A critical evaluation and the identification of next teaching and learning steps focusing on a case study of an individual learner or a group of learners, based on an observed critical incident.

Word count: 4,398.

Introduction

The professional development of teachers is essential to efforts to improve the quality of teaching in schools (Borko, 2004, p. 3). Educators in Wales today are being challenged to think afresh about what they teach and how they teach. In 2018, the Welsh Government launched the National Approach to Professional Learning (NAPL), creating a professional learning vision fit for the evolving education system in Wales. As part of the research commissioned by Welsh Government to inform the evidence base for the NAPL, Lee and Richings (2018) discussed how the development of reflective practice aids student teachers in integrating theory and practice, which helps promote high-quality professional learning.

The importance of reflective practice was made clear when the Cabinet Secretary for Education, Kirsty Williams, indicated to the Children, Young People and Education (CYPE) committee that reflective practice is one of the four key elements she is focused on basing her methodology for professional learning around (National Assembly for Wales Research Service, 2018). The following year, the Welsh Government published the Professional Standards for Teaching and Leadership. The standard for Professional Learning demands that teachers can show how reflection informs professional learning (Welsh Government, 2019).

Critical incident analysis is a popular technique for self-reflection in teacher education (Mohammed, 2016, p. 25). Joshi (2018, p. 82) describes a critical incident as “any unplanned event which takes place during the class”. Tripp (1993) states that whilst these incidents initially appear to be ‘typical’ rather than ‘critical’, they can then be rendered critical through analysis. In this study, I will focus on one critical incident from a pedagogical context. Through analysing the theory behind the incident I will identify next teaching and learning steps which I can then implement in my teaching practice to meet the standard for Professional Learning (Welsh Government, 2019), helping promote my professional learning, as described by Lee and Richings (2018).

Observation

School X is a large Catholic primary school located close to the city centre of Swansea. As of 2018, there are over five hundred 3 to 11-year-old children in the school, of which 12.4% of children are entitled to free school meals (My Local School, 2018). The pupil to teacher ratio is 29:1 and 34.3% of children have English as an additional language (EAL), far higher than the national average of 6.2% (My Local School, 2018). Four official observations were carried out (See Appendix A, B, C and D), and an Assisted Reflective Conclusions Model (ARC) was completed for each observation (See Appendix E, F, G and H). However, this case study will only focus on the critical incident identified in the first observation (See Appendix A and E). Page 21 – Point 40 of the BERA guidelines (2018) was adhered to throughout this case study.

The critical incident which this study focusses on took place in a Year 2 classroom on October 2nd, 2019 (Appendix A). There were 29 children present in the class, one teacher and one teaching assistant. There was one child with additional learning needs who was receiving most of the support and attention the teaching assistant was providing to the class. The lesson was immediately after the children returned from their morning break time. At the time of the critical incident, all children were sitting in their seats and the teacher was in the process of introducing the lesson. The teacher had created six groups based on the children's ability and each group sat at their own table.

A written observation model was used in each of the lesson observations conducted throughout this study. The written observation model consisted of six questions adapted from Fletcher-Wood (2016). This observation model was chosen as it helped ensure a multifaceted record of the lesson was recorded, yet upon reading the completed observation sheets it was clear there was little information regarding the interpersonal relationships within the classroom. Sociograms can reveal the changing and complex nature of interpersonal relationships among children in the classroom (Dell'Angelo and Sobieski, 2016, p. 417). The use of sociograms was considered prior to commencing the study, however only capturing data on the students' interpersonal relationships does not provide enough information on the lesson to assist with analysing the critical incident.

The Hawthorne effect is when students or adults in the classroom may behave differently if they know they are being watched or studied (Frey, 2018). Oswald et al. (2014, p. 70) conclude that establishing rapport with the children prior to the observation is essential to

mitigate the Hawthorne effect. This was considered before conducting any observations, however, I concluded it would be difficult to mitigate the Hawthorne effect as there would be no opportunity to establish a rapport prior to the day of the observations. As a result, it was decided each lesson would be observed in a non-participative manner, despite the risk of incorporating the Hawthorne effect (Kumar, 2014). This was to ensure the written observations could be recorded immediately, minimising the risk of important details being forgotten.

Extensive methodological development has been made towards case study research over recent decades (Harrison et al., 2017, p. 1). It was decided this research would be constructed as a case study, as this design will help develop a holistic understanding of the critical incident (Kumar, 2014). This case study uses critical incident analysis – a pedagogical theory developed by Tripp (1993) who suggests there are two stages to understanding a critical incident: understanding what happened and why it happened. The written observation model adapted from Fletcher-Wood (2016) was used to document what happened (See Appendix A) and an Assisted Reflective Conclusions (ARC) Model was used to reflect on why it happened (See Appendix E).

Tripp's (1993) methodology was chosen because it has the potential to enable a greater focus on the context of the critical incident; record a thick description of the incident; and offer the prospect of surprise – ideal for identifying anomalies and contradictions to existing theory (Bott and Tourish, 2016, p. 289). Furthermore, the analytical approaches described by Tripp (1993) can develop the professional learning of teachers through reflecting on teaching situations – 'the critical incident' (Mohammed, 2016, p. 25).

Whilst critical incident analysis does have numerous advantages, a major limitation considered before proceeding with the case study was that the observer may cast a personal perspective on the incident (Serrat, 2017), which could cause the incident to be misinterpreted or misunderstood. This potential for bias was why 'target child' observation models were not considered for this study. Nevertheless, the potential for bias was still present in the case study, as the use of critical incident analysis can encourage a behavioural emphasis when identifying critical incidents (Hughes et al., 2007). Each critical incident identified in this case study was behaviourally orientated, suggesting this bias towards behavioural emphasis was present.

Gagne's model of an instructional unit can be used as a theoretical framework for identifying critical events within a lesson (Krull et al., 2010, p. 197). The use of this case study

methodology would have required collaboration with the class teacher beforehand to ensure each of Gagne's nine-step model could be implemented. As this would not be possible, Gagne's model was not used for this study.

In 2015, Professor Graham Donaldson published his independent review of the curriculum and assessment arrangements in Wales, titled 'Succesful Futures'. The review recommends four core purposes to the Curriculum for Wales (Donaldson, 2015). The four purposes of the curriculum and a larger breakdown of these ideas can be seen in Appendix I.

The critical incident occurred within the first few minutes of the lesson. Despite the lesson taking place immediately after outdoor play, the students were quick to take their seats and settle down with minimal direction from the teacher. This could be evidence that the students were ambitious, capable learners, which is one of Donaldson's (2015) four purposes. The students were ready to learn not just throughout their whole lives, but immediately. Settling down quickly meant less time was wasted and provided the opportunity for more learning. On the other hand, it is possible this is instead evidence of a behaviour management strategy previously modelled by the teacher working effectively. The teacher gave out one house point to a table of students who settled down quickly. This suggests the students' incentive to settle down quickly was to receive a reward, rather than to adhere to one of Donaldson's (2015) purposes. Whilst it did an excellent job of settling the class down, I believe the school should be encouraging students to understand how the four purposes can benefit their learning and development, rather than simply having the students meet the purposes through incentives and reward schemes.

After the students settled in their seats, the teacher began asking questions about BBC Children in Need, which was a school-wide theme throughout October. This theme helps develop the students' knowledge about their culture, community, society and the world – adhering to Donaldson's 'ethical, informed citizens' purpose of the curriculum. The students appeared to already be aware that they needed to put their hands up and wait for the teacher to ask them for their answer, as the whole class initially followed this procedure without any problems.

Child X had put his hand up for two different questions but was not chosen to answer on either occasion. A few questions later, Child X shouted out the answer to a question. Whilst Child X's answer was correct, this was not acknowledged by the teacher. Instead, she sternly told the child to put his hand up if he wanted to answer a question. Following this incident, Child X did not engage in any more questions throughout the lesson.

The teacher's question and answer model encouraged children to grasp opportunities and take measured risks when answering a question, which links to Donaldson's (2015) 'enterprising, creative contributors' purpose. However, it did result in not every student being chosen to answer a question. Consequently, it did not provide each student with the opportunity to explain their ideas and communicate effectively to the class, which is what Donaldson's (2015) 'ambitious, capable learners' purpose looks to promote. After observing how this impacted Child X's engagement throughout the rest of this activity, I believe implementing a formative assessment strategy that involves the whole class when questioning would help better develop many of Donaldson's four purposes in the classroom. The use of mini-whiteboards (Andersson and Palm, 2017, p.114), think-pair-share (Demirci and Düzenli, 2017, p. 64) and exit/admission tickets (Danley et al., 2016, p.48; Marzano, 2012, p.80) are examples of assessment for learning (AfL) questioning strategies that can be used which can also help promote other aspects of the four purposes as well.

Literature Review

Questioning Techniques

The critical incident (See Appendix A and E) occurred when the teacher was conducting a questioning exercise in a classroom where a 'hands up' approach to answering questions had already been established. The use of 'hands up' questioning has been a controversial topic throughout the last decade. Many schools have banned the practice entirely, which often causes tension between students, parents, staff and even teacher unions (Pells, 2016). William (2014, p. 16) argues that the fundamental flaw when using a 'hands up' approach is that it makes participation voluntary and that teachers may develop a bias towards students they know are more likely to provide a good answer. Students with high levels of anxiety or low intellectual confidence may be reluctant to participate due to the risk of providing an incorrect answer in the presence of their peers and teacher (Cohen et al., 2019). However, it could be argued that removing the 'hands up' approach could cause anxiety for students who do not know the answer to the question and feel safe knowing they are not required to risk providing a wrong answer in front of the class.

Whilst the debate surrounding the 'hands up' approach continues, questioning is still an essential part of the teaching and learning process (Nappi, 2017, p.30). In education in Wales, questioning is considered "the driving force of developing thinking in the classroom" (Welsh Government, 2010). Classroom teachers spend anywhere from 30-50% of their direct teaching time conducting questioning exercises (Cotton, 2001) as they can serve various purposes within a classroom. Teachers frequently use questioning to manage behaviour (Hussain, 2017, p. 19; Postholm, 2013, p. 398) and as an AfL tool to evaluate students' learning (Joseph, 2018, p. 77). However, poorly constructed questions can actually cause behaviour problems within a classroom (Bond, 2008, p.41) or suppress learning by intimidating or creating confusion amongst students (Tofade et al., 2013, p.1).

Bloom et al. (1956) developed a taxonomy for teachers to use as a framework when considering what questions to ask students. The taxonomy is represented by a pyramid, with lower-order thinking at the bottom and higher-order thinking at the top. The use of higher-order cognitive questions is stressed in contemporary teacher training programmes (Joseph, 2018, p. 78), and curriculums in the United Kingdom and around the world are making significant moves towards developing higher-order skills (Donaldson, 2015). Degener and Berne (2016, p. 596) discuss how complex questions promote higher cognitive thinking.

Research conducted by Cotton (2001) and later by Hattie (2012) showed that 60% of questions asked by teachers are lower cognitive questions, 20% are procedural questions and 20% are higher cognitive questions. This suggests teachers need to increase their use of higher-order questions. However, Brown et al. (2014) discuss how the use of lower cognitive questions can help develop and embed the core knowledge students require to effectively engage with higher cognitive questions. This view is supported and expanded on by Lemov (2015) who argues that without the use of lower-order questions to build factual knowledge, the use of higher-order questions will lead to only unfounded speculation.

Formative Assessment and Assessment for Learning (AfL)

Effective questioning is a key aspect of good formative assessment (Cremin and Burnett, 2018). Assessment for learning has always been closely associated with formative assessment. In work later endorsed as “the characteristics of effective formative assessment” (Donaldson, 2015), Black and William (1998a) brought the concept of formative assessment to attention after synthesising over 250 studies linking assessment and learning. They defined it as activities undertaken by teachers or the students themselves which provide the teacher with feedback which can be used to adapt the teaching work to meet learners needs. In a later paper, Black and William (1998b, p. 7) claim that formative assessment “yields substantial learning gains” among students. However, some research has argued the meaning of the term should be restricted only to situations where the teacher interprets the feedback on the spot and adapts the lesson immediately (Heitink et al., 2016, p. 58; Heritage, 2018, p. 51). Furthermore, Black and William (1998b, p. 7) have faced scrutiny regarding many of the forty studies conducted in their research, with claims they were flawed (Baas et al., 2014, p.34) and therefore difficult to interpret, and that their forty studies were too disparate to be studied meaningfully through meta-analysis (Bennett, 2011, p.11; DeLuca et al., 2018, p. 78).

Assessment for learning is attributed specifically to the techniques and approaches associated with the practice of formative assessment (Black and William, 2018, p. 553). Educational policies in Wales (Welsh Government, 2010) and throughout the world have adopted AfL practices as an alternative to traditional testing practices (Birenbaum et al., 2015, p. 118; DeLuca et al., 2018, p. 77). However, despite the early innovations in AfL made by Black and William (1998a) and the Assessment Reform Group (1999), several researchers have argued that some practices of AfL have devolved simply into tools for judging student performance (Marshall and Drummond, 2006, p. 133; Ninomiya, 2016, p.

80). This could be because whilst the review by Black and William (1998a) provided plentiful information on what teachers can focus on to improve feedback, it lacked details on how teachers can implement AfL.

Nevertheless, numerous strategies have been developed and studied in recent years which are available to teachers when practising AfL. Many theories suggest that teachers need to create a positive classroom culture and safe environment to help promote AfL (Hammond, 2006). On the other hand, some researchers have developed AfL strategies for classrooms which do not necessarily have a positive classroom culture (Hodgson and Pyle, 2010). These conflicting opinions further support my thought that there was not enough clear guidance available to practitioners on how to implement AfL in classrooms when the early innovative arguments supporting its use were made.

In one study preceding the work of Black and William (1998a), Gardner, Heward and Grossi (1994, p. 63) found a 14-fold increase in participation when students used mini-whiteboards to answer teachers questions compared to the use of hand-raising. They discussed how some students did not like the 'hands up' approach as they were not always chosen to answer questions. Although this study did take place over 25 years ago, contemporary research has reinforced the belief that the use of mini-whiteboards and other AfL strategies increases participation compared to hand-raising (Gimbutas, 2019). The use of mini-whiteboards and other strategies that engage the whole class also eliminates the potential for teacher bias during questioning activities that William (2014, p. 16) highlighted.

Operant Conditioning

When implementing a 'hands up' approach in the classroom, teachers can consider operant conditioning to encourage children to follow the hands up rule correctly. Skinner's (1963) theory of operant conditioning claims that behaviour can be controlled by its immediate outcomes. The possibility of the behaviour being repeated in the future is determined by its feedback and consequence. This theory has been applied extensively throughout various professions, including health (Adamczyk, 2018, p. 1), teaching (Coskun, 2019, p.1) and animal behaviour (Lansade and Calandreau, 2018, p. 61).

However, despite its widespread application, a serious limitation when applying this theory in education is that Skinner's research was almost exclusively conducted on animals (rats, pigeons and dogs). Psychologists argue that the physiological and anatomical differences between animals and humans are so great that Skinner's research on animals cannot be

extrapolated to humans (McLeod, 2018). Furthermore, the use of operant conditioning to encourage participation through extrinsic motivations, such as praise or rewards, can lead to children only participating if there is praise or reward (Hammond, 2016). It is possible that aspects of operant conditioning were present when the students settled down quickly during the first lesson observation (See Appendix A).

A serious cause for concern is that many schools use operant conditioning to focus on changing the students' behaviours instead of understanding the behaviours and why they are being exhibited (Dyson, Plunkett and McCluskey, 2015). This was evident in the lesson where this study's critical incident occurred. The class teacher was praising children who raised their hands, whereas she sternly told child X to raise his hand and did not praise or even acknowledge his answer when he shouted at. School X also implements a 'hands up' approach in Year 1, so child X should have been familiar with this behaviour policy. Coskun's (2019, p. 1) findings may provide some insight into why the approach is struggling in school X. Coskun's study found that five-year-old children adjust to classroom settings best under classical conditioning, whereas operant conditioning is most effective for children aged 9 years onward. This does contradict the earlier work of Rudduck & McIntyre (2007) however, as they found that older children felt disdain for extrinsic motivators, such as praise or rewards. Students instead appreciated it more when teachers took the time to understand what engages their desire to learn.

Despite the possible limitations when applying operant conditioning in teaching, the behaviour policies of many schools (Dyson, Plunkett and McCluskey, 2015) and behaviour management approaches suggested by Welsh Government (2012) encourage teachers to implement aspects of operant conditioning in their classrooms. This may be because researchers past and present have lauded the positive effects in the classroom that operant conditioning provides in improving cognitive domains of learning (Bloom, 1984, p. 4; Coskun, 2019, p. 19) and deterring unwanted behaviours (Doughty & Shields, 2009, p. 315). This suggests that operant conditioning does have an important role to play in the classroom, however, it should only be used if it is used to develop students' intrinsic motivations to want to learn, not simply as a tool to manage behaviour.

Reflection / Evaluation & Next Steps

The critical incident identified occurred during an ‘activating prior knowledge’ formative assessment activity, however, I do not believe it was the concept of formative assessment that caused this incident. A consequence of not speaking with child X is that I cannot be sure why he shouted out and disengaged from the rest of the activity, however, it appeared to be out of frustration due to not being picked to answer any questions up until that point. I would continue ‘activating prior knowledge’ activities in future lessons as they help provide the teacher with the necessary feedback to adapt the upcoming lesson(s) to meet the next steps in the students’ learning. In addition, Donaldson (2015) proposed to Welsh Government that formative assessment should be an essential part of the teaching process as it can double the rate of learning. Therefore, formative assessment must form a natural part of my teaching practice, as the upcoming changes to education Wales are based on the recommendations proposed by Donaldson (2015).

However, this is not to say I would mirror the teacher’s implementation of AfL that I observed during the questioning activity. The Welsh Government (2014) has acknowledged that AfL approaches are poorly understood and embedded within the assessment framework in Wales. For better or for worse, this presents teachers with an element of freedom when they implement AfL in during such activities. After reviewing the literature surrounding the use of hands up approaches in classrooms and observing the frustration it can cause for some students, I would instead prefer to implement a strategy where every child in the classroom has to provide an answer to every question. There are many well-studied AfL strategies that can engage the whole class, including the use of mini whiteboards (Gimbutas, 2019) and think-pair-share (Hamadan, 2017, p. 88).

I acknowledge that the teacher was put in a difficult situation when child X shouted out. Ineffective classroom management can have detrimental effects on students’ social and academic progression (Alter and Haydon, 2017, p. 114), meaning class rules must have consistent follow-through. On the other hand, child X appeared to disengage completely from further questioning activities after the teacher failed to acknowledge his answer and reminded him of the class rules. When considering Skinner’s theory of operant conditioning, it is possible child X will associate future questioning activities with this negative experience, impacting his participation in future questioning activities. Consequently, as questioning is such a prominent aspect of formative assessment, any reduced participation could have a harmful effect on child X’s learning. Subsequently, in my teaching practice, I will be mindful

of associating negative consequences or feedback when Year One students genuinely try to engage with classroom activities. In such a situation, I believe it would be best to acknowledge and praise the student's correct answer, however not to the same extent as a student who followed the correct procedure. I base this on Coskun's (2019, p. 1) findings which suggest that classical conditioning is more effective with children this age, thus the student will associate higher levels of praise and reward with following the class rules.

In terms of my professional development, the use of case study design as described by Kumar (2014) has taught me how useful it can be when the focus of a study is to explore and understand an incident. Yet, there were limitations to this case study that hindered my ability to gather more detailed data for analysis. Whilst the written observation model used did provide rich and detailed information on what happened in the classroom, I lacked the same quality information in terms of the cognitive and language development of the students, as well as the personal relationships within the classroom. Cappella et al. (2013, p. 367) suggest the interpersonal relationships in the classroom need to be considered when researching the behavioural engagement of students in schools. Furthermore, Rudduck & McIntyre (2007) found that students' interpersonal relationships with their class teacher have an important role in their motivation to participate in classroom activities. Therefore in future similar studies, I would use multiple other methods in conjunction with the written observation model when gathering data. Specifically, I would conduct a sociogram to reveal the interpersonal relationships within the class (Dell'Angelo and Sobieski, 2016, p. 417) and interview the class teacher to ensure I have a comprehensive understanding of the cognitive and language development of the students, especially in a school with such a high percentage of EAL students.

Conclusion

To conclude, critical incident analysis has been an enlightening experience. The Professional Standards for Teaching and Leadership require teachers to “show how reflection and openness to challenge and support informs professional learning to progressively develop pedagogy” (Welsh Government, 2019), and this case study has developed my professional learning pedagogical knowledge extensively. The use of Tripp’s (1993) two stages of understanding a critical incident: understanding what happened and why it happened helped simplify what was a challenging analytical process. Reflecting critically on the incident using the ARC Model (See Appendix E) enabled me to consider alternative ways of thinking and has caused me to rethink my professional judgement and strategies I initially planned on implementing in my practice.

Initially, I was very negative about how the incident was allowed to happen. However, the subsequent research into why it happened made me aware of the full ramifications of what had happened, the complex demands of the teaching profession and the positive aspects of the teacher's decision making at the time. Nevertheless, through this reflection, I have understood that a major limitation of critical incident analysis is that incidents can potentially be misinterpreted or understood. I could not be sure of why child X decided to shout out, or why he decided to disengage from the rest of the activity. If repeating this study I would observe through a participative manner and attempt to build a rapport with the students beforehand as suggested by Kumar (2014). This approach may have enabled me to talk with students and understand what questioning strategies they feel engage them best. Otherwise, I risk basing my reflection and pedagogy on flawed interpretations or assumptions.

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Appendices

Appendix A: Written Observation Notes from Lesson Observation 1.

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

Yr Athrofa
Addysg a'r Dyniaethau
Education and Humanities

OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016)

Date: 2nd October 2019, 11:00AM.
Lesson details: It is a literacy lesson. Children are learning about BBC Children in Need. They have a question sheet they partially filled in last time.
Classroom culture (Are the students focused on learning?) The lesson is immediately after outdoor playtime. The students came in and settled down very quickly. Teacher awarded a house point to one table. There are 29 students (1 child with ALN), 1 teaching assistant and 1 teacher.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) The purpose appears to be to complete a question sheet from a previous lesson. There is a carousel of activities - they're split into groups and each group rotates activities. One activity is completing the sheet with the teacher, the rest are to complete 'missions' set at the start of the week.
Direction (Are the students clear about what they are doing and how to do it well?) The students are clear about their 'missions' - these must have been explained previously. The teacher is assisting them with the BBC Children in Need question sheet. The teaching assistant is checking each group is on task with missions, paying particular attention to the child with ALN.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) All children do appear engaged. They especially enjoy the 'missions' which incorporate the use of iPads and Chromebooks. The teaching assistant is checking each group is on task with missions, paying particular attention to the child with ALN.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? The teacher started the lesson by asking questions about BBC Children in Need. Students had to raise their hands to answer. The teacher was working directly with each group during the lesson. The question sheets were collected at the end to be marked.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? One child had his hand up to answer questions on two occasions but wasn't chosen to answer. Shortly after he shouted out an answer to a question. The teacher reminded him to raise his hand before answering. He didn't engage with this questioning activity at the start of the lesson after this.

Appendix B: Written Observation Notes from Lesson Observation 2.

Prifysgol Cymru
Y Drindod Dewi Sant
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Trinity Saint David

Yr Athrofa
Addysg a'r Dyniaethau
Education and Humanities

OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016)

Date: 2nd October, 1:00PM.
Lesson details: It was an R.E. lesson. There was 1 teacher and 2 teaching assistants. One teaching focussed exclusively on the one child with ALN. I was a participant-observer.
Classroom culture (Are the students focused on learning?) The lesson is not with the usual class teacher. It is not taking place in the usual classroom. Children were distracted at the start of the lesson, possibly due to the new surroundings. They were sat at tables based on their ability.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) How do the lesson activities promote that purpose?) The lesson objective was to write a prayer. The teacher began by asking questions to children about who they can pray for, what the prayer can be about etc.
Direction (Are the students clear about what they are doing and how to do it well?) They were clear about what they needed to do, but not so much how to do it well.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) The lower ability group struggled. I was asked to help them. They needed the teacher to write the start of example sentences on a mini whiteboard to get started. As I was asked to participate and assist, I did not have an opportunity to see if the higher ability students were challenged.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? The teacher asked questions at the end of the introduction to gauge the students understanding. During the lesson, he was walking around seeing how students were getting on. At the end, he collected the books to mark.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? One child entered the class crying. He apparently had a toothache. The teacher spoke with him privately but he sat back down to join in. The child was still crying slightly throughout the lesson introduction, this distracted a lot of other students. At the end of the introduction, the child was taken aside his parents were called.

Appendix C: Written Observation Notes from Lesson Observation 3.

Prifysgol Cymru
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Yr Athrofa
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Education and Humanities

OBSERVATION / FIELD NOTES 2: LEARNING EVENT

(Questions adapted from Fletcher Wood (2016)

Date: 26th September, 1:00PM.
Details of learning event: It was a P.E. lesson. The lesson took place in the cathedral as it had a large hall available. There were 28 students present. The lesson was taught by one of the teaching assistants, not the class teacher. A second teaching assistant was present to assist the one ALN child.
Learning culture (Are the pupils focused on learning?) Everyone apart from the child with autism was focused on learning. They all listened promptly to the teaching assistant. The child with autism was running around, playing with the laptop and found it extremely difficult to concentrate. The other students were not distracted by this.
Objectives (Is there a clear purpose to the learning event? The teaching assistant had notes with the lesson intentions. They were to perform different shapes and move in different manners, working as groups to create different shapes as well.
Direction (Are the pupils clear about what they are doing and how to do it well?) The teaching assistant would give a short explanation of each task, then the students would go and perform those shapes or movements. All students (except the child with an ALN) followed without any problems.
Access and challenge (Are all students able to engage in the learning event? All students engaged and enjoyed the activity, except the child with ALN who spent most of the time doing what he wanted to do (running around, playing with the computer or looking outside).
Assessment What is the pupils' understanding before, during and after the learning event? The teaching assistant asked the students what shapes and movements they remembered from their previous lesson. Each group would perform their shapes to the other groups as well.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? The child with autism ran outside at one point during the lesson. It didn't appear to be an attempt to escape the classroom or school, he just seemed to not be able to understand the purpose of the lesson or why he was there. The second teaching assistant tried to keep him on task but with little consistent success.

Appendix D: Written Observation Notes from Lesson Observation 4.

Prifysgol Cymru
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OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016)

Date: 26th September, 10:45AM
Lesson details: This was a Year 1 lesson. The students were designing a 'fruit skeleton' that they were going to make later in the week. In previous lessons, the students had learnt about different fruits, tasted some fruit in class as part of a health and well-being series of lessons. There were two teaching assistants present and one teacher. This class had a high number of EAL students (18/27).
Classroom culture (Are the students focused on learning?) The students all do appear focussed on learning. They appear very excited about the task. There was no bad behaviour throughout the lesson.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) The purposes appeared to be for every child to complete a design of their 'fruit skeleton' ready for when they create it in a future lesson. The children were split into four groups which were based on their ability. Three groups were working on the task at once, each with either a teaching assistant or the teacher. The fourth group was allowed to go 'on discovery'. Once a group had finished with the teacher, this fourth group went and worked with the teacher. The first three groups were allowed to go 'on discovery' after finishing their designs.
Direction (Are the students clear about what they are doing and how to do it well?) Some children appeared to understand better than others what they were supposed to do. The teacher has listed on the board the fruits they could choose from, however, some would draw fruits not listed on the board.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) All students were engaged throughout the task. The 'top' group did finish their designs far more quickly than the bottom two groups. The sheet was not differentiated for different levels of ability. Each group had to draw their fruit on the sheet and label what it was.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? The teacher designed her own fruit skeleton on the board during the introduction to the lesson. She asked students what fruit they would like to use, drew it herself on the skeleton and labelled it. During the task, each group sat with a teaching assistant or teacher who was monitoring and assisting students throughout the entire design process. The students had to show the teacher their design when they finished before being allowed to stick the sheet in their book.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? When the teacher was asking children to name fruit they could use, one student put her hand up to answer. However, when the teacher asked for her answer, she nervously shook her head and did not have an answer.

Appendix E: Assisted Reflective Conclusions (ARC) Model for Lesson Observation 1.

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

Yr Athrofa
Addysg a'r Dyniaethau
Education and Humanities

Model Beirniad Wedi Adfyfyrio (BWA)
Assisted Reflective Conclusions (ARC) Model

Dyddiad/*Date*: 2nd October 2019, 11:00AM

Digwyddiad critigol (Ffocws)/*Critical incident (focus):* Child X shouted out during a hands up questioning activity.

Profiad/ *Experience*	
Teimladau/ *Feelings* *Beth yw eich teimladau ynghylch y profiad?* *"What are your feelings regarding the experience?"*	I feel child X is now less likely to want to participate in questioning activities in the future. Whilst he did go against the class rules, he was excited to tell his teacher the correct answer. I feel it had a negative impact on his learning.
Cofio a Deall/ *Remember and Understand* *"Allwch chi restru elfennau'r achos yng nghyd-destun y dysgu?"* *"Can you list the aspects of the incident in the context of learning?"*	The student wanted to answer a question during an 'activating prior knowledge' questioning activity at the start of the lesson. He had his hand up for two previous questions but was not chosen to answer. He appeared to be a little frustrated which may have contributed towards his decision to shout it. After being told off by the teacher, he didn't participate in any other questions during the activity. If he did disengage from this point onward, he would not have benefited from listening to any of his classmates' answers to the questions. The teacher was granting praise to students who did give the correct answer after putting their hands up.
Gwerthuso a dadansoddi/ *Evaluate and analyse* *"Beth y gellid ei gadw yr un fath i sicrhau addysgu a dysgu effeithiol yn y dyfodol?"* *"What could be kept the same to ensure effective teaching and learning in the future?"*	The activating prior knowledge activity can be kept, as I believe it is a good way for the teacher to understand what the students already know about a topic before commencing, or perhaps seeing what they remember from a previous lesson. The students were excited to receive the praise was passing on to students who provided the correct answer, so I would keep that aspect of operant conditioning as well.
Casgliadau a chamau gweithredu/ *Conclusions and actions* *"Beth yw eich atebion posibl i'r mater a nodwyd?"* *"Beth y gellid ei wneud nesaf?"* *"What are your possible solutions to the issue identified?"* *"What could be done next?"*	If a child did shout out in that situation, a possible solution would be to explain politely that the child needs to put their hands up first. I would then acknowledge the correct answer and still praise the student for the correct answer, as hopefully, this will encourage them to put their hands up next time. A more drastic solution could be to implement an AfL strategy, such as class mini-whiteboards or other strategies that engage the whole class, instead of having the teacher just pick one student for each question.
Y profiad newydd / *Transformed experience*	

Appendix F: Assisted Reflective Conclusions (ARC) Model for Lesson Observation 2.

Prifysgol Cymru University of Wales | Yr Athrofa Addysg a'r Dyniaethau Education and Humanities

Model Beirniad Wedi Adfyfyrio (BWA)
Assisted Reflective Conclusions (ARC) Model

Dyddiad/*Date*: 2nd October, 1:00PM.

Digwyddiad critigol (Ffocws)/*Critical incident (focus):* A child entered the class crying, complaining of a toothache. The child continued crying intermittently throughout the lesson.

Profiad/ *Experience*	
Teimladau/ *Feelings* *Beth yw eich teimladau ynghylch y profiad?* *"What are your feelings regarding the experience?"*	I feel the teacher was put in a difficult situation. He was unaware of how serious the child's toothache was. I did not have any background information on this child which could have impacted the teacher's decision not to send the child home immediately. Perhaps the child has a history of over-exaggerating illnesses for example.
Cofio a Deall/ *Remember and Understand* *"Allwch chi restru elfennau'r achos yng nghyd-destun y dysgu?"* *"Can you list the aspects of the incident in the context of learning?"*	The crying child distracted a lot of other students during the introduction to the lesson. This may have impacted their understanding of what was expected of them. Some were staring at the child who was being assessed by the teaching assistant at the back of the class instead of focusing on the teacher.
Gwerthuso a dadansoddi/ *Evaluate and analyse* *"Beth y gellid ei gadw yr un fath i sicrhau addysgu a dysgu effeithiol yn y dyfodol?"* *"What could be kept the same to ensure effective teaching and learning in the future?"*	The questions the teacher asked at the end of the introduction appeared effective. He did not ask open questions, he made sure he asked students to explain what they were supposed to do. Splitting the students into groups helped the teacher and teaching assistants keep a close eye on the students who may have been struggling.
Casgliadau a chamau gweithredu/ *Conclusions and actions* *"Beth yw eich atebion posibl i'r mater a nodwyd?"* *"Beth y gellid ei wneud nesaf?"* *"What are your possible solutions to the issue identified?"* *"What could be done next?"*	Perhaps it would be best to ask one of the teaching assistants to take the child out of the class if they are crying and assess how serious it may be in a place where it prevents causing a distraction to the other students in the class.
Y profiad newydd / *Transformed experience*	

Appendix G: Assisted Reflective Conclusions (ARC) Model for Lesson Observation 3.

Prifysgol Cymru University of Wales | Yr Athrofa Education and Humanities

Model Beirniad Wedi Adfyfyrio (BWA)
Assisted Reflective Conclusions (ARC) Model

Dyddiad/*Date*: 26th September, 1:00PM.

Digwyddiad critigol (Ffocws)/*Critical incident (focus):* The child with autism ran outside at one point during the lesson.

Profiad/ *Experience*	
Teimladau/ *Feelings* *Beth yw eich teimladau ynghylch y profiad?* *"What are your feelings regarding the experience?"*	I feel like the two teaching assistants did an exceptional job. The lesson was very well explained and all other students engaged throughout. I felt the child with autism did seem to understand how to behave appropriately and was very distracted by the new surrounding in the cathedral. The fact other students were not distracted by this suggest it is a common occurrence.
Cofio a Deall/ *Remember and Understand* *"Allwch chi restru elfennau'r achos yng nghyd-destun y dysgu?"* *"Can you list the aspects of the incident in the context of learning?"*	The child would occasionally join in with the movements but would quickly run off to investigate something out of a window, the laptop at the front of the class and sometimes just walked about the room. The teaching assistant who appeared to be 'one to one' with the child tried very hard to get him to concentrate. I do not believe he ran outside in an attempt to 'escape', he appeared to simply be distracted by something he saw as he returned to the classroom immediately when called back.
Gwerthuso a dadansoddi/ *Evaluate and analyse* *"Beth y gellid ei gadw yr un fath i sicrhau addysgu a dysgu effeithiol yn y dyfodol?"* *"What could be kept the same to ensure effective teaching and learning in the future?"*	The teaching assistant who conducted the lesson was very well prepared. The child did have a teaching assistant who focused specifically on him which did help him partake in some parts of the lesson.
Casgliadau a chamau gweithredu/ *Conclusions and actions* *"Beth yw eich atebion posibl i'r mater a nodwyd?"* *"Beth y gellid ei wneud nesaf?"* *"What are your possible solutions to the issue identified?"* *"What could be done next?"*	Keeping the door closed may have prevented the child from running outside. Familiarising the child with the cathedral hall beforehand may decrease the need to investigate the surroundings. Perhaps the teaching assistant who was one on one with the child could have had her own simpler routines for the child to perform, as they did appear too complicated for him to understand.
Y profiad newydd / *Transformed experience*	

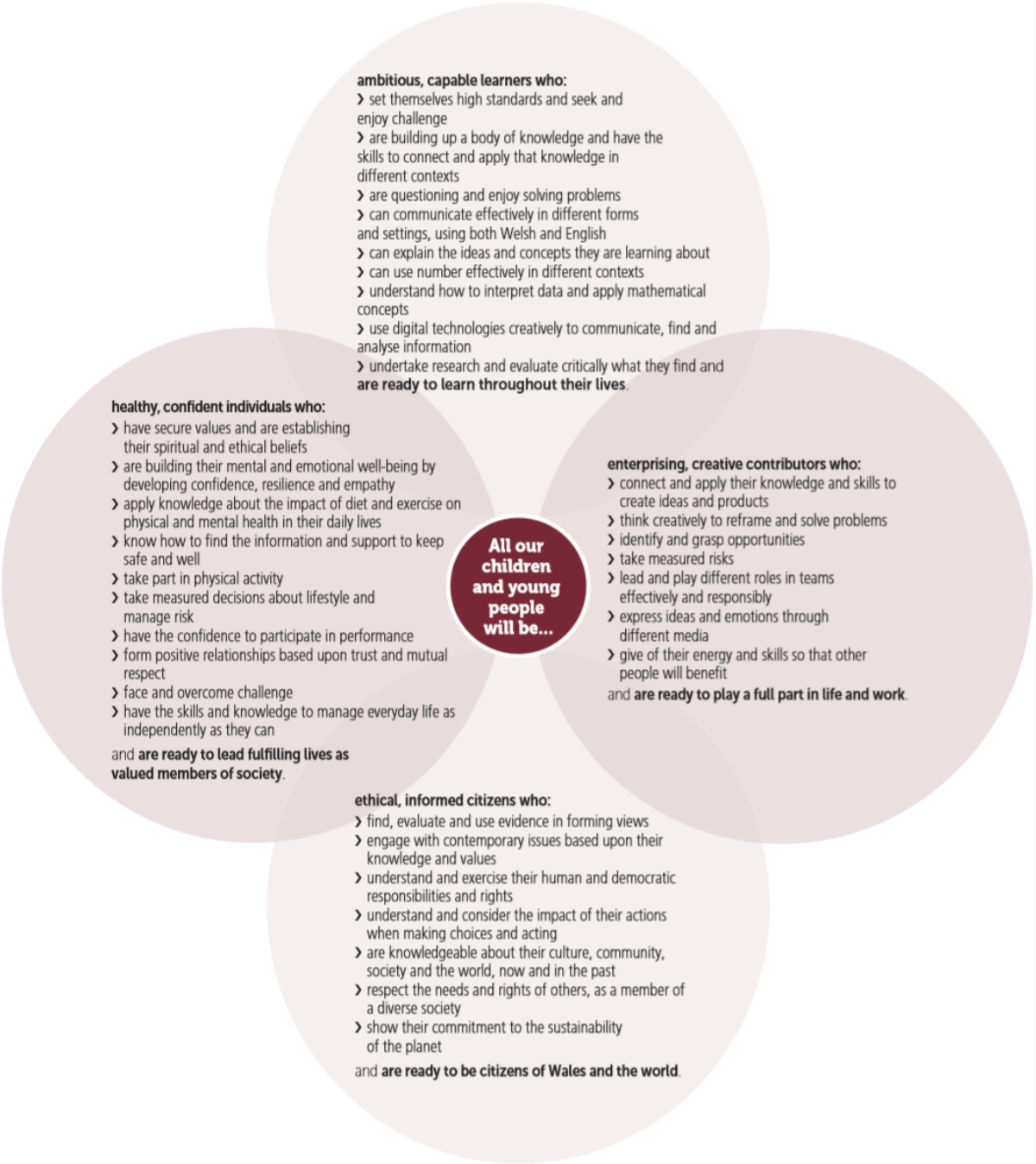
Appendix H: Assisted Reflective Conclusions (ARC) Model for Lesson Observation 4.

Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David | Yr Athrofa Addysg a'r Dyniaethau Education and Humanities

Model Beirniad Wedi Adfyfyrio (BWA)
Assisted Reflective Conclusions (ARC) Model

Dyddiad/*Date*: 26th September, 10:45AM.

Digwyddiad critigol (Ffocws)/*Critical incident (focus):* A student raised her hand to answer a question but did not provide an answer when chosen by the teacher.

Profiad/ *Experience*	
Teimladau/ *Feelings* *Beth yw eich teimladau ynghylch y profiad?* *"What are your feelings regarding the experience?"*	I feel this lesson went very well. The students understood what they needed to do and were engaged throughout the lesson. I felt puzzled as to why the student raised her hand but did not answer the question. She appeared very shy. Perhaps she put her hand up to join in with some of her peers, however, I did not speak to her so cannot be sure.
Cofio a Deall/ *Remember and Understand* *"Allwch chi restru elfennau'r achos yng nghyd-destun y dysgu?"* *"Can you list the aspects of the incident in the context of learning?"*	The teacher was conducting a questioning activity during the introduction. The teacher was creating a 'WAGOLL' fruit skeleton using fruits the students suggested. The student raised her hand to suggest a fruit but did not say anything when the teacher picked her. The teacher did try and coax an answer out of her by repeating the question but the child did not say anything.
Gwerthuso a dadansoddi/ *Evaluate and analyse* *"Beth y gellid ei gadw yr un fath i sicrhau addysgu a dysgu effeithiol yn y dyfodol?"* *"What could be kept the same to ensure effective teaching and learning in the future?"*	I feel the use of 'WAGOLL' made it very clear to the students what the teacher expected of them. I also think involving them in the creating of the 'WAGOLL' helped keep the students engaged. Having the children sitting on the carpet at the front of the class ensured the teacher could keep a close eye on everyone.
Casgliadau a chamau gweithredu/ *Conclusions and actions* *"Beth yw eich atebion posibl i'r mater a nodwyd?"* *"Beth y gellid ei wneud nesaf?"* *"What are your possible solutions to the issue identified?"* *"What could be done next?"*	A possible solution would be to use a questioning strategy that does not involve one child speaking in front of the whole class. Perhaps think-pair-share or the use of mini-whiteboards may have encouraged the student to participate if anxiety was the reason she did not provide a verbal answer.
Y profiad newydd / *Transformed experience*	

Appendix I: Donaldson's (2015) Four Purposes to the Curriculum for Wales.