 11% of children are eligible for free school meals, which is well below the national average, and approximately 10% of children have been identified as having additional learning needs, again well below the national average. Most pupils are of white, British ethnicity and speak English as their main language. Very few children speak Welsh at home (Estyn, 2015). In my research partner's class, there are 29 children aged between 7 and 8, of which 14 are girls and 15 are boys.

In line with BERA (2018) ethical guidelines the names of the schools will not be disclosed and will be referred to as 'School A' and 'School B'. The names of any teachers or pupils mentioned within this research enquiry will also be kept anonymous. In School A, the three target children will be referred to as 'Child 1', 'Child 2', and 'Child 3', and in School B, the three target children will be referred to as 'Child A', 'Child B' and 'Child C'.

My research partner and I agreed on our research question following a discussion about the current literature and thinking on peer assessment strategies and their use in the classroom and having identified a lack of current research on this particular subject. Since both schools are pioneer schools for the developing curriculum in Wales, it felt natural to explore a subject which would seem to form an important part in shaping the future of education in Wales.

Literature review

Black and Wiliam (1998) discussed the use of formative assessment in the classroom and its impact on the standards of achievement of learners in their seminal work on Assessment for Learning (AfL). They concluded that it is an essential part of classroom practice and that there is no better way of raising standards than formative assessment. This is a point backed up by Hattie (2012), another advocate of AfL who, after extensive research, ranked feedback strategies tenth out of 150 factors which significantly improve learner outcomes, and stated that if teachers use formative assessment as part of their teaching, pupils learn at approximately double the rate. Donaldson (2015) takes this further by saying that in order for effective assessment to happen within the new curriculum, teachers need to

engage learners in the assessment process, through self- and peer assessment. During the course of my reading, I have come across a lot of literature on AfL, but less so on the use of peer assessment specifically, perhaps because it is a sophisticated skill which takes time and perseverance to master and is thus little used in educational contexts (Isaacs, 2013).

Therefore, this study becomes all the more pertinent.

Clarke (2005) recognised the importance of peer feedback by saying that if it is solely the teacher who is giving the feedback, then the children will feel little compulsion to engage with it because they have no power in it. Giving the children ownership and responsibility for their learning will therefore increase their stake in it. Indeed, the Welsh Assembly Government (2013) published two papers, on the 'how' and 'why' of peer assessment, saying that learners may better accept criticisms and constructive feedback from their peers that they would not take seriously from their teachers, therefore giving them more impetus to improve their learning. In addition to this, Black et al. (2003) said that the language that learners use to give feedback is naturally similar to their own, thus increasing the likelihood that their peers will understand what is needed to improve. In the Year 3 classroom, in which this research enquiry will take place, I will hopefully be able to see the beginnings of this positive engagement with peer assessment, and the beginnings of understanding in the children of the benefits of its use.

However, Black and Wiliam (1998) also say that pupils will only be able to benefit from peer and self-assessment if their learning objectives and success criteria have been made explicit beforehand. Thus, they know what goals they are working towards. Black et al. (2003) further concluded, as a result of extensive research into peer assessment, that for peer assessment to be successfully used, time and effort needs to be given in modelling, scaffolding and practicing the skill, particularly with low-attainers. Galton (2007) adds to this by saying that peer assessment will also only ever be affective if classroom cultures change to focus solely on the learning rather than on the black and white of right and wrong. In Gaer Primary School, Newport, peer assessment models introduced have had an extremely positive effect on the pupils, with Estyn (2018) reporting that the models promote the celebration of success in learning and help foster diplomacy and oracy skills amongst the pupils. This clearly shows the positive effects of peer assessment on the

learners and their wellbeing. Therefore, I believe that when all of these directions are used in synchronicity, the impact on the learners will be immeasurable. This research enquiry therefore aims to shed more light on this.

Turning now to how peer assessment should be used in the classroom, and specifically how the learners should be allocated partners, Clarke (2005) said that 'talking partners' should be randomly generated and frequently changed. This would give them opportunities for discussion with a rich variety of abilities and personality types. However, Bates (2016) goes against this, saying that learners should work alongside those of a lower or higher ability than themselves, echoing Vygotsky's (1978) theory of social development that children learn by moving through the 'zone of proximal development' with the help of a 'more knowledgeable other.' I think that both ways of allocating partners have their merits, but that the random allocation of partners as suggested by Clarke (2005) would further develop the learners' skills in collaboration and cooperation.

In terms of which method of peer assessment should be used, Donaldson (2015) remarks that if assessment is to be used across all four purposes, it stands to reason that teachers will need to become proficient at using a wide range of assessment techniques suitable for the different outcomes. Black et al. (2003) note to exercise caution in the introduction of assessment techniques, recommending that peer assessment is mastered before introducing self-assessment since, as Isaacs (2013) says, assessing the work of peers can provide valuable insight to the learner of what to include or avoid in order to improve their own work. The use of a strategy with a positive spin on it is useful too, since it helps the learners see that it is being done to help them, rather than being "victims" of it (WAG, 2013) and helps to avoid the anxiety that some learners might feel when being judged by a peer (Clarke, 2003). Therefore, using the 'Feedback Sandwich' method of enclosing the constructive criticism between two positive comments seemed to be the most obvious choice for my research partner and I to investigate in this enquiry.

This reading supported our research question, and in light of this our predictions of the results are that pupil engagement of both the peer assessment tool and in achieving success criteria will increase through use, and that this will be achieved through systematic

modelling and guidance from the class teacher. We also predict that pupils will engage better when using peer assessment on written rather than oral work.

Research methodology

The method of research we used in this enquiry is a form of action research called Lesson Study. According to Dudley (2014), there are three main reasons why Lesson Study is a tool vital to the future development of effective learning and teaching. The first is that it gives teachers a new, detailed perspective on the relationship between their pupil's learning and their own professional development, the second is that Lesson Study creates environments where teachers can explore and experiment together without the fear of failure, and in doing so come to new understandings of how to improve their pupils' learning and achievement. And the third is that best practice methods which may have been previously hidden can be shared and aid professional development on a much wider scale. However, Lesson Study is not without its critics, with Lewis et al. (2006) describing it as being in danger of becoming a "fad", since so little is known about what it is and what it does. According to TES (2016) there is limited evidence to suggest it actually works, since very few studies have been completed to compare Lesson Study with non-Lesson Study conditions. Also, completing a comprehensive Lesson Study takes a long time, and it can be difficult to plan in to the daily routines of a school in order for it to be completed effectively. This is a point backed up by Buchard and Martin (2017) who said that the quality of Lesson Study and therefore its effectiveness as a research tool can only be determined when they are given time, perseverance and investment. For us and this enquiry therefore, which was conducted on a very small scale, meant that there were limitations, and where possible we took steps to mitigate against them. Nevertheless, the results of the enquiry provided an insight into the use of peer assessment in the classroom and highlighted areas for further research and development.

Several methods of data collection were used within this enquiry: structured non-participant observation, 'exit ticket' class feedback, focus group interviews, and personal reflections. There are a wealth of different methods that could have been used within this research project, however for this particular type of small-scale enquiry, these were seen as

the most effective methods to use. The strengths and limitations of each type of data collection are listed in the table below:

	Strengths	Limitations
Observations - Structured - Non-participant	- Keeps the focus - Quick and easy - Supplies qualitative data - Helps researchers stop making assumptions	- Limits the view, miss other things happening that aren't the focus - Personal interpretations/assumptions - Observer bias – preconceptions can alter what the observer sees/hears - Children's behaviour could change, knowing someone is watching - Can only see overt behaviour, not the feelings or reasons for the behaviour - Pupil interruptions of observer - Children unfamiliar with a new person
'Exit Ticket' class feedback	- Helps validity of observations and focus group interviews 'Pupil voice' of whole class rather than only 3 focus children	- Voluntary – children may not fill them in - Children may copy their friends - Children may not understand what is being asked of them
Focus Group Interviews	- Pupil voice – powerful tool in Lesson Study - Helps strengthen evidence from observations - Encourages positive rapport between researchers and children - Can probe further what happened in lesson - Easy to record – don't have to transcribe, can pick out relevant bits	- Children may tell researchers what they think they want to hear rather than what they're actually thinking - Children may simply agree with their peers - Children could become distracted or withdraw altogether - Could show bias – quotes taken out of context - Answers could be different with a different group of children
Personal Reflections	- Benefit of hindsight – can look back at positives and negatives - Researchers can see what needs to change in order to progress - Makes observations deeper - Fellow researcher can help reflect – another viewpoint	Danger of reflecting on everything which can prevent reflection from being deep enough

Using a number of different methods of data collection helped ensure that the evidence was both full and robust, which contributed to a more thorough enquiry.

My fellow researcher and I used structured non-participant observations to record the behaviours of the target children in each class, using a pre-determined checklist to keep a narrow focus. The checklist made was adapted from the Leuven Scale of Engagement. There are myriad limitations of using observations as a form of data collection in Lesson Study, as listed in the table above, and my research partner and I took steps to mitigate against as many of them as possible. One such limitation is the researcher's personal interpretation of what they're seeing. Baumfield et al. (2013) suggest that this is the critical element within observations and that in order to counteract this it is crucial to ensure an accurate description of the behaviour observed. Therefore, we carried out a 'trial run' of the observations, using a YouTube video within a similar context, to ensure that we were both looking for the same things and making interpretations in the same way. We also acknowledged that other things may happen during the lessons which were not our focus

but provided an interesting point of note, so space was provided on the observations form (see appendices) for extra notes. For me, it was particularly interesting to observe the children giving and receiving peer feedback since this was one of the first times they had encountered it, and the results of the study will therefore inform both my own development of its use, and in what direction to take its use in early Key Stage 2 in the future.

We used 'exit ticket' class feedback in the Lesson Study in order to mitigate against the limitations of using only 3 target children in the focus group interviews. Whilst the 3 children selected to take part in the interviews were intended to provide a representative sample of the whole class, they could only be representative of one particular aspect of the class, (perceived engagement level in this enquiry), and so other aspects of the class dynamic may have been missed, for instance behaviour or attainment level. Therefore, using 'exit tickets' provided a valuable new dimension to the study and provided validity to the answers the target children gave in their focus group interviews, as well as informing the researchers of a 'whole class' view of the use of peer feedback in the lessons. The 'exit tickets' were also anonymised to encourage truthfulness. Indeed, David Ginsburg (2015) remarks that this way of using 'exit tickets' to garner feedback about a lesson is more useful than asking children to use an 'exit ticket' for the teacher to assess what they have learned in the lesson.

Breen (2006) suggests that using focus groups to research is useful when trying to generate and develop ideas and is particularly useful to use alongside other methodologies if the aim of the study is to find out about the actual behaviours of people. However, Bragg (2007) concluded in her exploration of teachers' perspectives on the use of pupil voice, that it is a complex area and its level of success of implementation in the classroom much depends on the commitment of the teachers, more so than the ability of the learners to adapt to its use. Therefore, in terms of its use within the focus group interviews, my research partner and I were careful to know exactly what we wanted to achieve from them beforehand. This included asking only open questions relevant to the enquiry but allowed space to seek clarification or probe further. We also piloted the questions on family and friends beforehand to check that we were getting what we wanted from the answers. Baumfield et

al. (2013) also suggest limiting the number of questions to five, and to set a time limit, which was important for our enquiry as we were working with fairly young children with limited attention spans.

In terms of using personal reflections within a Lesson Study, Dudley and Gowing (2012) regard this as a skill fundamental to its success. Therefore, the inclusion of reflections in this enquiry was non-negotiable. Upon analysis of several different models of reflective practice, my researcher partner and I decided that using a combination Brookfield's (1998) Lenses and Gibbs' (1988) Reflective Cycle would give us the breadth and depth of reflection needed to adequately critically assess the pupil observations and focus group interviews. We used our reflections to help come to conclusions and inform our future practice. In their discussion of effective reflective practice, Grigg and Lewis (2017) say that it is not just about evaluating a lesson, but reflection also helps to increase self-awareness and address the 'what' and 'why' of implementing changes to improve learning and teaching. Using the Brookfield and Gibbs models in conjunction helped us achieve this.

All of the methods of data collection discussed collected qualitative rather than quantitative data. According to Mack et al. (2005), using qualitative data allows for more flexibility in terms of the interactions between researchers and participants. However, the danger therefore is a loss of focus – quantitative data provides very structured, statistical data (Baumfield et al. 2013) – so in using several different types of data collection, our research aimed to be more thorough, and therefore our evidence robust enough to stand up to analysis.

Ethical considerations

When carrying out research within a classroom environment, there are several ethical considerations which must be taken into account. These were set out in my completed ethics form which was submitted to and approved by the Athrofa Ethics Committee. (Appendix 1)

In order to carry out effective research, researchers must balance the benefit of doing the research with the amount of risk involved in carrying it out. As researchers, we had to make sure that we were minimising the risks so that the benefits outweighed the risks (Bell, 2014). In this research enquiry, there were risks to both ourselves as investigators, and to the participants, chiefly that of safeguarding, and that any risk to the safety and wellbeing of both the participants and the researchers was mitigated against at all times. This is one of the requirements set out in the EWC Code of Professional Conduct and Practice (2019). The EWC also states that the relationship between teachers and children is built on trust and respect, and that teachers maintain a professional relationship with other teachers, professionals and parents, guardians and carers at all times. These were the other main risks of carrying out this type of research.

BERA (2018) states that the participants' voluntary consent must be given prior to the research study taking place, and that the participants may withdraw their consent at any time and for any reason throughout the study. The UNCRC (2004) states that "children should be given a say in matters that affect them" (p.5). This means that both consent and assent procedures should be followed to ensure an open and honest exchange. Therefore, the consent from the parents of the participants was sought prior to the research study taking place, and the continuing assent of the target children was sought throughout the process.

BERA (2018) also states that any data collected should be treated both confidentially and anonymously. Therefore, steps were taken to ensure that no participant could be identified, nor information given that might allow any participants to be identified.

My research partner and I also took steps to ensure the safe handling of all data collected, in accordance with UWTSD guidelines.

Lesson Study 1 – Results and analysis

The results of Lesson Study 1 show that the target pupils displayed better engagement with peer assessment on written rather than oral work. This was a result predicted by myself

and is evident in my research partner's observations which show low pupil engagement with the first use of the 'Feedback Sandwich' – Child 1 "physically migrated off the carpet" (Appendix 2) – and thus revealed how uncomfortable she was in taking part. The observations also show a higher level of engagement with the second use of the 'Feedback Sandwich', which was, importantly, the first instance of its use on something visual in the lesson.

Another predicted result of this Lesson Study was that the pupils would engage more successfully with peer assessment upon being given guidance and a scaffolding of its use by the teacher. The evidence shows that, with guidance, Child 3 began to think of ideas, but when given no guidance he displayed very little interaction with the feedback method (Appendix 2). This means that in order for peer assessment to be successful and for effective learning and teaching, the technique should be modelled, guided and practiced with learners until they are proficient in its use.

The results also show that the pupils displayed increased engagement with improving their work as a result of using the 'Feedback Sandwich'. The children were able to begin critically assessing each other's work and provide ideas on how it could be improved. My research partner reported that Child 2 gave her partner "clear verbal communication, illustrative pointing and idea development" (Appendix 2). Further evidence of this is provided in the focus group interview in which the same child was able to explain why the 'Feedback Sandwich' was useful to their learning by saying that it "helps us to think of things we can do while doing love spoons".

However, engagement with the peer assessment tool was not consistent throughout the lesson. All three target children struggled to use the peer assessment tool for the three instances of its use within the lesson, with the highest levels of engagement seen in the second use of the technique (Appendix 2). Only child 2 showed an attempt at engagement with the technique in the third and final instance of its use. This could show that the technique was used too many times within the lesson, and that children had gotten bored with using it, or simply wanted to finish doing their work. This could also show that it was actually necessary to use the tool three times within the lesson because the first time the

children were learning how to use it, the second time they were able to engage with it and benefit from it, and the third time they only used it if they felt it would benefit them further in terms of improving their level of success with the task.

One other main result of the Lesson Study was the variance in understanding of how the use of the 'Feedback Sandwich' is useful in improving learning. This is evident in the range of responses received in the 'Exit Ticket' plenary to the lesson. (see Appendix 3) and is also evident in the range of responses received in the focus group interview to the question of how using the 'Feedback Sandwich' affected the target pupils' learning. For the children in my class this means that since this was one of the first times they had encountered the use of peer feedback, they had not yet had the opportunity to find out the impact it could have on their engagement and learning. Clearly this is therefore something that would need to be explored further with them.

An interesting result of this Lesson Study was that the perceived ability level of the target children in the subject did not necessary correspond with their predicted engagement level. My research partner and I had predicted that a low ability level would correlate with a low engagement level, and that a high ability level would correlate with a high ability level. However, the empirical evidence shows that whilst a high ability level did correlate with a high engagement level, as seen in the observations of Child 2, the mid ability and low ability engagement levels were reversed (Appendix 2). This could point towards a difference in engagement levels more generally between the sexes, since Child 1 with a low ability level displayed a mid-engagement level as is female, whilst Child 3 with a mid-ability level displayed a low engagement level and is male. However, further studies would need to take place in order to prove or disprove this theory.

Therefore, key learning from this experience is that peer assessment is better used on written than oral work. Also, that peer assessment is more successful when its use is scaffolded by a More Knowledgeable Other, and that knowledge, engagement and understanding of peer assessment and its benefits to learning improves with use. In light of this, our improvements to the next lesson were to scaffold the use of the 'Feedback

Sandwich' with the whole class the first time it is used in the lesson, and to only use the technique when peer assessing written work.

Lesson Study 2 – Results and analysis

In terms of achieving the success criteria and learning objective of the lesson, most children were able to write a rhyming couplet about Wales or being Welsh. However, in terms of achieving the Lesson Study goal of engaging with the peer assessment technique, the children really struggled. This, even after my research partner changed how she was going to first use the technique in her lesson, in light of the first Lesson Study results, by going through the technique step-by-step with the class. The observations show very limited interaction between any of the target children and their partners specific to the use of the Feedback Sandwich, with only child E and her partner really trying to engage with it (Appendix 4). This could have been because the class had never used peer assessment before, and my research partner had not introduced the technique in a previous lesson as I had done. This also could have been because the children were given no individual guidance on how to be successful at using the 'Feedback Sandwich'. I reflected on this following the lesson (Appendix 5).

Further evidence of the target children's lack of understanding of the peer assessment tool can be found in the results of the focus group interview. The target children found it difficult to distinguish between the lesson and the feedback method used within it, and their answers confuse the two elements, Child L saying "How hard it was. Fun what they sounded like, hard to write the poem and make it rhyme." (Appendix 6). The children also perhaps struggled to answer the questions because they had never used peer assessment before, and therefore had nothing to compare it to. The lack of understanding is also evident in the 'Exit Tickets', which show a variance in the number of stars given and the type of comments, of which one was "I thought it was fun and helpful", perhaps indicating that they were commenting on the use of the Feedback Sandwich in the lesson, rather than the lesson itself (Appendix 7). The number of children giving the lesson 5 stars tallies with the observations and the lack of engagement with the peer assessment tool, which seems to suggest that the children in this lesson were simply more interested in the contents of the

lesson than in engaging with a new tool to aid their learning and engagement. However, the stars alone don't really tell us anything further so this evidence isn't as robust as we would have liked it to be.

An interesting result of Lesson Study 2 was the adverse reaction of the children to my presence in the classroom. This can be seen in my reflections on the lesson, in which I note that the children in the class were perhaps unsettled by a new person in the class, and therefore didn't engage as well as they could have done (Appendix 5). Further evidence of this is provided in the focus group interview in which a couple of the children mention the "new teacher" and have differing opinions on whether that was a "scary" or a "nice" thing (Appendix 6).

Upon studying all the results from both Lesson Studies, the evidence collected corresponds with my reflections on the second lesson. Since the two research schools are so different in terms of their classroom set up (School A uses a carousel-based learning approach where the children are continually collaborating and learning cooperatively in small groups, School B uses a more traditional whole-class learning approach where the children spend much less time working collaboratively in comparison) the children in School A are simply better trained in talking to each other and giving and receiving feedback than the children in School B. They are therefore better equipped to learn and respond to the new technique.

The lesson could be improved by providing the children with individual guidance on using the Feedback Sandwich in order to scaffold its use and improve the likelihood of its success in future lessons. This would also then help to scaffold the children's learning and help to improve the success of the children in the overall learning outcome.

In terms of the overall experience, my research partner and I agreed that our research tools would need to be modified in order to collect better evidence. The use of the Feedback Sandwich had limited success in either lesson because the children were not familiar with its use. Evidence of this can be seen in the observations, focus group interview and in mine and my research partner's reflections. However, the children in both schools are familiar with the use of different coloured pens for giving feedback – "tickled pink" and "green for

growth” – so if this method was used instead, perhaps we would see better interaction from the children.

My research partner and I also felt that our observations form could be adjusted to better suit the task. The adapted Leuven Scale provided a useful basis for the observations but didn't quite get to the crux of what we were looking to observe. The results of the observations show that what we actually observed didn't fit very well into any pointer on the observations chart (Appendix 4). Therefore, adapting the pro forma and using it again in a future lesson would help give us more robust observations to work from.

We would also adjust our focus group interview questions, in light of the results. The evidence, both audio-recorded and written, and across both lessons, shows that the children struggled to answer several of the questions which suggests that they did not understand what was being asked of them. Therefore, refining the questions and making them more age-appropriate would help produce better results.

Discussion of research findings in relation to relevant literature and research

As a result of my research and my reading of current literature on the subject, both have come together to form my professional understanding now.

I found out that pupil engagement increases both with their work and of peer assessment upon use and practice of the peer assessment tool. This matches the predictions my research partner and I made at the start of the study, and these results are further supported by Black et al. (2003) who said that children take criticisms better from their peers than from teachers, and that this inspires them to work more carefully and thus produce better results.

Another prediction my research partner and I made was that the children would find it easier to use peer assessment to critique each other's written work than their verbal ideas. This was immediately apparent upon analysis of the results of the observations. It also correlates with the anonymised written work that Clarke (2005) recommends using to first

introduce peer assessment to the class, and with Dunn (2011) who not only recommends using anonymised work from another class or year group, but also mentions the positive effect on pupil wellbeing as a result of not having to assess the work of their peers straight away. This is a point which could be taken forward to take into consideration if conducting this particular lesson study again in the future.

I also found out that in order for effective engagement with peer assessment, whatever the tool used, peer assessment needs modelling, scaffolding and plenty of practice in order for it to be successful. This fits with Vygotsky's theory that we learn through social interaction with 'More Knowledgeable Others' (in this case teachers or peers) who 'scaffold' the learning (Bates, 2016). This also fits with Hattie and Clarke (2019) who said that children need to be trained to use peer assessment effectively.

An interesting result of the first Lesson Study in particular was that the target pupils' level of ability in the subject area did not correspond with their level of engagement with peer assessment. Dudley (2014) comments that this phenomenon happens regularly in Lesson Study research where the perceived ability level of a target child is different than the actual one, but not when the perceived ability level does not match with the actual engagement level of the child. This would be another interesting area for development in the future, to help inform future practice.

Another interesting result from comparing both Lesson Studies, was that in general, the pupils in School A who learn in a carousel-based environment in small groups, were more adept at engaging with peer assessment than their counterparts in School B who learn in a whole-class learning environment. This was not a result we were expecting, but with the benefit of hindsight, stands to reason since the learners in School A are continually collaborating and reflecting on their work cooperatively in groups. There is little current thinking on the benefits to pupils of a carousel-based learning approach. However, the Welsh Assembly Government (2013) advises that for the effective use of peer assessment, learners must first be used to working in groups. Estyn's (2013) report on best practice at Undy Primary School, describes how the school operates a plaza style of teaching and

learning, similar to the carousel method, which produces confident, naturally reflective pupils.

Therefore, for my class this means that they are already in a strong position for peer assessment strategies to be effectively integrated into the teaching and learning practises of the class and for them to develop the capacity to reflect on and take responsibility for their own learning throughout life (Donaldson, 2015).

Conclusion

Below is a table detailing the main strengths and limitations of the methods specific to this enquiry:

	Strengths	Limitations
Observations	Carried out pilot observations using a video of a similar lesson being taught, to ensure both researchers looking for the same things.	Didn't account for the observations pro-forma not quite fitting what we actually observed.
'Exit Ticket' class feedback	Results collected served to strengthen evidence collected in observations and in focus group interviews.	Inconsistent use of method of data collection – I used them at the end of the lesson; my research partner used them directly after the break following the lesson. Therefore, difficult to compare results.
Focus Group Interviews	- Both interviews conducted in the same way, using the same questions. - Carried out pilot interview prior, to focus and refine questions.	- Inclusion of an extra child in my research partner's focus group interview, who wasn't one of the target children I was observing in the lesson. - Didn't get consent of target children in my research partner's interview to audio-record children's responses. Had to write down their responses.
Personal Reflections	Allowed us to see that our observations and thoughts on the lessons were similar.	
Lesson Study Methodology in general	- Both classes were of the same year group. - Target children chosen using the same attainment and engagement criteria (low, mid, high).	- Lessons planned were not the same. - Differences in structure of learning environment – School A: carousel-based learning School B: traditional learning environment. - Only 2 lessons taught, no cycle of lessons.
Use of peer assessment tool within lessons	Both researchers introduced and modelled the 'Feedback Sandwich' in the same way.	- Lessons taught were different, therefore slightly different uses of the 'Feedback Sandwich' within the lessons. - Different number of instances of the use of the 'Feedback Sandwich' within the lessons.

Upon critically examining our research lessons, my research partner and I found several areas where the method of data collection could have impeded our results.

We had piloted the observations pro forma prior to the research lessons, which helped us to ensure that we were both looking for the same behaviours, and to remain as objective as possible (Bell, 2014). However, in practice we found that our pro forma didn't quite fit with what we observed, which led to different interpretations of events and behaviours seen.

This is something that both Baumfield (2013) and Bell (2014) warn of when carrying out structured non-participant observations, and suggest refining in light of experience, so in future it may be prudent to try an un-structured method of observation to allow for the observation of behaviours without setting pre-determined parameters.

We had also piloted our focus group interview questions which helped to a certain degree in that we were able to make our questions more specific to what we wanted to find out, but in practice we found that some questions were not angled in the right way for children to understand, so they struggled to answer or mis-understood the question (e.g. commenting on the lesson rather than the use of the 'Feedback Sandwich'). In School B, we were not given consent by the children in the focus group to audio-record their interview. Therefore, in writing down their responses I could have missed bits or added a subconscious slant. Bell (2014) suggests including prompts on the interview questions schedule to aid recall afterwards, and perhaps even pre-empting answers to questions in order that they can simply be circled, and the focus remain on the interviewees.

The inclusion of an extra child within the second focus group interview provoked an interesting discussion between my research partner and myself. She argued that the child was included for their wellbeing development, but my argument was that their inclusion could have altered how the other focus children interacted. Dudley (2008) says that different children can be used in the focus group interviews than the ones used in the observations, to help triangulate the results, but that it can complicate the data. In this case, it was difficult to tell either way, so therefore neither validates nor invalidates the data collected.

Whilst reviewing and evaluating the evidence, it has been difficult to distinguish whether pupil engagement changes or stays the same as a result of the lesson subject, the way of including the 'Feedback Sandwich' within the lesson, the method of teaching or the perceived ability and engagement levels of the pupils. This is a point made by Buchard and Martin (2017) which leads them to redefine the parameters of Lesson Study methodology. Therefore, if I was to undertake Lesson Study research again, I would teach exactly the same lesson across a longer cycle of lessons (Dudley, 2015) and possibly across different year

groups in order to answer these questions, and to strengthen the evidence collected in this enquiry.

In conclusion, in my next school experience, I will use self-assessment techniques within lessons to enable children to become familiar with critiquing themselves, before introducing peer assessment. I will use peer assessment in a variety of different types of lesson and use a variety of different peer assessment techniques, in order to find the ones that work best to foster a positive engagement with peer assessment. I will also change children's 'talking partners' often, as recommended by Clarke (2005) so they get used to giving and receiving peer assessment with a variety of different personalities and abilities.

This research enquiry has helped me to address the QTS (2009) standards of monitoring and assessment, in particular involving the children in "reflecting on, evaluating and improving their own performance" (p.5).

Recommendations

For the teacher in my class, I would recommend the further exploration of ability versus engagement to see whether parallels can be drawn between other children in the class, or whether the differing ability versus engagement levels of Child 1 in the research study was a 'one off'. I would also advocate the continued use of the carousel-based learning system within the class and the whole school, since the children are clearly at an advantage in respect of the development of the new curriculum in Wales and the increased emphasis on self- and peer assessment therein.

In light of my research findings, I would recommend that the research question be refined to look more broadly at how pupil engagement itself could be improved through the general use of peer assessment. This would mean that whilst the research area becomes broader, it would allow researchers to look at a range of different peer assessment techniques in order to find the ones that impact most successfully on pupil engagement and learning. It may also be prudent to use Lesson Study research in the future to investigate how to improve the engagement of low-attaining pupils through the use of self- and peer assessment. This

would therefore better inform both my personal professional practice, and that of other educational professionals, thus sharing the good practice within the industry.

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References

- Bates, B. (2016) *Learning Theories Simplified ...and how to apply them to teaching*. London: Sage.
- Baumfield, V. Hall, E. and Wall, K. (2013) *Action Research in Education*. 2nd Ed. London: Sage.
- Bell, J. (2014) *Doing your Research Project: A Guide for First Time Researchers in Education and Social Science* (6th ed.) Maidenhead: OUP.
- Black, P. and Wiliam, D. (1998) *Inside the black box: raising standards though classroom assessment*. London: GL Assessment.
- Black, P. (2003) *Assessment for Learning: putting it into practice*. Maidenhead: OUP.
- Bragg, S. (2007) 'But I listen to children anyway!' – teacher perspectives on pupil voice, *Educational Action Research*, Vol. 15, No. 4, pp. 505-518.
- Breen, Rosanna L. (2006) A Practical Guide to Focus-Group Research, *Journal of Geography in Higher Education*, 30:3, pp. 463-475, DOI: 10.1080/03098260600927575.
- Buchard, J. and Martin, D. (2017) 'Lesson Study...and its effects', *Hellenic Journal of Research in Education*, Special Issue, eISSN 2241-7303.
- Clarke, S. (2003) *Enriching feedback in the primary classroom*. Abingdon: Hodder and Stoughton.
- Clarke, S. (2005) *Formative assessment in action: weaving the elements together*. London: Hodder Murray.
- Donaldson, G. (2015) *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales*, Crown Copyright. Available at: <http://gov.wales/topics/educationandskills/schoolshome/curriculum-for-wales-curriculum-for-life/why-we-are-changing/successful-futures/?lang=eng> (Accessed: 27 January 2019).
- Dudley, P. (2008) *Improving Practice and Progression through Lesson Study: Handbook for headteachers, leading teachers and subject leaders*. Nottingham: Crown.
- Dudley, P. (2014) *Lesson Study: Professional learning for our time*. Available at:

<http://lessonstudy.co.uk/2014/09/lesson-study-professional-learning-for-our-time-read-pete-dudleys-resume-of-the-case-for-lesson-study-made-in-his-new-book-out-on-10-september-which-can-be-ordered-at-httpwww-routledge-comb/> (Accessed: 20 January 2019).

Dudley, P. (2014) *Lesson Study: A Handbook*. Available at: <http://lessonstudy.co.uk/wp-content/uploads/2012/03/new-handbook-revisedMay14.pdf> (Accessed: 27 February 2019).

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

Dudley, P. and Gowing, E. (2012) 'Reflection through Lesson Study', in Hansen, A. (ed.) *Reflective Learning and Teaching in Primary Schools*. London: Sage.

Estyn (2015) "*The Plaza*", a shared learning area. Available at: <https://www.estyn.gov.wales/effective-practice/“-plaza”-shared-learning-area> (Accessed: 28 February 2019).

Estyn (2017) *X Primary School information*. Available at: <https://www.estyn.gov.wales> (Accessed: 19 January 2019).

Estyn (2015) *Y Primary School information*. Available at: <https://www.estyn.gov.wales> (Accessed: 19 January 2019).

Estyn (2018) *Assessment for Learning and Thinking Skills*. Available at: <https://www.estyn.gov.wales/effective-practice/assessment-learning-and-thinking-skills> (Accessed 1 March 2019).

EWC (2019) *Code of Professional Conduct and Practice*. Available at: <https://www.ewc.wales/site/index.php/en/> (Accessed: 26 February 2019).

Galton, M. (2007) *Learning and Teaching in the Primary Classroom*. London: Sage

Ginsburg, D. (2015) 'Exit Tickets: Too little, Too Late', *Education Week Teacher* [blog]. 30 June. Available at: https://blogs.edweek.org/teachers/coach_gs_teaching_tips/2015/06/exit_tickets_too_little_too_late.html (Accessed 28 February 2019).

Grigg, R. and Lewis, H. (2017) 'Is reflective practice worth all the effort?' *Teaching Times*, Vol. 7.6, pp.46-51. Available at: <https://library.teachingtimes.com/articles/slt76-reflective-practice-is-it-worth-it> (Accessed: 23 January 2019).

Hattie, J. (2012) *Visible learning for teachers: maximising impact on learning*. Abingdon: Routledge.

Hattie, J. and Clarke, S. (2019) *Visible Learning: Feedback*. Abingdon: Routledge.

Isaacs, T. (2013) *Key concepts in educational assessment*. London: SAGE.

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. Accessed: 28 February 2019

https://moodle.uwtsd.ac.uk/pluginfile.php/133351/mod_resource/content/1/How_Should_Research_Contribute_to_Instructional_Im.pdf

Lewis, H. (2019) 'The Enquiring Teacher', *Observation*. UWTSD Swansea 15/01/19.

Mack, N., Woodsong, C., MacQueen, K.M., Guest, G., and Namey, E. (2005) *Qualitative Research Methods: A Data Collector's Field Guide*. North Carolina: Family Health International. Accessed: 28 February 2019

https://moodle.uwtsd.ac.uk/pluginfile.php/133372/mod_resource/content/1/Qualitative%20Research%20Methods%20-%20A%20Data%20Collectors%20Field%20Guide.pdf

TES (2016) *Lesson Study: Are You Doing It Right?* Available at:

<https://www.tes.com/news/lesson-study-are-you-doing-it-right> (Accessed: 20 January 2019).

United Nations (2004) *United Nations Convention on the Rights of the Child*. Available at:

https://downloads.unicef.org.uk/wp-content/uploads/2010/05/UNCRC_united_nations_convention_on_the_rights_of_the_child.pdf . (Accessed: 26 February 2019).

Vygotsky, L. S. (1978) *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Harvard University Press.

Welsh Assembly Government (2009) *Qualified Teacher Status Standards Wales*. Available at:

<https://gov.wales/legislation/subordinate/nonsi/educationwales/2009/3220099/?lang=en> (Accessed: 25 February 2019).

Welsh Assembly Government (2013) *How to develop thinking and assessment for learning in the classroom*. WAG: Crown. Available at: <https://learning.gov.wales/resources/browse-all/how-to-develop-thinking-and-assessment/?lang=en> (Accessed 23 January 2019).