



PRIFYSGOL CYMRU

Y Drindod Dewi Sant

UNIVERSITY OF WALES

Trinity Saint David

Does the use of self- assessment in mini-plenaries effect levels of pupil engagement?

A LESSON STUDY

Word Count: 6,331

James Jewell-Edmonds

1401667 | M7X2152

Student Self Evaluation Form

This section repeats in brief the common assessment criteria detailed on previous pages. The *extent* to which these are demonstrated by you determines your mark. Using these criteria, tick the box that best indicates the level of achievement you feel you have achieved with regard to each of them.

Common Assessment Criteria Applied	REFER		D	C	B	A
	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT
1. Subject Knowledge and Understanding (which includes using research-informed literature and knowledge and understanding of the subject)				✓		
2. Intellectual Skills (Analysis)				✓		
3. Pedagogic and Professional Applications (Practical Application and Deployment)					✓	
4. Key Transferable Skills					✓	

PLEASE COMMENT ON AREAS IN WHICH YOU FEEL THAT YOU HAVE PERFORMED WELL	PLEASE COMMENT ON AREAS YOU FEEL THAT YOU NEED TO DEVELOP
I feel that I was able to effectively present and analyse the results obtain from the lesson study process, along with making useful and effective observations and recommendations.	I feel as though I could have read wider on the topic and used a wider range of sources to back my argument presented in this study.

Lesson Study: Introduction

This study aims to critically assess the effectiveness of using self-assessment, in the form of 'mini-plenaries', on levels of pupil engagement. Research will be based upon the 'lesson study' model, in which I the researcher will work with another practitioner in jointly planning, delivering and assessing a lesson each. We chose to focus upon self-assessment as we identified the implementation and use of Assessment for Learning (AfL) during our respective teaching placement experiences as an intriguing area which could be examined and adapted to produce effective results. I personally identified AfL as an area of weakness upon reflecting on my own teaching experience and felt that this study could improve my teaching practice as well as being an area which would promote critical discussion in the context of this assignment. The research will aim to build upon studies relating to AfL strategies and the impact that using AfL can have on pupils' learning. Existing research has found that through AfL, teachers are able to find out numerous things such as what their pupils know, things they only partly know and things that they do not know, enabling the teacher to devise suitable future activities which can advance pupil learning (Hodgson and Pyle, 2010). AfL aims to encourage pupils to discuss their learning, which can lead to them forming a more accurate understanding about what they understand and need to learn more about (Harrison, 2013).

In order to assess the effectiveness of AfL in this particular study, we decided that four target pupils would be assessed throughout the duration of a given lesson which was planned with the aim of implementing defined mini-plenaries which were referred to as 'pit-stops'. As one of us taught the lesson, the other acted as a passive researcher in assessing the engagement of each of the pupils at five minute intervals throughout the lesson, using the Leuven scale as a way of assessing the engagement of pupils. At the end of the lesson, the four target pupils partook in an informal interview and were questioned about their understanding and their opinions about the outcome of the lesson, the results of which will be analysed later.

Literature Review

Upon establishing a working theory about which area to research for the study, the next step involved researching the topic in question in more detail. This involved reading around the current literature related to and critically evaluating the use of AfL

in teaching. The University of Cambridge (UoC, 2018) describes AfL as a process which allows learners to become more involved in the learning process through enabling them to understand what is expected of them and how they are expected to achieve the desired outcome set by the teacher. As such, AfL enables pupils to become 'active' learners and encourages pupils to think about what they understand and areas on which they need to improve. AfL is most effective when it is integrated into a lesson and exists as part of the natural flow of teaching (UoC, 2018). AfL is highly adaptable and can be applied to a variety of educational phases and subjects, meaning it is highly versatile and a useful tool which can be utilised in a wide range of educational settings. The UoC (2018) highlighted five main process which take place through AfL, the first being the questioning by a student, which enables them to independently discover what level their learning is at with any given topic; secondly, a teacher must provide feedback to outline how a student can improve their work; this will then lead to a student understanding what a successful piece of work looks like, thus providing a template of what is expected of them in a given task; peer and self-assessment is the next stage in which students will again become more independent in their learning and it will help them understand the steps required of them; and finally, summative assessment is required to formally test the student and provide them with an overall view of their work, providing them with an outline of their understanding and how they can improve (UoC, 2018).

Arguing in favour of AfL, John Hattie believes that the process enables learning to become 'visible', in that it allows learners to understand what a successful piece of work looks like and how they can develop their own learning to achieve it (Hattie, 2012). Hattie was a strong advocate for the use of feedback in improving learner achievement, with his own seminal research outlined in 'Visible Learning for Teachers' (2012) finding that AfL strategies which relied upon learner feedback on their own work yielded the most positive results (Hattie, 2012). The benefits of AfL, backed by research, have been shown to improve learner outcomes through the effective use of both formative and summative assessment which provides learners with a clear idea of what excellent work looks like and provides them with a 'map' of how to achieve it (UoC, 2018). Further to this, effective AfL implementation can lead to an increase in learner confidence and independence, through task-specific feedback which can encourage a learner to improve through active measures as

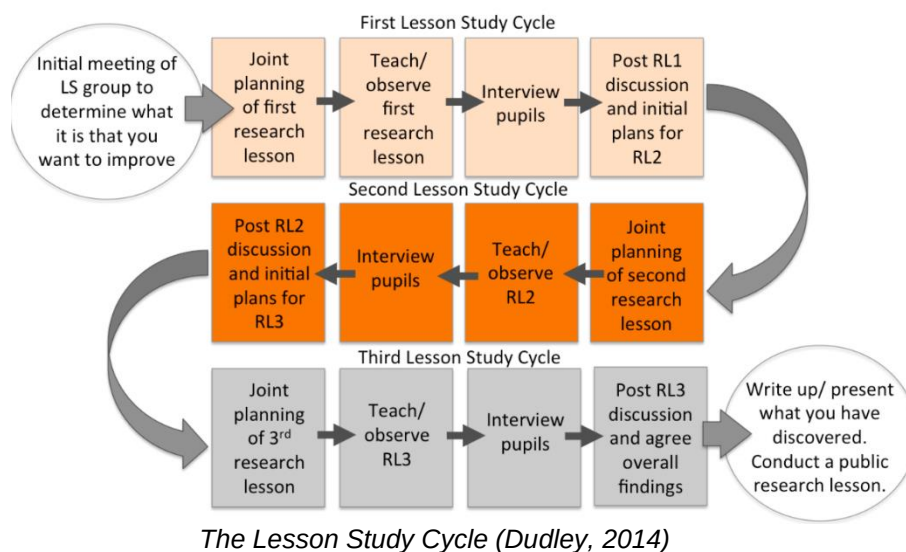
opposed to simply highlighting their weaknesses and offering no way forward, leading to passive learners who may become 'lost' in the learning process (UoC, 2018). A further benefit of AfL as proposed by Carol Dweck (2012), is that when used effectively, AfL can improve the culture of a classroom environment in allowing teachers the opportunity to present mistakes as an opportunity for further learning as opposed to viewing them in a negative light (Dweck, 2012). Dweck argued that some high-ability students are afraid of making mistakes which leads to the avoidance of taking risks in their learning; by implementing effective AfL strategies, teachers can encourage learners to learn from their failures, which can also improve outcomes in later life (Dweck, 2012).

Whilst the benefits of AfL are clear, it is important to acknowledge possible drawbacks of its use, as argued by Ninomiya (2016). The author acknowledges the value of AfL when used effectively as a tool for preparing future learning, but argues that in some cases it is simply a tool used to gauge pupil performance, which is of little value to the pupil's learning (Ninomiya, 2016). The author highlights the argument of Torrance (2012) who believes that AfL has increasingly become a process of formative assessment which simply monitors pupils progress and is used as a way of coaching techniques to improve test results (Ninomiya, 2016). The authors argue that the increasingly accountability driven culture of education in the United Kingdom, in which both teachers and schools are constantly monitored on their test results and outcomes, leads to the misuse of AfL as a cynical tool to help 'teach to the test' (Torrance, 2012). Ninomiya goes as far as to label this practice as 'convergent assessment', arguing that the current education system is more concerned with meeting targets as opposed to improving the learning of its pupils, which is enabled by the misuse of AfL as a coaching practice to ensure the pupils meet said targets, regardless of their understanding of the topic (Ninomiya, 2016, p.88). With that in mind, it was key that a balanced view of the implementation and use of AfL in the classroom was taken prior to research being conducted for the study. The review of literature enabled us as researchers to pick up upon points of consideration, such as AfL being used as a tool to 'teach to the test' or as an effective way of engaging and moving a pupils learning forward. These considerations enabled to us to form a working title of "Does the use of self-assessment in mini-plenaries effect levels of pupil engagement?"

Methodology: The Lesson Study

The methodology of the study involved the use of the lesson study model, which requires collaborative learning between classroom professionals. The lesson study model was developed in Japan in the 1870s and has since been used in western countries as a method of classroom action research (Dudley, 2014). Lesson study requires two or more teachers to work together in developing classroom practice, which is achieved through collaborative planning, teaching, observing and analysis of results (Dudley, 2014). The model focuses on the needs of real pupils (as opposed to theoretical scenarios) and allows the practitioners to participate in an organic example of problem based learning. The aim of the study is to develop the teaching practice and technique of practitioners through mutual observation and analysis of each other's teaching in the context of a learning problem, often as part of a regular classroom lesson (Fernandez and Yoshida, 2004).

Fig. 1 The Lesson Study process



The process of a lesson study in the context of the research discussed in this essay involved myself and my research partner discussing and formulating a learning problem, as discussed in the previous chapter, in which we concluded that the use of AfL in the classroom would be our primary focus. The lesson study model requires the identification of a learning problem (AfL) which needs to reflect the needs of the pupils we will be teaching. I identified AfL as an area of weakness during my earlier teaching practice and felt that this was an area that I could improve upon as a

practitioner; as such, I felt that by using the implementation of AfL in a lesson as part of a lesson study would allow me to improve my own practice as well as providing us with an area of interest to analyse. Following our identification of a problem, we were then able to jointly plan a lesson in which we could embed our chosen AfL techniques, which would be presented as 'learning pit stops' or mini-plenaries.

As part of the lesson study design, we would need to choose target pupils which would be observed during the lesson as an indicator of engagement (Dudley, 2014). The reason for this is that it would allow us to focus our observations on the target pupils as opposed to taking an overall view of the engagement of the class, which would have led to our observations being too broad. We decided to focus on four target pupils in each lesson, two of which we identified as being lower ability learners and the other two being higher ability learners. We each relied upon our respective experiences of teaching in each of the classes to identify the pupils whom we felt would offer the most representative view of the classroom as a whole. As part of the lesson study process, as a collaborative research pair, we would each need to teach the planned lesson, whilst being observed by the other as a non-participant researcher. As such, the non-participant researcher needed to observe the four target pupils to assess their levels of engagement in the lesson and then collaboratively reflect upon the impact of mini-plenaries on the levels of pupil engagement at the end of the lessons.

As part of this process, we decided that we would use the Leuven scale of involvement as a way of observing the target pupils, which we felt would allow us to effectively assess the levels of engagement of each of the target pupils. The Leuven scale (Appendix D) enables researchers to assess the level of involvement of participants against a five-point scale which measures engagement levels from low activity through to sustained intense activity (Laevers, 2005). The scale provides guidance about what features participants will display through these varying levels of engagement, allowing the researcher to easily assess and provide each participant with a numbered rating depending on their level of participation at any given time (Laevers, 2005). We decided that in order to obtain fair and structured results, we would use the Leuven scale assessments at a set time of five minute intervals throughout the lesson. We acknowledged the need to have this structure in place, as without a set schedule of observation times, observation and assessments made by

the non-participant researcher could be considered to be ad hoc and inconsistent, which would not offer fair results. With this in mind, we prepared an observation schedule which enabled the non-participant researcher to rate the involvement levels of each target pupil at the chosen five minute intervals.

At the end of each of the lessons, the four target pupils took part in a focus group interview; the questions asked were prepared beforehand with the intention of assessing the pupils' understand and reflections on the lesson. The four pupils were each asked to give their opinion on certain elements of the lesson, focusing mainly on the use of the learning pit stops and whether they felt that their use benefited their learning and led to greater engagement (the results of which will be discussed in detail in a later chapter). In accordance with the lesson study model, the feedback received from the first lesson was collated and used to modify the second lesson with the second focus group, with the aim of improving the implementation and use of mini-plenaries.

It is important to acknowledge that this use of qualitative methods in the gathering of data for the study was chosen as the most appropriate form due to the nature of the study; whilst the use quantitative data can be a very useful tool in studies such as this, the time constraints placed upon the study (the overall study taking place over two lessons as opposed a series of lessons) meant that the broader nature of qualitative data gathering was more appropriate. This process of naturalistic data gathering allowed for a broader scope of research, which in turn led to the need for the interpretation of results by the researchers, which in itself can be seen as a limitation (Cohen and Manion, 2011). As with any form of interpretation, analysis of results is subjective and can be subject to further scrutiny from a wider audience. However, qualitative data gathering is geared towards the understanding of the social world through observing the way in which participants interact with each other and their environment, which was a key element of this research as participant observation, naturalistic talk and an informal interview were all used (Cohen and Manion, 2011). The benefits of using these research techniques meant there was little disruption caused to the natural flow of the lesson, which meant that a naturalistic and organic view was presented; the non-participant observer was able to watch from afar and enable the target pupils to behave naturally without feeling the pressure of being observed. Nonetheless, one must acknowledge a limitation of

this process as the mere presence of any type of 'stranger' in the classroom is likely to have an effect on the way pupils behave, in that some may feel as though they need to behave in an artificial way due to the consciousness of being observed; despite this, one must note that all pupils who participated in this study appeared comfortable throughout the study and their behaviour was typical in comparison to previous lessons delivered during earlier teaching practice.

Ethical Considerations

Prior to the beginning of the study, a number of ethical issues were taken into consideration. Utmost care was taken to adhere to ethical guidelines set out by the British Educational Research Association (BERA, 2011), along with complying with the university guidelines relating to educational research. During the planning phase of the study, an ethics form was submitted which outlined the aims of the study and the proposed methodology that would be used to obtain the results (Appendix A). Upon being granted ethical approval by the university board of ethics, consent was also gained from the participating schools through sending a consent letter home to the parents of participants, which complies with the Data Protection Act (1998), stating that participants must be made fully aware of the purposes for which the data gathered about them is to be used for. Along with this, both researchers provided proof of a Disclosure and Barring Service (DBS) check which certifies eligibility to work with children.

One of the ethical issues considered prior to the first lesson study was questioning how the pupils would behave during the study (Oliver, 2003). As discussed, it is important to note the behaviour and characteristics of pupils as participants can be influenced by the attendance of the researcher as a stranger in the classroom which can lead to the results being affected and not a true representation of the classroom environment. In response to this consideration, pupils were assured that they were under no obligation to participate in the lesson or to behave in a particular fashion; pupils were asked to sign a consent form at the beginning of the lesson and were asked to provide continued assent throughout the duration of the lesson (pupils were told that they could opt out of the lesson at any point and were under no obligation to remain in the study against their will). Participants were at no point pressurised to provide a specific answer which may provide an unfair weighting to the results of the

study and were encouraged to offer their own opinions both during the lesson and during the focus group interview (Oliver, 2003).

Furthermore, great care was taken to ensure that no child was exploited during the study; with children being considered as vulnerable parties, it was a key responsibility of the researchers to ensure their wellbeing and safety at all times during the study, as outlined by Punch (1994, p.89) noting “avoidance of harm, fully informed consent, and the need for privacy and confidentiality” were paramount throughout the duration of the study.

Lesson Study One

To provide context, School A is an urban primary school with 289 pupils on roll. Approximately 37% of pupils are eligible for free school meals (FSM) and around 46% of pupils have additional learning needs (ALN); the class in which the study took place was a year five, mixed ability class made up of 27 pupils.

As part of the planning process, it was decided that the two lessons which would be part of the study would be literacy lessons, with a focus on persuasive language. This was decided as both researchers had delivered such lessons during teaching practice and felt that both sets of pupils would respond well to the task set and would likely provide a range of observable data. The lesson would focus on the pupils being given a fictional letter from the local council which outlines a proposal in which the pupils would need to make up time lost from school closures due to recent adverse weather conditions through the implementation of a ‘weekend school’ (Appendix B). This letter was intended to inflame the pupils’ emotional response, with the expected reaction being strongly against the idea of a weekend school. The pupils were placed in six separate groups, each made up of mixed abilities, with three of the groups being asked to argue in favour of the weekend school, whilst the other three needed to argue against it. As part of the introduction, a PowerPoint was delivered which recapped the features of persuasive writing, a lesson delivered by the author during teaching practice. Further to this, pupils were provided with a ‘word mat’ which included useful words and connectives which would aid them in forming a persuasive argument. A success criteria was displayed so that pupils were made aware of what was expected of them in the lesson and provided an outline of how to formulate and achieve the expected outcome. Each group was given an A3 sheet of

paper in order to create a visual accompaniment to their argument, which they would then use at the end of the lesson to present to the rest of the class. Each group was also given either an iPad or laptop which they were encouraged to use independently to research and gather facts which they could use to support their arguments. Groups were encouraged to communicate with each other in order to form a consensus and construct their argument in a democratic manner, which also enabled the researchers to assess their oracy skills throughout the lesson. Finally, along with gaining assent to conform to ethical standards, it was explained that the use of mini-plenaries or 'learning pit stops' would be a key element of the lesson and the reasoning for using them was explained to the pupils so that they would be aware of their implementation and value.

The lesson plan (Appendix C) outlined the structure of the lesson and indicated when the mini-plenaries would be introduced; the first being after the lesson introduction, which felt like a natural point to introduce a pit stop to get an initial impression of the pupils' understanding; the second would be introduced approximately half way through the lesson, after the pupils had made progress on the task- this mini-plenary would involve examples of good work being shown to the rest of the class, along with pupils sharing their ideas orally with the aim of providing the other groups with some key points they may not have thought of; the next mini-plenary was delivered approximately five minutes before the groups had to deliver their presentations- this acted as a way of recapping the task and ensuring that the groups had included all of the key features set out in their success criteria (such as including the use of persuasive language, connectives and using facts to back their argument). The final plenary was delivered at the end of the lesson, which involved the use of lollipop sticks to pick pupils at random to feedback what they learnt in the lesson, elements of their work that they were proud of and things they would like to improve upon.

In analysing the use of AfL in the lesson, the use of the Leuven scale provided a useful representation of how the four target pupils engaged with the lesson (Appendix D). Child 1, a lower ability pupil who was chosen due to her quiet nature and usual manner in which she avoids speaking up in class, demonstrated surprisingly high levels of engagement throughout the lesson, displaying mainly continuous activity and continuous activity with intense moments throughout the

lesson (Laevers, 2005). Analysis also shows that Child 1's level of engagement increased after the first mini-plenary, moving from a level three to a level four. This level was sustained through to the third mini-plenary, dropping back to a level three for the remainder of the lesson; this would indicate that through initial observation, Child 1 benefited from the use of the mini-plenaries as her engagement increased, which is supported by Hattie's views that AfL strategies which relied upon learner feedback often lead to positive results (Hattie, 2012). This was a trend also seen with Child 2, also a lower ability pupil who initially demonstrated very low levels of engagement (often observed during teaching practice), demonstrating low activity and frequently interrupted activity (Laevers, 2005). However, Child 2's level of engagement increased to level three after the first mini-plenary and increased to level four after the second and third. This again demonstrates a trend in which the two lower ability pupils benefited from the use of mini-plenaries during this lesson.

In contrast to these results, the higher ability pupils produced data which shows a different trend; Child 3 began the lesson showing engagement levels fluctuating between level two and level three. Child 3 increased to level four after the first mini-plenary, but then steadily returns to level three for the remainder of the lesson, with the exception of a brief return to level four after mini-plenary three, followed by a drop to level two at the end of the lesson. These results appear to indicate some levels of improved engagement as a result of the mini-plenaries, but not as strong a trend as with the previous two pupils, producing mixed and inconclusive results. Child 4 demonstrated very low levels of engagement throughout the entire lesson, consistently demonstrating levels of one and two, with a brief period of mainly continuous activity (Laevers, 2005). This brief period at level three appears to be unrelated to the use of AfL, instead reflecting an intervention by the teacher in which the pupil was questioned about his understanding and involvement in the task. This would indicate that the use of AfL had no effect on Child 4 and their lack of engagement in the lesson may be due to reasons beyond what was being considered in this study (such as a lack of interest in the topic or a lesson which may have been below their standard of learning ability, leading to boredom) and may also be indicative of Dweck's view that some high-ability students are afraid of making mistakes which leads to the avoidance of taking risks in their learning (Dweck, 2012).

The second stage of analysis involved interviewing the four target pupils as a group at the end of the lesson. The questions were prepared beforehand with the aim of obtaining organic views and opinions from the pupils about how they felt the lesson went and if the mini-plenaries were of any benefit to them. The interview (Appendix E) yielded mixed results; Child 1, who demonstrated increased levels of engagement after the use of AfL, acknowledged the benefit of the mini-plenaries when questioned, explaining that it was helpful and provided her with some new ideas, which supports the theory that effective AfL implementation can lead to an increase in learner confidence and independence through task-specific feedback (UoC, 2018). Child 2 however, who also demonstrated increased levels of engagement after the mini-plenaries, declared that he did not find them useful and that he was happy with his own ideas and did not benefit from hearing other pupils' ideas, explaining that he found the pit-stops 'distracting'. This was echoed by the two higher ability pupils, who declared that they did not find the mini-plenaries useful, also finding them 'distracting' and in some cases, causing them to forget their own ideas and lose focus; this does however comply with the results obtained from the observation, which imply that the higher ability pupils did not benefit from the AfL as much as the lower ability pupils. Despite this, all pupils agreed that they enjoyed the lesson and were all able to give examples of elements they learnt, all demonstrating that they had achieved the lesson goals. Finally, we asked the pupils for guidance in improving the lesson if it was to be delivered again; the guidance they gave included using less mini-plenaries, to avoid distraction and allow the lesson to 'flow' more naturally- the pupils all advised that one pit-stop placed in the middle of the lesson would be ample.

Lesson Study Two

School B is an inner-city primary school which has 611 pupils aged 3-11 on roll. Approximately 16% of the pupils are entitled to FSM and around 28% of pupils are considered to have ALN; the group was again a mixed ability year five class made up of 31 pupils. In line with the lesson study design, the results from the first lesson were used to modify and improve the second lesson. One of the main indicators taken from lesson one was that a) AfL appeared to be most effective in improving the engagement of lower ability pupils and that b) all target pupils fed back that they felt only one mini-plenary implemented in the middle of the lesson would be more useful

than the multiple implementations of AfL used during the first lesson. As such, it was decided that a mini-plenary would only be used once in the middle of lesson two (along with a natural mini-plenary which occurs after the introduction to the task and the main plenary at the end of the lesson). The theme of the lesson was exactly the same of the last, with a focus on using persuasive language to argue for or against the introduction of a weekend school. The only differences were that as this was a higher ability class, the researchers felt that the pupils could work without the assistance of a word mat and iPads/laptops to assist in their research; they were however all given an A3 sheet of paper and asked to work in groups to present an argument.

As with lesson one, the four target pupils chosen for this lesson were of mixed ability and were chosen due to the belief that they would offer a fair and organic view of pupil engagement within the class. The observation element of the study, again using the Leuven scale, allowed the non-participant researcher to observe the pupils throughout the lesson and rate their engagement at five minute intervals. The observation sheet (Appendix F) shows an overall trend of higher engagement throughout this lesson, in contrast to lower levels of engagement overall from lesson one. This may demonstrate that the improvements made to lesson two through the lesson study design may have led to a more engaging and effective lesson.

However, one could argue that due to the contrasting natures of both classroom, with regards to the pupils abilities and other contexts (such as significantly higher FSM and pupils with ALN in School A) could have led to a discrepancy in the results regardless of changing the lesson; in reflection, it could also be argued that the style of teaching may have differed between the two lessons, again causing a difference in the levels of engagement. With regards to analysing the effectiveness of using the single mini-plenary in the lesson, the observation sheet shows that the two higher ability pupils demonstrated higher levels of engagement after the learning pit-stop, one of the lower ability pupils showed no change and the final lower ability pupil displayed a lower level of engagement after the mini-plenary. These results show that overall the mini plenary was effective in engaging the higher ability target pupils, but had either no effect or an apparent detrimental effect on the other half of the sample group, who were the lower ability pupils; this is in direct contrast to the results obtained from lesson study one.

The post-lesson interview (Appendix G) again provided useful and varied results with regards to the effectiveness of using AfL; unlike the feedback received from lesson study one, all the target pupils from lesson study two gave a positive response when questioned if the mini-plenary was useful to their learning. The feedback given by the pupils outlined that the single mini-plenary delivered in the middle of the lesson helped them to understand the lesson and provided them with ideas and examples in order to improve their work, which supports the findings presented by the UoC which argues that effective AfL provides learners with a clear idea of what excellent work looks like and provides them with a map of how to achieve it (UoC, 2018). When questioned on whether or not the pit-stop enabled them to become more focused, all pupils answered with a resounding 'yes'. Interestingly, this response does not tally with the observations, in that the lower ability pupils did not demonstrate higher levels of engagement as a result of the mini-plenary. In analysing this discrepancy, it is possible that the observations noted were not accurate, which is a limitation of using the Leuven in scale, in that the observations are subjective and based upon the judgement of the assessor; it is also possible that due to the nature of the interview, where all of the pupils are questioned together as a group, the pupils may have felt pressured by their peers to give a positive answer due to the enthusiasm and energy in the discussion, whilst not revealing their true feelings. This is again a limitation of the study and could be alleviated in future studies by interviewing the pupils on an individual basis to provide a more accurate result. The recommendations given by the pupils for a future lesson study was to offer the class the chance to choose their own groups to work in and for the teacher to assign specific roles to members of the group to ensure everyone remains on task and knows what they are doing.

Conclusion and Recommendations

In evaluating the strength and value of the research conducted in this study, it is clear that the lesson study process has provided both measurable and thought-provoking results. The first key point is that the improvements made to the second lesson as a result of analysing and evaluating the first lead to an improvement in levels of engagement by the pupils. Whilst this is positive outcome of using the lesson study process, one which was the main aim of implementing the process, it is important to note some possible limitations to the process. As discussed in an earlier

chapter, there are a number of variables which differed between the two lessons, many of which could not be controlled by the researchers. The context in which the studies took place may have had an impact on the results; whilst great care was taken to ensure that both lessons took place in a KS2 year five class, the natural differences and disparities which exist in each school are unique and mean that no two classrooms are the same and as such, it is possible to argue that the results could have been affected by the variations in abilities, attitudes to learning and possible ALN variations within each of the classes. This could have been alleviated by teaching the same lesson twice to the same class to ensure continuity, however this would have offered little value to the participants as they would be taught the same content and be expected to perform the same duties which may have led to boredom and disengagement, therefore offering an unrepresentative set of results. As such, it is possible to conclude that the lesson study process is an effective tool in offering practioners the opportunity to observe, collaborate and critically assess one another with the aim of improving the quality of their teaching and practice, but the process is not without fault and the aforementioned limitations to the study must be noted.

With regards to evaluating the results obtained in relation to the use of AfL in the form of mini-plenaries throughout a given lesson, a number of outcomes were observed; firstly, it is again important to note the diversity of children in any educational study, which will naturally lead to a wide range of results and outcomes, some of which may not be a true representation of the areas being assessed. In this study, great care was taken to select four target pupils of differing learning abilities in order to try and gain a fair representation of both cohorts as a whole. The results of the first lesson study showed that the lower ability pupils benefited the most from the mini-plenaries and their engagement improved as a result of their use; despite this, one of the lower ability pupils noted in their post-lesson interview that they did not find the mini-plenaries useful despite what was observed of their engagement in the lesson. Both higher ability pupils did not show any improvement as result of using the mini-plenaries and this was confirmed during their post-lesson interview. The recommendations made by the participants in the first lesson in which they agreed that a number of mini-plenaries were of little benefit and that a single mini-plenary implemented in the middle of the lesson would be of most use, were taken upon

board when planning and delivering the second lesson. The results of the second less contrasted with the first in that they showed that that overall the mini plenary was effective in engaging the higher ability target pupils, but had either no effect or an apparent detrimental effect on the lower ability pupils. The interview results however indicated that all of the pupils gave a positive response to the use of AfL in the lesson and confirmed a benefit of its use. As acknowledged in the previous chapter, a possible reason for this discrepancy is that due to the nature of the interview, where all of the pupils are questioned together as a group, the pupils may have felt pressured by their peers to give a positive answer due to the tone of the discussion and may have been afraid of giving an honest answer. It is also important to note that the observations made by both researchers during both lessons may not have been entirely accurate due to limitations in using the Leuven scale, in that the observations are subjective and based upon the personal judgements and opinions of the assessor, which is a key issue in analysing the results of this study.

Moving forward, some key recommendations which can be formed as a result of this study would be that AfL has been proven to have an effect on improving the engagement of pupils within a learning environment and that it should be implemented with care and the consideration for the needs of the pupils within each given class (as seen in the difference in response between higher and lower ability pupils in each lesson study). The study also showed that a 'less means more' approach fits best with regards to using AfL in the classroom and that the use of mini-plenaries should be kept to a single implementation in the middle of the lesson in order to be most effective, in line with the recommendations made by the participants of this study. That said, in future studies it would be of value to explore further avenues with regards to using AfL in other areas of the curriculum (such as numeracy, science or ICT lessons) and within the Foundation Phase in order to further assess its impact in a variety of contexts; furthermore, in order to gain a true representation of its effect on learning and engagement, further study would be required in a wider range of classes and educational settings.

Reference List

Bell, J. (2010). *Doing Your Research Project: A guide for first time researchers in Education and Social Science* (2nd ed.). Buckingham: OUP.

BERA (2011). *Ethical Guidelines for Educational Research*. Available at: <https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf?noredirect> [Accessed: 7 April 2018].

Cohen, L. and Manion, L. (2011) *Research Methods in Education*, (7th ed) London: Routledge.

Dudley, P. (2014). *Lesson Study: a handbook*. Cambridge: Peter Dudley.

Dweck, C. S. (2012). *Mindset: How you can fulfill your potential*. Constable & Robinson Limited.

Fernandez, C. and Yoshida, M. (2004). *Lesson study: A Japanese approach to improving mathematics teaching and learning*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Harrison, C. (2013). *Assessment for learning: are you using it effectively in your classroom?* Available at: <https://www.theguardian.com/teacher-network/teacher-blog/2013/aug/29/assessment-for-learning-effective-classroom> [Accessed: 27 February 2018].

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

HM Government (1998). *The Data Protection Act 1998*. Available at: <http://www.legislation.gov.uk/ukpga/1998/29/contents> [Accessed: 7 April 2018].

Hodgson, C. and Pyle, K. (2010). *A literature review of Assessment for Learning in science*. Slough: National Foundation for Educational Research.

Laevers, F. (2005). *Well-being and Involvement in Care Settings: A Process-oriented Self-evaluation Instrument*. Research Centre for Experiential Education, Leuven University.

Ninomiya, S. (2016). "The Possibilities and Limitations of Assessment for Learning: Exploring the Theory of Formative Assessment and the Notion of 'Closing the Learning Gap'". *Educational Studies in Japan: International Yearbook*, Vol 10. pp. 79-91.

Oliver, P. (2003). *The Students' Guide to Research Ethics*. Buckingham: Open University Press.

Punch, M. (1994). 'Politics and Ethics in Qualitative Research', in Denzin, N.K. and Lincoln, Y.S. (eds.) *Handbook of Qualitative Research*. Thousand Oaks: Sage, p.89.

Torrance, H. (2012). "Formative assessment at the crossroads: Conformative, deformative and transformative assessment". *Oxford Review of Education*, Vol 38.

University of Cambridge (2018). *Getting started with Assessment for Learning*. Available at: <https://cambridge-community.org.uk/professional-development/gswafl/index.html> [Accessed: 27 March 2018].

Appendix A

(Ethical approval, parental consent letter and example of pupil assent)



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Approved: PC

PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

Full Name:		James Jewell-Edmonds	
Tick all boxes which apply:			
Member of staff:	☐	Student:	☒
Honorary research fellow:		☐	

Faculty/School/Centre:	Yr Arthrofa		
Campus:	Townhill		
E-mail address:	1401667@student.uwtsd.ac.uk		
Contact Telephone Number:	07769180842		

For students:

Student Number:	1401667	Undergraduate	☐
Programme of Study:	Primary PGCE	Taught Postgraduate	☒
Director of Studies/Supervisor:	Dr CJ Lewis	Research	☐

SECTION B: Approval for Research Activity

Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)		YES	☒	NO	☐
		Date			
If Yes, please indicate source of approval (and date where known):	Research Degrees Committee	☐			
	Faculty Research Committee	☐			
	Other (write in) <i>Dr Ceri Lewis</i>	☒			28/02/18

Approval in principle **must** be obtained from the relevant source prior to seeking ethical approval.

July 2017 | Ethical Approval Form v6



Dear Parent/Guardian,

Your child's school is a partner school of Yr Athrofa at University of Wales Trinity Saint David. This school offers placements to students who are learning to be teachers.

The student teacher in your child's class has been given the task of planning, teaching and evaluating one lesson so that he/she can develop specific strategies to improve their own teaching. As part of this, student teachers will be observing the children's responses and asking some pupils their views on parts of the lesson. This is designed to inform students' own practice and support children's learning.

Any information collected would remain confidential, and both the school and the children would remain anonymous in work produced. The work undertaken would be in line with the University's ethical guidelines. If, at any time, your child does not want to share ideas, they would not be required to do so.

If you are happy for your child to contribute to the project, please complete the parental consent form below and return directly to the school as soon as possible. If you are interested in the outcome of this project or if you have any questions, please contact the University Partnership Office - partnership@uwtsd.ac.uk.

Yours faithfully,

A handwritten signature in blue ink that reads 'C Morgan'.

Catherine Morgan
Module lead – The Enquiring Teacher

As Parent/Guardian of..... (pupil name),
I do / do not give consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....





Prifysgol Cymru y Drindod Dewi Sant / University of Wales Trinity Saint David

Dear pupil,

Thank you for taking the time to participate in this study regarding levels of engagement during lessons. Please read through the following information carefully, asking your teacher if you have any questions. Participation is not compulsory but would be greatly appreciated.

Dear participant,

Our names are Mr. Jewell and Mr. McCoy, we are currently studying at the University of Wales, Trinity Saint David. We would like to invite you to participate in our research project. The project aims to investigate how the use of self-assessment in 'pit-stops' affects levels of pupil engagement/alertness.

We will be teaching a lesson to the whole class which will include 'pit-stops'. These will allow you the opportunity to self-assess your level of understanding. 4 pupils will be observed at regular intervals during the lesson to see how engaged you are. Following the lesson, the 4 pupils will take part in an interview with both researchers to see what you thought of the lesson, and to find out if you felt like the 'pit-stops' helped you to stay more engaged with the task.

All activity relating to yourself and the lesson will be kept strictly confidential and anonymous. No one apart from the researchers will have access to the responses you give. It will only be used in order for the researchers to write the final report, in this case no names will be attached to the data used. Your participation in this study is completely voluntary and you can withdraw at any time.

The lesson should take around 1.5 hours. If you are chosen for interview, then this should take approximately an extra 20 minutes. There are no right or wrong answers to the questions that will be asked. After your responses have been analysed and combined with information from other sources, a copy of the final report will be available to your teachers.

The results of the study will be fed back to our tutors at the University of Wales, Trinity Saint David and hopefully enhance our understanding of the topic. Thank you in advance for your time and participation.

If any questions do arise after we have left, please feel free to contact either of us (your teacher has our contact details).

If you are happy to take part in the study, please complete the following declaration:

Participation assent	✓ = yes ✗ = no
I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.	
I understand that any information given by me may be used in future reports, articles or presentations by the researcher.	
I understand that my name will not appear in any reports, articles or presentations.	
I agree to take part in the above study.	

Name of Participant

Date

Signature

Appendix B

(Literacy exercise introductory letter)



Tuesday 27th March 2018

Dear Teacher,

I am writing to inform you that the council has had to invoke the Statutory Snow Day Ruling (SSDR) following the unavoidable school closures earlier this term.

The SSDR requires all pupils to make up any time missed through Snow Days on Saturdays and Sundays.

According to our records, Ysgol Pen Rhos was closed on Thursday 1st March and Friday 2nd March 2018. This requires a total of 10 hours and 10 minutes to be made up by your pupils. This is calculated as 5 hours and 5 minutes teaching time per day. This ruling applies to all pupils and staff.

Please reply before Thursday 29th March with the days that you will be opening to accommodate your pupils.

Thank you,

Mr H A Lark

Director of SSDR.

Appendix C

(Lesson plan)

Carollan Adhyg Aethron The Gellwyl Cymru		 The South West Wales Centre of Teacher Education		1B
Session Plan – Key Stage 2				
Name of trainee: James Jewell-Edmonds		Session ref: 27/03/18 Literacy- persuasive language.		
Personal target(s) in relation to QTS: S2.1, S2.4, S3.1, S3.2.2, S3.3.1, S3.3.4, S3.3.6, S3.3.7				
Year group: 5	No. of learners: 27	ALN: Suitable for all abilities.		
Additional Adults: /				
Learning objective(s): To counter-argue an opinion.		Success criteria: SC- I can form my own opinion. SC- I can use facts to support an argument. SC- I can use persuasive language to effectively counter-argue an opinion.		
Links to previous learning: Linked to previous persuasive writing lesson, identifying facts and opinions and persuasive writing lessons.				
Curriculum coverage (range, skills) • Range: increase their confidence in language use by drawing on their knowledge of English; communicate for a range of purposes; use appropriate vocabulary and terminology to discuss, consider and evaluate their own work and that of others; speak and listen individually, in pairs, in groups and as members of a class; present, talk and perform in formal and informal contexts and for a variety of audiences including teachers, peers; speak clearly, using intonation and emphasis appropriately. • Skills: explain information and ideas, exploring and using ways to be convincing; speak clearly, using formal language and projecting voice effectively to a large audience; explore issues and themes through role play; listen carefully to presentations using techniques to remember the main points; listen to others, asking questions and responding to both the content and the speakers' viewpoints; contribute to group discussion, taking some responsibility for completing the task well.				
Literacy (LNF) • Speaking: communicate ideas and information to a wide range of audiences and a variety of situations. • Listening: listen and respond to the viewpoints and ideas of others. • Collaboration and discussion: contribute to discussions and presentations and discuss the viewpoints/ideas of others to reach agreement.		Numeracy (LNF) • Identify processes and connections; represent and communicate.		
DCF • Use of iPads/laptops to research and find facts used to support an opinion and form a counter-argument. • Use iPads/laptops to create a poster to support argument.	Thinking • To use facts to form the basis of an argument. • To recognise the difference between facts and opinions. • To form a counter-argument using persuasive language	ESDGC	YCC • Use of incidental Welsh and commands.	
Key vocabulary (English/Welsh): Persuade, describe, outline, features, argue, present, facts, opinions, counter-argue, ~~per s'n brod? gwrandwch, eisteddych, cefnfydd~~				
Time	Session activities, organisation and management		Key questions & Assessment for Learning opportunities	
15 mins	Introduction • Introduction to recap the features of persuasive writing [PPT] • Ask class to identify the key features of persuasive writing (key words, connectives, importance of supporting arguments with facts, facts v opinions). Warm-up • Upon establishing the key features of persuasive text, split the class into two groups and explain that they will need to think about and write a brief statement arguing either for or against the use of fidget spinners in school. • Provide a word-bank of connectives and persuasive text features that pupils can use. • Use lollipop sticks to choose pupils to read their statement (mixture of for/against).		• Revisit SC • Questioning and evaluation throughout the task to ensure understanding. • What are the features of persuasive writing?	

	• Question class whether or not the statements were effective and who produced the best argument (how/why?)
45 mins	Main activities • Begin by reminding the class about the issue surrounding the snow days earlier in the month- mention that there has been some controversy about children missing too much school due to the snow. • A fictional letter will be prepared and given to the pupils which will argue that missed snow days will need to be made up by school lessons being given on the weekend (allow the pupils some time to open and read the letter, analysing the content and establishing their initial reaction). • Class will again be split into four groups, with two groups arguing in favour of weekend lessons and the other two against. • Each group will need to clearly present their argument to the rest of the class with an accompanying poster/spider diagram. • Pupils will need to back their arguments with facts (use of iPads/laptops).
15 mins	Plenary • Circulate around the class and find best examples of the persuasive language- feedback these examples to the rest of the class (to be delivered as 'pit stops' during the lesson which will provide pupils with ideas as they work). • Recap what is needed to form a counter-argument, such as including facts and persuasive language.

Appendix D

(Leuven observation sheet: lesson one)

Observer Checklist
How does the use of self-assessment in mini-plenaries affect levels of pupil engagement?

(E/Majken) (F/Thomas) (B/Rhianon) (B/Connor)

	Child 1 (record activity level)	Child 2 (record activity level)	Child 3 (record activity level)	Child 4 (record activity level)
5 minutes	4	1	3	3
10 minutes	3	2	2	1
15 minutes	3	2	4	2
20 minutes	3	3	2	2
25 minutes	4	2	4	2
30 minutes	4	2	3	1
35 minutes	4	2	3	1
40 minutes	4	4	2	3 <i>Intervention</i>
45 minutes	3	3	3	2
50 minutes	3	4	4	2
55 minutes	3	3	3/4	2/3
60 minutes	3	3	2	1

Letter MP1
MP2
MP3
presentation

The Leuven Scale for Involvement

1) Low Activity - activity at this level can be simple, stereotypic, repetitive and passive. The child is absent and displays no energy. There is an absence of cognitive demand. The child characteristically may stare into space. N.B. This may be a sign of inner concentration.

2) A Frequently Interrupted Activity - the child is engaged in an activity, but half of the observed period includes moments of non-activity, in which the child is not concentrating and is staring into space. There may be frequent interruptions in the child's concentration, but his/her involvement is not enough to return to the activity.

3) Mainly Continuous Activity - the child is busy at an activity, but it is at a routine level and the real signals for involvement are missing. There is some progress, but energy is lacking, and concentration is at a routine level. The child can be easily distracted.

4) Continuous Activity with Intense Moments - the child's activity has intense moments during which activities at Level 3 can come to have special meaning. Level 4 is reserved for the kind of activity seen in those intense moments and can be deduced from the 'involvement signals'. This level of activity is resumed after interruptions. Stimuli, from the surrounding environment, however attractive cannot seduce the child away from the activity.

5) Sustained Intense Activity - the child shows continuous and intense activity revealing the greatest involvement. In the observed period not all the signals for involvement need be there, but the essential ones must be present: concentration, creativity, energy and persistence. This intensity must be present for almost all the observation period.

Appendix E

(Interview transcript: lesson one)

Post Lesson Interview: Questions

1. What did you enjoy most about the lesson?

- a) Presenting what we were writing about
- b) Group working, team working, different ideas
- c) Presentation and drawings – poster format

2. What did you learn?

- a) How to read a letter and summarise it
- b) How to counter argue a point
- c) Ways to present persuasive writing

3. What did the teacher do that helped you learn most?

- a) Recapping information on PowerPoint, using laptop to research
- b) Word mat to help frame writing

4. Was pausing the lesson helpful for you/your work?

- a) Yes it was helpful, helped to think with some new ideas
- b) I thought of my own ideas and other people's ideas were not useful
- c) Stopping was distracting, I forgot my ideas

5. Did you feel more focussed on the task?

- a) Helped to focus on work as the group went off topic
- b) Lost flow
- c) Confused me, I had my own ideas

6. If we taught the same lesson again to another year 5 class in a different school, what do you think we should change?

- a) Only one pit stop in the middle of the lesson
- b) Less distraction on PowerPoint (animation)
- c) Fidget spinners as a **stimulus**
- d) More time, more ideas on the sheet to help
- e) Group work was good.
- f) Working on A3 was useful – split groups into smaller groups.

Appendix F

(Leuven observation sheet: lesson two)

Observer Checklist

How does the use of self-assessment in mini-plenaries affect levels of pupil engagement?

	Child 1 (record activity level)	Child 2 (record activity level)	Child 3 (record activity level)	Child 4 (record activity level)
(Intro)				
5 minutes	2	2	4	4
10 minutes	1	2	3	5
(Letter)				
15 minutes	4	4	4	4
(Questioning)				
20 minutes	1	2	4	4
25 minutes	2	3	3	3
(Task)				
30 minutes	4	3	4	5
35 minutes	4	4	4	4
40 minutes	4	5	3	5
45 minutes	4	5	3	4
(MP)				
50 minutes	4	4	4	3
55 minutes	3	3	5	3
(Plenary)				
60 minutes	3	5	2	4

The Leuven Scale for Involvement

- 1) Low Activity - activity at this level can be simple, stereotypic, repetitive and passive. The child is absent and displays no energy. There is an absence of cognitive demand. The child characteristically may stare into space. N.B. This may be a sign of inner concentration.
- 2) A Frequently Interrupted Activity - the child is engaged in an activity, but half of the observed period includes moments of non-activity, in which the child is not concentrating and is staring into space. There may be frequent interruptions in the child's concentration, but his/her involvement is not enough to return to the activity.
- 3) Mainly Continuous Activity - the child is busy at an activity, but it is at a routine level and the real signals for involvement are missing. There is some progress, but energy is lacking, and concentration is at a routine level. The child can be easily distracted.
- 4) Continuous Activity with Intense Moments - the child's activity has intense moments during which activities at Level 3 can come to have special meaning. Level 4 is reserved for the kind of activity seen in those intense moments and can be deduced from the 'involvement signals'. This level of activity is resumed after interruptions. Stimuli, from the surrounding environment, however attractive cannot seduce the child away from the activity.
- 5) Sustained Intense Activity - the child shows continuous and intense activity revealing the greatest involvement. In the observed period not all the signals for involvement need be there, but the essential ones must be present: concentration, creativity, energy and persistence. This intensity must be present for almost all the observation period.

Appendix G

(Interview transcript: lesson two)

Post Lesson Interview: Questions

1. What did you enjoy most about the lesson?
 - a) Debating- liked giving the reasons for your arguments.
 - b) Presenting the poster.
 - c) Making the poster.
 - d) Enjoyed debating authenticity of letter.
2. What did you learn?
 - a. Persuasive language- how to organise and write.
 - b. Work as a team- (despite preferring individual work).
 - c. Importance of questioning authenticity of texts.
 - d. How debates can develop from small issues into something bigger.
3. What did the teacher do that helped you learn most?
 - a. Learn more about persuasive language- explaining what is and setting it out.
 - b. Encouraged to work.
 - c. Helped with the structure of writing/how to set it out.
 - d. Helped to develop opinion and to speak up.
4. Was pausing the lesson helpful for you/your work?
 - a. Yes- helped you understand, understand the lesson and gave tips/ideas, examples.
5. Did you feel more focussed on the task?
 - a. Resounding yes- helped you 'get you into the lesson', acts as a 'hook'.
6. If we taught the same lesson again to another year 5 class in a different school, what do you think we should change?
 - a. Ask the class to present the work in a neat way.
 - b. Ask each group if they would rather work in smaller groups- pairs of threes.
 - c. Like the choice to work with friends.
 - d. Assigned roles within the group to ensure that everyone gets a chance to do something, e.g. scribe.