

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.

An observed critical incident will be discussed in relational to three of the four (Donaldson, 2015) purposes outlined in Success Futures. The use of observation in teaching practice will be examined in conjunction with an analysis of case study methodology. Research into two areas of interest raised by scrutinizing an observed critical incident will be outlined. Ideas developed based on the literature reviewed will be reflected upon and evaluated along with the possible implications for future practice.

A critical incident is said to be “an interpretation of the significance of an event.” (Tripp, 1993, p. 8) any observed event could become critical upon reflection as it is the reflection that makes the incident critical to the observer. As such the majority of critical incidents are not striking or particularly noticeable events. Typical, everyday occurrences in the classroom become critical through analysis, revealing underlying assumptions and trends (Tripp, 1993).

Reflective practice is defined as the action of thinking deeply about professional predicaments, difficulties or obstacles that do not have a clear-cut remedy or response (Government, 2015). The main objective of reflective practice is to improve teaching and learning. Critical incidents are a component of reflective practice which narrows in on a specific incident that may otherwise be overlooked.

Observation was conducted over two days at what will henceforth be referred to as School X, in line with the ethical guidelines for educational research.

“The confidential and anonymous treatment of participants’ data is considered the norm for the conduct of research. Researchers should recognise the entitlement of both institutions and individual participants to privacy, and should accord them their rights to confidentiality and anonymity.”

(British Educational Research Association [BERA], 2018, p. 21)

School X is a newly built 3-16, mixed gender, English medium school situated in an area ranked 79 out of 1909 in Wales on the index of multiple deprivation (UK Local Area, 2014). School X is comprised of 1294 pupils, 28% of whom receive free school meals. The attendance rate for the academic year 2018/19 was 93.8% placing School X in the 1st quartile of schools in Wales for attendance.

A range of year 8 lessons were observed across the Areas of Learning Experience, with class sizes ranging from 25 to 35 pupils per class. The classes were only set for mathematics, all other year 8 lessons were mixed ability.

In terms of primary data collection, observation appears to be the most appropriate strategy when studying individuals' behaviour during an event. Observation methods are separated into two types, Participant and Non-Participant. Participant observation is when the observer engages in the same activities as the individuals they are observing. Non-Participant observation is when the observer remains uninvolved with the activities of those being observed, taking on a passive role (Kumar, 2011).

One of the major limitations of observation is the resultant Hawthorne effect, where those being observed behave differently because of the presence of the observer. The observer may ascribe increased importance to behaviour that is atypical, leading to a distorted understanding of the event by the observer (Sharman, et al., 2007). Analogously, the interpretation of events from one observer to another can be very different, raising the issue of consistency (Kumar, 2011).

Narrative recording of observation usually involves taking brief notes while observing, then adding detail soon after or writing detailed notes as quickly as possible immediately following an observation (Lofland & Lofland, 1971). If detailed notes are taken while observing, it is likely key events or interactions may be missed. However, it is less likely that the observer will forget important details when writing their notes directly after observation. Narrative recording can allow for deep insight into the incidents observed. Notes taken should include enough detail such that, when referred to in the future, they elicit a vivid memory of events.

Gagne's model of instruction which is based on engaging pupils' learning processes can be used as a tool when observing lessons. Gagne identifies nine "instructional events" (Gagne, 1985, p. 224) that should be repeated during the learning process. Any instructional events that the observer identifies during the lesson's activities are noted and reflected upon. However, inexperienced observers may struggle to adequately identify instructional events (Krull, et al., 2010).

A case study is characterized as a particular event that encapsulates a broader concept (Nisbet & Watt in Bell et al, 1984). The view is taken that a critical incident is a form of case study. Case studies are frequently used to demonstrate abstract concepts in a practical context and tend to be more analytical than statistical. Case studies are of highly useful in situations where the researcher has little control over events (Hitchcock & Hughes, 1995), such as a non-participant observer in a classroom. Another strength of case study lies in the accessibility of results to a wide range of readers (Adelman et al. in Simons, 1980, Nisbet & Watt in Bell et al, 1984).

(Smith, 1991) posits that case study is the weakest tool for the analysis of individual events. According to (Dyer, 1995) the issue with case studies arises from the combination of the analysis of the event and theorizing that cannot be easily separated by the reader. This notion is supported by (Nisbet & Watt in Bell et al, 1984) who suggest case studies may be difficult to generalize such that readers can clearly see their broader application.

Non-Participant observation was determined to be the most appropriate in the classroom setting to identify a critical incident. (Cohen, et al., 2007, p. 257) state that during observation "infrequent, unrepresentative but critical incidents occur." that when analysed, are key to observer understanding. Narrative recording of the observation was utilized via field note sheets adapted from (Fletcher-Wood, 2016) seen in Appendix A.

The following critical incident occurred during an observation of a year 8, top set mathematics class at School X which consisted of 35 pupils. The lesson was focused upon fractions and fractional operations, of which pupils had prior knowledge. The pupil who is the focus of the critical incident has been identified as more able and talented (MAT) pupil by the class teacher. During the starter task the pupil presented their approach to answering a question that involved converting fractions to decimals. The teacher praised the pupil and explained that while this method was correct, for this lesson she would prefer that the class gave all their answers in fractions. The teacher went on to explain that it was necessary to

work in fractions to be able to answer the extension questions and that this pupil would definitely get onto the extension. The incident is reflected upon further in Appendix G.

An element of the critical incident can be directly linked to the (Donaldson, 2015, p. 29) first curriculum purpose that all pupils will be “ambitious, capable learners”. This purpose highlights the desire for pupils to be aspirational learners who enjoy challenge and are able to apply prior knowledge in a range of situations. The teacher setting the expectation that the pupil would reach the extension task is modelling to the pupil how to set expectations and to hold themselves to high standards. In doing so the teacher is applying the second pedagogical principle of good teaching and learning outlined by Donaldson that pupils are challenged to “recognise the importance of sustained effort in meeting expectations that are high but achievable” (Donaldson, 2015, p. 64) in an informal way. As the exchange between teacher and pupil occurred in front of the rest of the class, other pupils may have benefitted from this modelling of high expectations. The teacher stating that she knew a certain pupil would reach the extension task may have activated the competitive nature of other pupils in the class who would then strive harder to reach the extension.

The pupil was able to apply their prior knowledge of decimals and fractions to construct a method for solving the starter problem in a creative way. Donaldson’s second purpose states that all learners will be “creative contributors” (Donaldson, 2015, p. 29), the pupil contributed to the class a creative, effective way of answering the question by utilising decimal equivalence. The pupil being comfortable sharing their method with the class would ideally encourage other pupils to do so too.

Donaldson’s fourth principle focuses on learners as “healthy, confident individuals” (Donaldson, 2015, p. 29), this includes emotional well-being that is strengthened by confidence building. The teacher was likely conscious of not undermining the pupil’s confidence and so praised the pupil for using a correct mathematical method before explaining why a different method needed to be used for that specific lesson. Instead of being reassured by this praise however, the pupil may have felt an increased pressure to achieve or possibly embarrassed by being singled out in front of their peers. Highlighting a pupil’s higher ability may have impacted other pupils in the class, who perhaps lack self-esteem or underestimate their ability, to make unhelpful comparisons between themselves and other learners.

Carol Dweck conducted a seminal study on the effect of praise on pupils. A sample of pupils were all given a set of easy puzzles to do. Upon successfully completing the puzzles one group was praised for their intelligence and the other group praised for their effort. When given the choice of a second, harder set of puzzles to do that would help them improve or another easy test 90% of those praised for effort chose the harder test while the majority of those praised for intelligence chose the easy test (Dweck, 1999). Placing significance on the effort a pupil expends gives them power over the outcome whereas placing emphasis on intelligence makes pupils feel powerless when they face setbacks. When pupils are praised for their intelligence, effort is seen as less socially accepted by pupils that feel that if they have to expend effort they're not as smart as they were led to believe (Bronson & Merryman, 2009; Barton, 2018).

However, praising effort has also been questioned. A conflict with Dweck's previous findings concerning effort has been highlighted first by John Hattie then by David Didau. The effects of praising a pupil as a whole person versus praising their effort were found to have zero or negative effects on pupil attainment (Dweck & Kamins, 1999). Dweck's later work on growth mindset described how the results of her study had led to the misconception that pupils should only be praised for their efforts. Dweck in fact advocates praising pupil's process, persistence and the methods they employ (Dweck, 2017). Similarly, (Willingham, 2005-2006) suggests praising pupil's process and work product.

The Behaviourist theory of learning defines learning as a change in behaviour due to conditioning. (Skinner, 1948) developed operant conditioning through which learners make a connection between a behaviour and a consequence. Operant conditioning utilizes praise as a "reinforcer" to garner the desired effect. (Kohn, 2012) argues that when praise is used as a reinforcer it devalues the learning as pupil's motivation becomes extrinsic. When praise is not forthcoming pupils' motivation is then diminished. (Holt, 1982, p. 113) argues that "the idea that children won't learn without outside rewards... usually becomes a self-fulfilling prophecy." suggesting that educators do not have enough faith in pupils to be self-motivated learners.

Particularly in the field of mathematics using extrinsic incentives such as praise is generally inferior to encouraging the development of pupils on intrinsic motivation and enjoyment of the subject (Middleton & Spanias, 1999). Praise is also not deemed to be motivating as (Tanner & Jones, 2000) state that pupils who received praise as feedback credit their

achievement to their mathematical ability and do not achieved any higher on following tasks than pupils who receive no praise.

The use of praise in general has been criticized. (Kohn, 2012) characterizes praise as “patronizing, manipulative and an abusive of power”. Children analyse praise in the same way as adults, looking for ulterior motives. Only children below the age of seven see all praise as sincere (Bronson & Merryman, 2009). Pupils of age twelve and above interpret teacher praise as signifying a lack of ability and that they require increased supported (Meyer, et al., 2004). Teenagers reject praise completely and view criticism as the true reflection of a teacher’s belief in their abilities. (Kohn, 2012) suggestion that pupils infer low expectations from praise of their efforts is in line with Meyer’s findings. Furthermore, (Willingham, 2005-2006) posits that teacher praise signals to a pupil that their natural ability cannot be stretched any further whereas criticisms indicate there is room to improve.

Insincere and excessive praise can have negative impacts upon learners. Once pupils have deemed praise to be baseless, they discount both insincere and sincere praise (Bronson & Merryman, 2009). Pupils ability to assess their own performance may then be hindered if the majority of feedback they receive is in the form of praise that they discredit. A review by (Henderlong & Lepper, 2002) found that over praised children become risk-averse and display underdeveloped independent learning abilities, pupils are dependent on the teacher for both direction and social cues.

There are several suggestions concerning the best use of praise in the classroom. Praise must be specific and purposeful to be beneficial to the learner, pupils are more likely to assign merit to succinct praise than broad generalities such as “well done” and “good job” (Barton, 2018; Bronson & Merryman, 2009; Didau, 2015; Kohn, 2012). (Barton, 2018) stresses that praise should be expeditious, as much of the associated informational value is lost if too much time elapses between the task and the praise. Barton also suggests that pupils should not be able to anticipate praise, as pupils discredit routine praise. (Didau, 2015) recommends that praise should not be divisive, while healthy competition in the classroom can be beneficial, praise that identifies one pupil as better than the others for example, can have unintended negative consequences.

In Wales, More Able and Talented (MAT) is a term used “to describe learners who require opportunities for enrichment and extension that go beyond those provided for the general cohort of learners.” (Estyn , 2017, p. 2). A Welsh Government review of MAT provision found

that schools consider pupils who achieve “above the expected outcomes for their age or stage of learning in one or more curriculum area.” (Welsh Government, 2015, p. 8) to be MAT learners. The identification of MAT pupils varies by school, with most schools using some combination of formative assessment, summative assessment at transition points, testing and subject specific guidelines. Identifying MAT pupils is highly related to the school and wider community context, a pupil identified as MAT by one school may not be considered as such by another school (Estyn, 2017). The percentage of pupils identified as MAT differs from school to school but is usually around 20% (Welsh Government, 2015).

When teachers identify MAT pupils, they are likely to use subject specific guidelines to make qualitative judgements (Welsh Government, 2015). Teacher identification of MAT pupils may not be the most reliable method however as there is evidence to suggest that teachers are less likely to identify pupils from economically disadvantaged backgrounds as MAT due to unconscious bias (Montacute, 2018). While identifying MAT abilities may be a possible issue for teachers, once identified, teachers feel equipped to support these learners in their classrooms. Of the schools involved in the Welsh Government review, 91% described their practitioners as being “confident in their ability to support MAT learners.” and 80% of schools described their practitioners as “confident in their ability to challenge MAT learners.” (Welsh Government, 2015, p. 19).

Provision for MAT pupils also differs by school, but most describe differentiation, difficult questions and extension tasks as the central tenets of their MAT strategy (Welsh Government, 2015; Montacute, 2018; Chambers & Timlin, 2013; Hertberg-Davis, 2009). Differentiation is defined by (VanTassel-Baska, 2012) as a method of adapting teaching to each individual learner’s particular needs and learning style. The current practice of differentiation stems from Vygotsky’s intervention theory (1978) which advocates a focus on individual learners attainment outcomes as opposed to a strict adherence to the curriculum (Daniels & Hedegaard, 2011).

Differentiation can be classified into two categories; differentiation by outcome where all pupils complete the same task but garner solutions of a variety of difficulty and differentiation by task where pupils are given different tasks to do based on their individual needs (Chambers & Timlin, 2013). Differentiation can also consist of teaching MAT pupils the syllabus at a faster pace, following more detailed resources, asking pupils to exhibit deeper reasoning skills and articulate complex thought processes as a differentiated outcome (Montacute, 2018).

Extension tasks are a highly utilised form of differentiation by task provided for MAT pupils who complete the main activity. Extension tasks have been criticised for the lack of challenge they often pose MAT pupils when teachers use them as a form of busy work. For an extension task to be beneficial it must challenge and develop pupils' abilities further (Montacute, 2018; Chambers & Timlin, 2013; Hertberg-Davis, 2009). An issue specific to mathematics that is posed by extension tasks is that pupils begin to see mathematical ability as fixed if they never manage to reach the extension task. Overuse of extension tasks may also serve to demotivate pupils who feel that the reward for their hard work is simply being given more work to do. The element of fairness is also questioned by MAT pupils who feel overworked (Chambers & Timlin, 2013).

The range of differentiation approaches, along with the experience and expertise of the teachers that implement the approaches are said to contribute to inequality of educational experience (Terwel, 2005). A deficit of understanding and misconceptions surrounding differentiation cause issues within day to day practice for teachers who struggle to integrate learning for all pupils (West & West, 2016; Weber, et al., 2013). Issues arise when attempting to evaluate the effectiveness of differentiation on pupil attainment as there are too many interconnected factors to disentangle to quantify the impact of differentiation alone (Haelermans, et al., 2015).

When utilised effectively differentiation can improve intrinsic learner motivation, lead to greater academic attainment and increased collaboration between pupils (McNamara & Moreton, 1997; Hertberg-Davis, 2009). The benefit to MAT pupils can be substantial as it can allow individuals within a class to learn at their own pace and promote independent learning (Hertberg-Davis, 2009; Wu, 2013).

Pupils who are identified by their schools as MAT learners are made aware of the term and their identification as such in various ways. As part of the Welsh Government review many pupils disclosed that at school their public identification as MAT pupils "was not necessarily a positive experience as they wanted to avoid being perceived as being different by their peers." (Welsh Government, 2015, p. 12). (Csikszentmihalyi, et al., 1997) identify the importance of MAT pupils being part of a social group and feeling connected to their same age peers. For MAT provision to be successful the emotional well-being of pupils must be deemed as high a priority as attainment (Eyre & Lowe, 2012).

While limited in scope, the topics briefly explored in the literature review have revealed some possible areas to develop and incorporate into my own future practice. An element of the critical incident that was successful in practice and supported by the literature was the use of specific and sincere praise by the teacher of the pupil's use of a correct mathematical method. The evidence also suggests that praise may not be necessary in instances similar to this incident as pupils value criticism more than praise in terms of motivation and teacher belief in their abilities.

How to best utilize differentiation in the classroom in general and for MAT pupils specifically was also explored. Employing a range of differentiation approaches appear to be most effective so that learners do not lose interest or motivation through tasks becoming routine. When giving extension tasks to MAT pupils, ensuring that they know the extra work that they do is valued and following up with them on the task will be a priority in my future practice (Chambers & Timlin, 2013).

The ideas developed to incorporate into future practice were reached through critical reflection. Critical reflection prioritizes the difficulties met within the professional setting and is a component of reflective practice (Government, 2015). (Brookfield, 1995) posits that the focus on power dimensions in the classroom is what gives a reflection its criticality whereas (Mezirow, 1991) argues that criticality stems from questioning foundational assumptions. The main criticism of critical reflection is that it has come to lack criticality as practitioners simply go through the motions (Ixer, 1999). The consensus however, is that critical reflection allows practitioners to focus on why they make certain decisions in the classroom and how questioning these assumptions can improve their practice (Brookfield, 1998).

There are several reflection models that can be used to structure practitioners' reflections. As learning is an ever-evolving process many models are cyclical in structure. One of the simplest models was developed by (Borton, 1970) and consists of three key questions. Question one asks the practitioner to describe an incident they wish to reflect on. Question two asks the practitioner to learn from the incident by constructing their own personal reasoning and ideas surrounding the incident. Question three asks the practitioner how they could develop their practice surrounding the incident to improve their teaching.

(Gibbs, 1988) is a model that includes six categories to elaborate on as a means of structuring the reflection. The practitioner

1. Describes the incident

2. Describes the feelings the incident provoked
3. Evaluates the successes and failures surrounding the incident
4. Analyses the incident
5. Makes conclusions based on their reflections
6. Plans what can be done differently in the future
- 7.

The Assisted Reflective Conclusions (ARC) model used to reflect upon the observed critical incidents seen in Appendices ?? is very similar to Gibb's model but combines the evaluate and analyze and conclusion and future plans categories. A criticism leveled at these models is that they do not account for the learner's perspective of events or other relevant parties that may be able to contribute to the reflective process (Government, 2015).

In my future teaching practice, I will utilize a variety of reflection tools, including a reflective learning journal, observation and feedback from a mentor teacher and professional discussions with a mentor teacher and mentor lead. I aim to make reflective practice an integral part of my professional identity and outlook in order to develop my professional judgement.

The approach taken to explore the critical incident is directly connected to the Professional Standards for Teaching and Leadership which state "The teacher consistently extends knowledge, skills and understanding and can show how reflection and openness to challenge and support informs professional learning to progressively develop pedagogy." (Government, 2019). Reflecting upon a critical incident is an element of reflective practice that practitioners in Wales employ to consistently question typical events that occur in the classroom and identify areas that may require improvement.

In conclusion, based on an observed critical incident and upon reflection of the incident, two areas of investigation opened up. The role of praise in the classroom was explored with the salient points that will inform my future practice being that praise should be as specific, sincere and immediate as possible. Another key finding that will inform my practice is to extent to which teenagers in particular value criticism as opposed to praise.

The research into MAT provision and differentiation also has important implications. In terms of differentiating lessons to ensure MAT pupils are challenged and extended, a variety of approaches should be employed. When extension work is utilized it should be of clear

benefit to the learner and an effort made to make it as accessible as possible to all pupils in the class.

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Appendices

Appendix A

OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016))

Date: 26/09/2019
Lesson details: • Year 8 middle set Computing lesson. • Pupils' second lesson of the day returning from break. • There were 25 pupils in the class, appeared to have a seating plan. • Teaching Assistant in the class
Classroom culture (Are the students focused on learning?) • Pupils are allowed to talk to each other while completing tasks. • Pupil J is consistently off task, disrupting the back row of pupils. • Pupils discussed key terms together and helped each other with computer specific issues.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) • Starter task - pupils looked at a website on a tree octopus and answered questions in their books for 5 minutes on said creature using only the specified website. Teacher took answers from pupils on the questions completed then asked for a show of hands of how many pupils thought the website was a reliable source of information. Most pupils raised their hands. Teacher then revealed that the website was fake and there was no such creature as a tree octopus. • Learning objectives were introduced. The focus of the lesson was the reliability of online information, fake news and bias. The starter engaged pupils in considering these objectives. • Definitions of reliability, fake news and bias were discussed by pupils, then confirmed by teacher and copied into exercise books • Pupils were asked to look up a list of computing related acronyms it appears that this was intended to illustrate the volume of information available to them online and how to assess which information is relevant and correct for their purposes • Pupils were taught how to refine search results using google search • Pupils were asked to write the procedure of refining search results in their own words in their exercise books
Direction (Are the students clear about what they are doing and how to do it well?) • Several pupils began to search for terms on the computer before the teacher had finished giving instructions

- Pupils were asked to perform a specific google search and then refine it. This was first modelled by the teacher on the white board and the result they should obtain was left on the screen for pupils to see if they had done the search correctly. - Many pupils seemed to struggle with writing the search procedures they had just successfully performed into words in their books. Some pupils asked for help but most continued to use their computers or talked amongst themselves
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) - All students have access to computers and their exercise books to record answers in. - Some pupils completed the tasks very quickly and perhaps were not sufficiently challenged by the work.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? - Teacher asked for answers to starter questions, pupils shouted out answers, sometimes one pupil, sometimes several together. Teacher asked for a show of hands of pupil opinion on a specific question. - Individual pupils asked for their definitions of reliability and bias. - Teacher engaged in a discussion with pupils about online sources of information and how current political events may have been influenced by misinformation. - Homework was given related to the objectives of the lesson to consolidate learning.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? - Teacher used the countdown technique 5,4,3,2,1 on 6 separate occasions to control the noise level in the classroom and gain the pupils attention before giving instructions. Teacher used this technique while positioned in the front of the class only. - Teacher and TA had a conversation off to the side while pupils were on task about moving Pupil J because he was disrupting the back row of pupils. Whilst this conversation occurred several pupils had their hands up for help and called out to the teacher. Pupils waited around a minute for the teachers help.

Appendix B

OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016))

Date: 29/09/2019
Lesson details: • Year 8 top set Mathematics lesson. • 35 pupils in the class. • Third lesson of the day.
Classroom culture (Are the students focused on learning?) • Most pupils appeared focused on the task and could be heard discussing the work and how they wanted to structure it. • Strategies being used or rejected by the pupils in their pairs could be seen on the scribble sheets they were writing on before copying the final agreed upon answer into their books. • Pupils who were struggling went up to look at the hint sheet that the teacher had placed at the front of the class and instructed them to use if struggling. • Teacher went around class aiding pupils who asked for help, most pupils were checking that they were on the right track with their strategy or that their answers were correct.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) • Starter task was used to activate and assess prior knowledge necessary for the lesson. Teacher went through specific terminology in the starter question and explained the methods needed to complete the question. • Purpose of the lesson was to apply numeracy and literacy skills while developing problem solving skills. • The mathematical content of the lesson was focused on Fractions and fractional operations. • The main activity was focused upon picking out key information, collating it into a more useful form and then using prior mathematical knowledge to answer a question.
Direction (Are the students clear about what they are doing and how to do it well?) • Teacher gave clear instructions on how to perform the task. The teacher reassured the class that they would be able to complete the task as it was in a format unfamiliar to them. The teacher provided scaffolding in the form of a hint sheet for those struggling. • Teacher asked pupils for any questions they had before letting them begin the task. Mainly questions such as do we stick the sheets in our books, do we write on the sheet etc. • Pupils expected to use mathematical terminology accurately in spoken and written work.
Access and challenge

(Are all students able to engage in the lesson? Are all students challenged?)

- Pupils worked in pairs on the same activity.
- Pupils who were struggling with how to structure their work were given access to a hint sheet that gave a model answer structure.
- The main task that all pupils were to complete was set at the same time as a challenge question and super challenge question for the MAT pupils.

Assessment

How does the teacher assess student understanding before, during and after the lesson?
How is this used in their teaching?

- Starter task used to assess prior knowledge on fractions.
- Questions to individual students.
- Teacher went around the class checking pupil progress with task.
- As a plenary the Teacher asked open questions about the Mathematics and skills used in the lesson. Pupils identifying that they were problem solving.

Specifics / Critical Incidents

Are there particular telling moments and examples which it would be helpful to discuss?

- A pupil explained their approach to answering a question that involved converting fractions to decimals. The teacher explained to the pupil that while this method was correct for this lesson she would prefer that the class gave all their answers in fractions. The teacher went on to explain that it was necessary to work in fractions to be able to answer the extension questions and that this pupil would definitely get onto the extension.
- Teacher called on pupils by name to answer questions, stated that she was asking pupils who appeared not to be paying attention.
- About halfway through the lesson the Teacher explained a common misconception that many pupils in the class had made. Information is given that "Sian is the only person that eats the margarita pizza." And "There is $\frac{2}{3}$ of the Margarita pizza left." The teacher explained that many pupils had inferred from the information that Sian had eaten $\frac{2}{3}$ when in fact she had only eaten $\frac{1}{3}$. Several pupils then realised they had made this misconception and corrected their work.

Appendix C

OBSERVATION / FIELD NOTES

(Questions adapted from Fletcher Wood (2016))

Date: 29/09/2019

Lesson details: • Year 8 bottom set Spanish class. • 22 pupils in the class. • After lunch, fourth lesson of the day.
Classroom culture (Are the students focused on learning?) • Many pupils appeared to be participating mainly to receive positive achievement points and kept asking the teacher how many points they were going to achieve. • Pupils at the back of the class were particularly unengaged and spent much of the lesson throwing a protractor back and forth to each other. • There was quite a bit of low-level chatting that did not appear to be about the work. • One pupil sat looking out of the window for extended periods of time.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) • Learning objective was to be able to talk about what we ate and drank at break time [in Spanish]. • Pronunciation activities allowed pupils to practice speaking and repeat the new vocabulary they were learning. • Speaking activities were focused on using new vocabulary. • Written tasks were a means of recording new vocabulary for pupils to refer back to in the future.
Direction (Are the students clear about what they are doing and how to do it well?) • Teacher pronounces words and pupils repeat after her. Teacher corrects pupils whose pronunciation is wrong, praises whole class for participating well. • For written tasks teacher models how she would like work presented in the pupils' exercise books.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) • Whole class repeated new words after teacher pronounced them first. • Teacher provided scaffolding in the form of sentence structures displayed on board for pupils to use when struggling with speaking task. • Teacher let pupils attempt to say words before correcting them and having them repeat the corrected sentence.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? • Teacher asked pupils to work in pairs, asking and answering questions in Spanish. Teacher circulated the class, listening to each pair. Teacher then asked several pairs to demonstrate their question and answers to the whole class.

- Teacher introduced new vocabulary at the beginning of the lesson, after practicing pronunciation and writing down new vocabulary, pupils played a game. There were pictures of certain foods and drinks on the board, one would disappear, and the pupils had to say what had disappeared in Spanish. This allowed to teacher to assess pronunciation and consolidate learning of the vocabulary.

Specifics / Critical Incidents

Are there particular telling moments and examples which it would be helpful to discuss?

- Teacher warned two pupils that they would be separated next lesson because they were “constantly talking”.
- Teacher made a point to praise pupils she had earlier reprimanded for being off task when they participated well or answered a question correctly. Example - a pupil the teacher had to wait for to stop talking before continuing with an activity later pronounced a word well while giving an answer and was praised
- Two pupils arrived late to the lesson and were given negative points for being late. These points are part of the school behaviour management policy. One pupil complained that it wasn't fair to have a negative as she'd had to walk from the other side of the school to the classroom. This pupil was then very focused on receiving positive points throughout the lesson to counteract this negative. The pupil received 6 positives at the end of the lesson.
- Teacher allowed pupils to shout out answers for the first 20 minutes of lesson. Then the teacher asked for hands up only, telling the class “hands up, you know how much I hate shouting out.” Pupils then followed this rule, for the most part, for the remainder of the lesson.

Appendix D**OBSERVATION / FIELD NOTES**

(Questions adapted from Fletcher Wood (2016))

Date: 02/10/2019

Lesson details:

- Year 8 unset Science class.
- 23 pupils in the class.
- Second lesson of the day after break.
- Teaching Assistant in the class.

Classroom culture

(Are the students focused on learning?)

- The majority of pupils worked well within their groups and under the time limit imposed.

• Pupils put their hands up to give answers and answered questions when called on by name • One pupil was particularly disengaged and disruptive, but the teacher dealt with it well. Pupils outside of the individuals' group did not appear to be distracted by the individual.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) • Word jumble as a starter - pupils had to work out keywords from a list of words with mixed up letters. There was one word that none of the pupils could work out, deficiencies, which was the topic of the lesson. • Teacher told the class the aim of the lesson was to know something about five deficiencies and their causes. • Main task - each pupil was given a blank table to fill in and a placemat of information on one deficiency per group, to use to complete the table. After three minutes to write down as much information as possible, the placemats were swapped with a neighbouring table. • Game of hangman to end the lesson using science keywords that pupils had learned during this scheme of work.
Direction (Are the students clear about what they are doing and how to do it well?) • Pupils were given a sheet of paper by the teacher to complete the starter task on as they entered the classroom. The word jumble was displayed on the whiteboard. Pupils were told to unscramble as many words as possible. • During the main task a timer was displayed on the board so that pupils could manage their time when filling in the table. • Pupils were told to pass their placemats clockwise around the class.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) • Pupils worked together as a group but filled in their own individual tables. Pupils who were struggling tended to be helped by their peers as opposed to asking for teacher help. • The task did not appear to be differentiated and any scaffolding was provided verbally by the teacher. • There was no extension task given as no pupils completed the task ahead of the time limit set.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? • After introducing the aim of the lesson, the teacher asked the class for a definition of deficiency and examples of any deficiencies they knew of. • Teacher went through the table by deficiency, taking answers from pupils about what they wrote for the causes and symptoms of the deficiency.

- Pupils glued the complete tables into their books for the teacher to check at a later date.
- At the end of the lesson the Teacher asked pupils for a show of hands, who now knows something about five deficiencies.

Specifics / Critical Incidents

Are there particular telling moments and examples which it would be helpful to discuss?

- During transitions in the lesson the teacher asked for helpers to give out worksheets, placemats, exercise books and glue sticks. The same two pupils put their hands up to volunteer each time the teacher asked the class for a helper.
- Teacher used the countdown technique 3,2,1 to gain pupils attention throughout the lesson. The countdown became less effective as the lesson went on and three groups that were still talking after the countdown had to be reprimanded.
- Teacher told the class the aim of the lesson was to know something about five deficiencies and their causes. At the end of the lesson the Teacher asked pupils for a show of hands, who now knows something about five deficiencies. Most of the class raised their hands.

Appendix E

Assisted Reflective Conclusions (ARC) Model

Date: 26/09/2019

Critical incident (focus): Classroom management

<i>Experience</i>	
Feelings <i>"What are your feelings regarding the experience?"</i>	I feel that this kind of classroom management technique may have unintended consequences for pupils in the future. By conditioning pupils to be quiet after the count of 5, they may later lack the ability to read social cues as to when to be quiet naturally without such a prompt. I feel that this kind of conditioning also contributes to the artificial environment that many consider classrooms to be, as countdowns are rarely used outside of the classroom in pupils' everyday life.
Remember and Understand <i>"Can you list the aspects of the learning experience that went well?"</i> <i>"What were the elements of the learning experience that were disappointing?"</i>	When the teacher required the attention of the class, he counted down from five to one and asked for all pupils to look at and listen to him. Only when the class was quiet and looking at him did he proceed with an explanation, question or instruction. The teacher used the countdown technique before doing the register, to transition between the four activities of the lesson, and before assigning the class homework at the end of the lesson. The technique was effective, as on all six occasions the countdown was utilized, the pupils stopped talking and looked to the teacher for further instructions.

Evaluate and analyse <i>"What will you keep the same to ensure effective teaching and learning in the future?"</i> <i>"What was the cause of the most important disappointing element?"</i>	The efficacy of the technique is also what is concerning about it. An over reliance on this technique may lead to future difficulties if the pupils stop responding positively to it or if the pupils were to mimic it back to the teacher. Conditioning pupils to respond to a countdown is in some ways counterproductive to their development as autonomous learners and critical thinkers. A healthy skepticism of authority is deemed necessary to be a responsible citizen, yet pupils are conditioned to unquestioningly obey their teacher's authority. Whilst it is important to be able to control the noise level of the classroom and gain pupils' attention, does this supersede the teacher's commitment to a learner's holistic development?
Conclusions and actions <i>"What are your possible solutions to the disappointing issues identified?"</i> <i>"What will you do next?"</i>	It may be better to only use the countdown once or twice a lesson so that pupils do not become too desensitized to it. The teacher may want to intersperse other techniques to gain the pupils attention so that the countdown does not lose effectiveness. A teacher who finds this technique successful however, may wish to use it as frequently as they find necessary in their lessons.
Transformed experience	

Appendix F

Assisted Reflective Conclusions (ARC) Model

Date: 26/09/2019

Critical incident (focus): Questioning

- Teacher called on pupils by name to answer questions, stated that she was asking pupils who appeared not to be paying attention.

<i>Experience</i>	
Feelings <i>"What are your feelings regarding the experience?"</i>	I feel that this is an important tool to ensure all pupils are engaged in the lesson and to check understanding. I feel like this form of questioning highlights the importance of every pupil in the class participating in the learning. I also feel that targeting pupils that appear to not be paying attention may cause some pupils to feel anxious that they will be called on. This may discourage pupils from asking questions to sure up understanding that they otherwise might have asked as they feel the classroom is an uncomfortable environment or fear ridicule from peers.
Remember and Understand	The questions that the teacher asked to individual pupils were short, closed questions. The questions appeared to be designed so that the pupils built upon a previous answer to build up a strategy to answer the starter question, essentially

<i>"Can you list the aspects of the learning experience that went well?"</i> <i>"What were the elements of the learning experience that were disappointing?"</i>	the Socratic method of questioning. The pupils all attempted to answer the question posed to them and most used mathematical terminology accurately in their answers. Explicitly telling the class that the pupils who would be asked a question were the ones that appeared disengaged may create an uncomfortable classroom climate for some pupils. It also signals to the pupils paying attention that their engagement is valued.
Evaluate and analyse <i>"What will you keep the same to ensure effective teaching and learning in the future?"</i> <i>"What was the cause of the most important disappointing element?"</i>	Questioning pupils by name should be utilized to check pupil understanding and encourage participation. As long as pupils are given enough thinking time when called upon to answer and do not feel unfairly targeted this method of questioning is very useful. Telling the class that pupils who appeared not to be paying attention will be called upon is a means of gaining those pupils attention and places scrutiny on those pupils by their peers. It may also have the unintended consequence of causing pupils who actively participate to disengage as they know they will not be called on.
Conclusions and actions <i>"What are your possible solutions to the disappointing issues identified?"</i> <i>"What will you do next?"</i>	In future it may be more effective to simply call upon the pupils who appear not to be paying attention without making it explicit to the class.
<i>Transformed experience</i>	

Appendix G

Assisted Reflective Conclusions (ARC) Model

Date: 26/09/2019

Critical incident (focus): MAT pupils

- A pupil presented their approach to answering a question that involved converting fractions to decimals. The teacher praised the pupil and explained that while this method was correct, for this lesson she would prefer that the class gave all their answers in fractions. The teacher went on to explain that it was necessary to work in fractions to be able to answer the extension questions and that this pupil would definitely get onto the extension.

<i>Experience</i>	
Feelings <i>"What are your feelings regarding the experience?"</i>	I feel that praising the pupil who explained their method might encourage creative thinking and the sharing of ideas. I also feel that it was important to emphasize to

	the pupil that their mathematical knowledge was sound. Perhaps singling out a pupil to praise and challenge them to reach the extension task may have made that pupil feel apprehensive and under pressure to perform well.
Remember and Understand <i>"Can you list the aspects of the learning experience that went well?"</i> <i>"What were the elements of the learning experience that were disappointing?"</i>	The extension task was explained along with the main task. Pupils were able to access the extension task if they completed the main task as the teacher ensured they were using the correct mathematical method to do so. The teacher was careful to explain why she wanted a certain method to be used in such a way as to not undermine the pupil's confidence. The teacher encouraged the pupil to work hard by setting the expectation that the pupil would reach the extension task.
Evaluate and analyse <i>"What will you keep the same to ensure effective teaching and learning in the future?"</i> <i>"What was the cause of the most important disappointing element?"</i>	Ensuring that all pupils can access the extension work and are encouraged to do so is essential. Although the MAT pupils are usually the same pupils each lesson, particularly in mathematics, pupils who are not usually MAT pupils can excel in a particular topic or subject area and need to be challenged further. The teacher reminding the pupil that she expected they would reach the extension task in front of the rest of the class may have ignited the competitive nature of other pupils who then wanted to be seen to reach the extension task too. The positive way in which the teacher framed reaching the extension task may have impacted other pupil's perceptions about the task, engendered positive feelings towards the task and their desire reach it. Alternatively, the teacher highlighting a pupil's MAT abilities in front of the rest of the class may have discouraged some pupils who lack self-belief or underestimate their own abilities if they make comparisons between themselves and the pupil highlighted. It may also dishearten pupils who do not reach the extension task, making them feel that their effort is not enough. Singling out an individual pupil for praise in front of their classmates may also make that pupil feel increased pressure to achieve and have an unintended detrimental effect on that pupil.
Conclusions and actions <i>"What are your possible solutions to the disappointing issues identified?"</i> <i>"What will you do next?"</i>	A whole class explanation of why it is important to use a certain method could be followed up with one to one praise to the individual pupil who raised the issue. Whilst pupils are clearly aware that there will be MAT pupils in their class, it may be best not to highlight who those children are and talk about extension work with them individually when the need arises. There should be a balance of setting high expectations without placing undue pressure or scrutiny on individuals.
<i>Transformed experience</i>	

Appendix H

Assisted Reflective Conclusions (ARC) Model

Date: 02/10/2019**Critical incident (focus):** Lesson objectives

- Teacher told the class the aim of the lesson was to know something about five deficiencies and their causes. At the end of the lesson the Teacher asked pupils for a show of hands, who now knows something about five deficiencies. Most of the class raised their hands.

<i>Experience</i>	
Feelings <i>"What are your feelings regarding the experience?"</i>	I feel that the pupils were all clear about what the aim of the lesson was after the objective was introduced. I liked how clear and concise the objective was, especially that it was devoid of jargon. I feel that checking that the objectives have been met at the end of the lesson refocus' the pupils on the aim of the lesson and maybe prompts them to consider what they have learned or think about their own learning process.
Remember and Understand <i>"Can you list the aspects of the learning experience that went well?"</i> <i>"What were the elements of the learning experience that were disappointing?"</i>	After the starter that introduced the key word for the lesson the teacher explained the lesson objective. A definition of the key word was given and how the activity in the lesson would allow pupils to meet the learning objective was explained. The language used was simple and easy for the pupils to understand. At the end of the lesson, the teacher restated the lesson objective and asked the class to raise their hands if they had met the objective. The teacher posed a closed question to the pupils such that they either put their hands up to say they now knew something about five deficiencies or did not put their hands up. This kind of questions misses out the pupils that feel that they know something about one, two, three or four deficiencies but not five. Some pupils who did not put their hands up likely learned a lot about deficiencies during the lesson but didn't feel they had exactly met the objective.
Evaluate and analyse <i>"What will you keep the same to ensure effective teaching and learning in the future?"</i> <i>"What was the cause of the most important disappointing element?"</i>	Lesson objectives should remain clear, concise and jargon free so that pupils understand what is expected of them in the lesson and what they should learn. Setting the focus of the lesson in this way allows the teacher to introduce key terms and refer back to objective when pupils go off task. The type of question the teacher posed to class to ascertain who felt they had met the lesson objectives is what may lead to a misconception on the teacher's part. The misconception that pupils had either met the objective or had not, may be created as the question left no room for middle ground.
Conclusions and actions <i>"What are your possible solutions to the disappointing issues identified?"</i> <i>"What will you do next?"</i>	When checking that the pupils have met the lesson objective at the end of the lesson, the teacher might consider using the traffic light system or something similar that allows for middle ground. Green for meeting the objective, orange for somewhat meeting the objective, red for not meeting the objective. It might also be useful to ask pupils why they feel they haven't met the learning objective and perhaps pupils' answers may help to adapt the lesson further in the future. It may also be useful to ask pupils how they feel they've met the objectives to assess their understanding of the objectives and their learning.
<i>Transformed experience</i>	

