

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.

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Introduction

The learning environment is dynamic, challenging and a place with human interaction at its core. Teachers need to be prepared and responsive to this environment in order to provide the best learning experience for the people that they teach, the pupils. Within Wales, education is at pivotal point in its history with the new curriculum reforms based on the recommendations of Successful Futures (Donaldson 2015) report due to be implemented. Whilst this is an exciting time it is also a time of change and to some degree uncertainty, a time that will require schools and teachers to revolutionise the way that education is delivered in Wales in order to meet the needs of the new curriculum.

This paper provides a critical evaluation and the identification of next teaching and learning steps focusing on a case study of an individual learner based on an observed critical incident. Critical incidents in the reflective practice of teaching are identified as an approach of professional development, an approach whereby teachers can learn from the analysis and better the way they teach (Joshi, 2018, p.82). The paper will discuss the observation that took place that identified an event, the analysis of the event which determined its criticality, and the methodology used. The paper will move on to describe the observed event and to link this to the Four Purposes identified in Successful Futures (Donaldson 2015).

The observed event identified two areas of research that are discussed in order to establish a context for the paper and the criticality of the event, finally a reflection of the focus of the incident is discussed with recommended next steps identified.

Observation

In undertaking the observations, guidelines as per the British Educational Research Association (2018) were followed. As such and in line with the requirement for privacy and anonymity, the school in which the observation took place shall only be referred to as the school and the pupil who was the subject of the observation shall only be referred to as the pupil. The observations took place in an English medium mixed comprehensive school of 11 to 18 year olds situated in Cardiff area with circa 1550 pupils on the school roll. In 2018 17% of the school population were eligible for free school meals, approximately 19% were identified as having a special educational need and approximately 5% of pupils were statemented (My Local School 2019).

The school were put in the 'green' support category by Welsh Government under the National School Categorisation System (Wales Online 2019), a system which is based on a detailed assessment and analysis which places schools into a support category. A green rating means that the school requires the least support in the categorisation system (National School Categorisation System Guidance Document 2019). The latest Estyn School Inspection Report (2016) rated the school as adequate, which summarised, means that the strengths identified in the report outweigh the areas noted for improvement (Estyn 2016).

Four official observations were carried (see appendices1-4), this paper will focus one observation only (see appendix 2). The observations of a year 8 mixed ability class were observed during weeks 4 and 5 of the new academic term. The lesson from which the specific observation to which the critical incident relates and is the subject of this paper is that of a year 8 science class, the class was held mid-week and was the second lesson of the school day.

Methodology

Observation, as a research technique, allows for the researcher to gain information which is occurring in real time within a situation which occurs naturally (Cohen et al 2011), in this case a classroom environment. The participation of the researcher within the observation can vary and is often split into that of a participant observer and a non-participant observer. A participant observation method will involve the researcher learning about those that are

the subject of the observation through taking part in the activities (Kawulich 2005). A non-participant observation method involves the research observing in a non-intrusive way and simply observing what is occurring without actually taking part.

A non-participant observation method was chosen as this was deemed to be most appropriate for this observation. Participant observation would have been more challenging as noted by Kawulich (2005) and Cohen et al (2011) who suggest that this type of observation typically requires notes to be made at a later stage after the observation has been concluded. It was important that in undertaking the observation that full and detailed notes could be taken. Other observation methods were considered including using a sociogram, target child and tick chart process, however due to the need to take detailed notes to assist analysis, these methods were deemed inappropriate for this paper.

A semi-structured written observation model, as proposed by Fletcher-Wood (2016), see appendices 1-4, was utilised to record the observation. The model provides a structure for the observation within which a record can be made for each of the observation headings identified, it also allows for the observation categories, via each of the headings, to be identified in advance. According to Acheson & Gall (2003, cited in Myers 2012 p .95), in order to ensure the observation is effective, the observer should have a specific procedure for the observation, the Fletcher-Wood (2016) model allows for this. An alternative method of data collection is offered by Kumar (2014) who suggests that the observer may wish to use a scale, whilst this saves time on taking detailed notes it was not deemed as an appropriate method for this case as it would not provide an opportunity to note the detail required.

Whilst the methodology adopted, being that of a non-participant observes following a semi-structured method and taking a passive, non-intrusive role it is still possible that the observation could have been effected by presence of the observer and that the observation itself could have had some effect on the learners, this is often referred to as the Hawthorn effect. Kumar (2014) also identifies that those who are being observed may change their behaviour, however Kumar (2014) does make clear that this is not always a problem. In relation to the subject matter for this paper, it is suggested the presence of the observer had little or no impact on the lesson being observed and no influence on the critical incident identified due to the nature of the environment to which the observation took place. Pupils within a classroom environment are familiar with being observed by the teacher and other adults who frequent the learning environment.

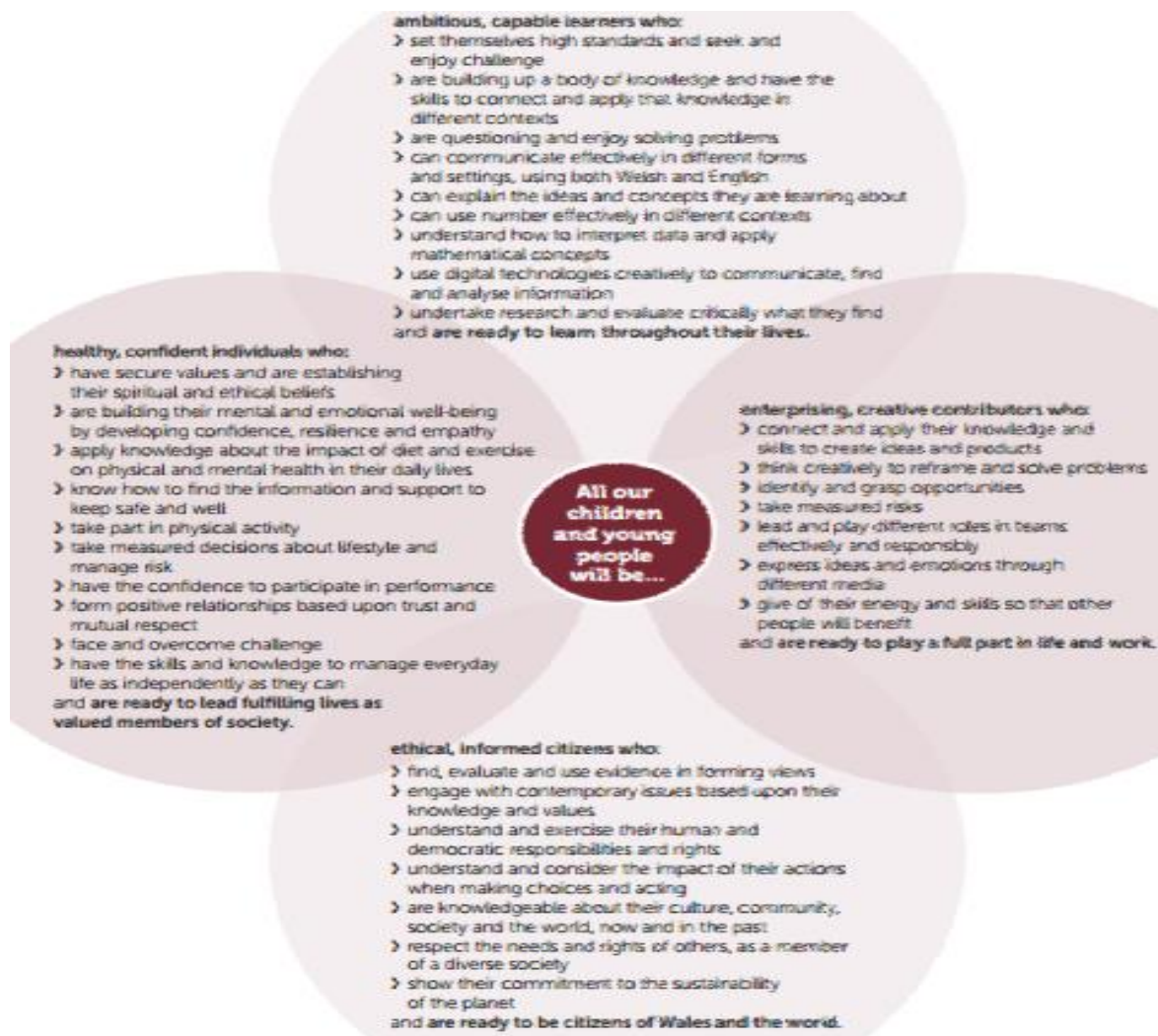
The approach taken allowed for the identification of an incident that may appear typical but could be identified as critical through analysis (Tripp 2012). The case study that is the subject of this paper is based on an observed event. Case study methodology allows for the build-up of a picture of the critical incident (Hamilton 2011). By reviewing the incident from a case study methodology it allowed for an in depth analysis to be made for the criticality in the incident to be identified, this may not have been possible if the incident was only reviewed in isolation without considering the implications that can be drawn from the incident. In order to identify that the incident was critical it is necessary to not just provide a description but discuss what the incident means (Tripp 1993). The use of a case study methodology allows for this.

Whilst it is important to recognise that the incident itself may not have been typical of the pupil (i.e. there may have been other factors affecting their behaviours in that particular lesson) it may also have not been typical of that teacher or of that classroom environment, it does provide a good base at which to carry out a detailed analysis.

Four Purposes

The critical incident identified happened approximately half way through a science class, the class were directed to individually carry out a piece of written work which involved producing a newspaper article about organic food, the class were instructed that they had approximately ten minutes to complete this piece of work. The pupil was sat at a desk alone, pupils were not allocated to a seating plan in this lesson and were free to sit anywhere of their own choosing. After about five minutes into the directed task the pupil closed their exercise book and placed their head on the desk. After about a further five minutes the teacher approached the pupil and asked if they had completed the task, the pupil raised their head, answered yes and put their head back down. The teacher responded ok and walked away, the pupil remained in that position for the remaining twenty minutes of the lesson.

The new Welsh curriculum has four purposes enabling young people in Wales to be ambitious and capable learners, healthy confident individuals, enterprising, creative contributors and finally ethical and informed citizens (Donaldson 2015), detailed as follows:



Source: Successful Futures - Independent Review of Curriculum and Assessment Review in Wales (2015).

The report notes that assessments carried out should relate to the four purposes (Donaldson 2015). It can be argued that the incident observed does not enable the pupil in becoming an ambitious capable learner as the incident did not enable the pupil in this direction. As the assessment method utilised was a question that allowed for a yes no response it was not possible to determine if the pupil had built on the knowledge required or had been able to apply in to the particular context. As the pupil was not required to explain or demonstrate their work and remained passive and disengaged in the lesson they were not able explain any of the ideas or concepts that they may have developed in the article. However, the task itself did require that the pupil undertook research by reading an article and to evaluate the findings in completing the task, the level of assessment i.e. the teacher asking if the work was complete, did not facilitate an assessment in that instant as to whether this particular purpose had been met.

Literature Review

Analysis of the critical incident identifies a number of areas for further review, notably the importance of formative assessment and particularly questioning as a strategy for effective teaching; and, learning styles in the classroom and the impact that this can have on the learner and the learning environment.

Formative assessment can be described in terms of extracting evidence about pupil achievement, interpreting that evidence and then using it to make decisions regarding what the next steps may be in the instruction that should be better than a decision that would have been made without that evidence (Wiliam 2018). Questioning and the use of effective questioning strategies can be an effective tool for teachers within the learning environment and are a key feature in much of the literature concerned with formative assessment. Questioning can be used by teachers in order to determine evidence of learning from students. Questioning is also identified by the Welsh Government Report (2010) as a motivator in developing thoughts and assessment for learning within the classroom environment, ascertaining that questions of a high quality will lead to dialogue that is also of a high quality. It makes sense that teachers must be able to ascertain not only what the pupils have learnt and assess their level of understanding but to also use questioning to probe further, to encourage higher level thinking, to encourage debate and to also assess any misunderstanding. Teachers must have an insight into the pupils thinking in order to better the quality of the learning (Wiliam 2018). Teaching and learning must be interactive (Black & Wiliam 1998). Effective questioning strategies have an important role to play in the learning environment, questioning technique should not be used as teaching tool in order to gain evidence of learning but also to enhance and improve understanding (Sardareh 2014).

Questioning is often linked to be able to check that a pupil knows an answer, that they have understood the point of the learning, that they have learnt, that the objectives of the class have been achieved. Fletcher Wood (2017) notes that performance and learning are not the same, that learning is a permanent change and that performance is temporary and that formative assessment may be undermined if teachers are unable to rely on a pupil giving a correct answer as a measure of learning. This is an objection that is raised by Didau (2014) who argues that questioning is not an effective way to ascertain what pupils have learnt in a particular lesson and that whilst learning is not visual, performance is and that learning and performance are separate from one another. Didau (2014) goes on to argue that spending time focusing on questioning can be mean that time is not spent by the teacher in explain the

topic, on direct teaching. Somewhat in support of this, William (2018) proposes that questions should only be asked either to stimulate thinking or to enable the teacher to decide on the next steps. Therefore it can be argued that questions that only require a yes no answer are not a suitable as a questioning strategy in terms of formative assessment as they do not stimulate thinking or allow the teacher to determine next steps. Ineffective questioning does not allow the teacher to determine if the pupil has misunderstood the intended learning, misunderstanding the learning can have consequences for the pupil. Fletcher Wood (2017) states that when a pupil gives a correct answer this may not be an indication of what they have learnt or will remember but that if the pupil gives an incorrect answer this will be an indication of what the student will not remember correctly. In support of this, Rosenshine (2012) states that to be effective a teacher must check for understanding and be able to correct errors in the understanding or work and this will help the teachers to be alert to any misconceptions that could be developing. The use of effective questioning strategies as supported via a formative assessment approach should be of benefit to the pupils as a number of studies have shown.

In contrast, Brown (2019) argues that assessment for learning is not really assessment and that it is instead a pedagogical principle stating that in a classroom there is the possibility that a teacher could misunderstand the contribution of a student, give a response based on that misunderstanding which could have significant implications for that student. Brown (2019) also argues that teachers are required to manage classroom often of significant size and that responding in the moment to those students can be challenging. However, Donaldson (2015) argues that formative assessment is an essential in the teaching process and should not be viewed as an additional feature. Effective use of formative assessment and particularly questioning techniques and strategies will allow the teacher to gain this insight in real time and have the opportunity to advance of the responses in order to develop higher level, deeper thinking and also to correct any errors or omissions in pupil understanding.

The importance of dialogue between the teacher and the pupil is highlighted by Black and Wiliam (1998) who refer to this as an aid to improving knowledge and understanding. They go on to discuss the notion that a pupil will often guess the answer that the teacher expects and then give that answer which in turn will lead to the teacher moving on. Hattie (2012) notes that time should be given to ask questions that are worth asking and questions that open dialogue.

The ideas and practices routed in formative assessment are based on numerous learning theories including behavioural and constructivist (Hattie 2007 quoted in Robinson et al 2014, p.143). A behaviourist approach will focus on behaviours that are visible, that can be observed and will not consider a mental process (Pritchard 2014). A constructivist view of learning is that of an individual process, a process where problem solving is self-directed (Halpenny 2014).

Perhaps the most well known work within this field is that of Piaget (1896 – 1980). Piaget's work proposes that a child's thinking is developed via a number of stages linked to the age of the child. This is often cited as a criticism of Piaget's work in that the stages are seen as fixed however pupils can be in a number of stages at any given time. In support of Piaget's work, Hattie (2012) notes that the stages were only to be used as a guide and that Piaget's work is useful because it shows that pupils and teachers do not think the same and that teachers need to be aware of not only what the pupil is learning but how they are learning. A further criticism of Piaget's work is that it did not consider how social interaction of cultural learning can have an impact on the learning (Semple, 2000, p.24). In contrast, Vygotsky (1896 – 1934) offered a model of social constructivism which recognises the importance of interaction in learning. Whilst Piaget and Vygotsky shared the same view that a child's learning is constructed by the child, Vygotsky recognised the significance of adult intervention in the learning (Halpenny 2014). Following a constructivist view the teacher will facilitate the learning whereas is a social constructivism view the teacher will aid collaboration and guidance, they will be active in supporting the learning. Considering a constructivist view a pupil should spend time focusing on developing their own learning whilst social constructivism view would recognise the importance of other, better informed individuals, for example a teacher, being involved.

A constructivist view of learning will typically focus on individual learning, on a pupil learning independently. In contrast, a social constructivist recognises the importance of social interaction between the learning and significant others in developing the learning. Vygotsky proposed that learning happens via interaction and that interaction can lead to increased knowledge, arguable recognising the importance of the teacher in the role of learning, although Shayer (2003 p.477) notes that neither Vygotsky or Piaget involved their research in the classroom. The notion of interaction in the learning process fits with much of the literature advocating the use of formative assessment, Black and Wiliam (1998) argue that teaching and learning must be interactive, in agreement, Hattie (2012) notes that dialogue and collaboration is required for learning.

Vygotsky introduced the concept of the zone of proximal development (ZPD). The ZPD can be described as the space whereby the learner is just above their actual level of understanding (Pritchard 2014). Whilst in the ZPD, a learner can learn, but requires support to advance the learning and that in order to learn, pupils need to be given tasks that are just outside of their current ability. The required support can be provided by a teacher and as such interaction is key. As Shayer (2003, p.470) notes that to create a ZPD is essential in the context of teaching, and that developmental processes can only operate when a pupil is in interaction with other people. The concept of the ZPD is arguably about moving learners on, particularly through collaboration, about advancing learning, that learning happens through interaction.

In summary it can be argued that the principles of formative assessment and social constructivism are linked, both place significance on interaction as a significant enhancement to learning.

Reflection/Evaluation & Next Steps

Reflection and evaluation are an important part in enabling teachers to learn from the analysis and to ultimately improve their teaching (Joshi 2018). In order to provide a structure for the reflection of the critical incident, an Assisted Reflected Conclusions (ARC) model has been used (see appendices 5-8) in order to capture the incident. Critical reflection has also been undertaken via a critically reflective lens of theoretical literature, as proposed by Brookfield (1998, p.198). This approach is limited in this paper as the reflection is of the incident observed and not of one's own practice, however despite this the model still provides a useful grounding for the reflection. The reflection should assist in developing one's own pedagogy. Pedagogy should go further than simply looking at methods used in the classroom and should be a combination of theoretical and practical knowledge that are utilised in the promotion of effective learning (Donaldson 2015), arguably the approach taken in this paper supports this.

Reflection, evaluation and the identification of next steps are important in the analysis of the critical incident and in order to identify next steps for teaching in one's own practice. It is important to note in this reflection of the limitations, namely that it is not possible to identify if the behaviour and response observed was typical, what any background considerations may be and any actions that were taken prior or after the observed lesson. This is perhaps a problem of observing learning in that learning is complex and multifaceted and that using

only a single method can only give part of the evidence of what has been learnt (Wood 2015).

A key area identified in analysing the incident and one that led to its criticality is that of formative assessment methods and more specifically the role of questioning as a method of extracting information as to the learning. As discussed above, interaction and dialogue between the pupil and the teacher is essential in order to assess learning and to elicit evidence of learning. In the case of the critical incident the question asked of the student in assessing the outcome of the task was closed and perhaps asked in a way to elicit a simple yes or no response. The pupil gave a response and that concluded the interaction for that part, the dialogue was not extended further, the pupils understanding of the subject and therefore their learning was not assessed by that particular interaction. It could be argued that in asking that question and in not pursuing any further confirmation of learning that the teacher was assessing performance in that they were assessing if the student had finished the task. The questioning style did not allow for the teacher to ascertain if there were any misconceptions or errors in the pupils understanding of the task. The learner needs to be active in the learning in order for the learning to be effective, it was clear in the case of the incident that the learner was not actively engaged for the majority of the class or the learning. This was evident in the pupils action prior to the teacher questioning in that the student had their head down and evident after the teacher questioning in that the student returned to a passive position.

Practically in developing next steps in consideration of my own practice I would look to utilise a formative approach and specifically effective engagement and questioning strategies. Strategies to encourage engagement would include a no hands up rule, this would involve selecting pupils at random, perhaps via a lollipop system, to answer questions. This would demonstrate to the class that participation was required and was not optional (William 2018). In the case of the incident the pupil was not participating effectively in the class, the use of this technique could keep a student engaged. Another strategy would be that of motivating the pupils as owners of their own learning (Leahy et al, 2005, p.20). This could involve using a relatively simple system to enable the pupil to communicate directly to visually demonstrate levels of understanding, a practical example could be a traffic light system where red demonstrates they don't understand, amber shows that further explanation is required and green demonstrates they do understand. This could work well where the topic is relatively straightforward for example learning how to calculate break even point in a business class. Other examples would be the use of mini whiteboards to give a visual demonstration of understanding and also to engage pupils and also the use of exit passes

that can assess if the learning has been understood. These examples as a next step would allow for an assessment to be made of extent of student learning although the effectiveness would depend on the quality of the questions asked (William 2018). In order to develop effective questioning I would consider Blooms Taxonomy (Bloom 1956) as a framework for establishing and developing effective questions.

In referring to a constructivist view of learner it could be argued that by not engaging the student further they were being constructivist in their approach and allowing the student to work independently and not challenging for evidence of learning. In my own teaching practice I would consider more the view of social constructivism and in particular the work of Vygotsky and the ZPD, I would work with the student in order to develop their learning through the zone, in practical terms I would utilise scaffolding as a mechanism to support this. As noted by Pritchard (2014) scaffolding would allow for the pupil to be engaged in dialogue and develop understanding in a planned way.

Conclusion

To conclude, the paper has focused on an observed critical event and in doing so has identified next teaching and learning steps by focusing on the case study. The methodology for the observation chosen allowed for a semi-structured non participant observation to be carried out which in turn allowed for an incident to be identified and to be analysed for its criticality. The critical incident was identified as linking to one of the Four Purposes (Donaldson 2015) namely that of being ambitious, capable learners. The literature review identified two areas of research being formative assessment and the use of questioning and constructivist and social constructivist theories in education. Finally, the paper reflected and evaluated the focus of the critical incident and described how the approach will be used to inform professional and personal development.

Teaching and a teachers role as a reflective practitioner is essential to meet the needs of the new curriculum. The Professional Standards for Teaching and Leadership in Wales (2019) which state five standards for teaching and leadership in Wales, concentrating on five elements of every day have relevance to this paper and identify a number of areas that align with reflection. The standards refer particularly to the standard for professional learning, taking a reflective approach to practice should enable teachers to meet this standard.

The educational landscape in Wales is changing, the future is exciting and challenging, pedagogy will need to align to the new curriculum, good reflective practice should enable

teachers to critically evaluate their own lessons, their own approaches and in doing so develop their own pedagogy in consideration of the new curriculum in Wales.

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Appendix 1 Observation Notes Year 8 Maths Class

(Questions adapted from Fletcher Wood (2016))

Date: 26 th September 2019
Lesson details: Year 8 Set 2 Maths Class First lesson of the day 08:30
Classroom culture (Are the students focused on learning?) Pupils are sat facing forward. Teacher checks pupils have materials needed to start lesson. Lots of displays in the classroom that re-enforce positivity and are relevant to the subject. Some derogatory graffiti in classroom which may affect some pupils.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) PowerPoint accessible to all class communicates objectives for the lesson in clear way. Starter activity is on the desk ready for pupils to start on entering the lesson. Pupils given activities related to the topic to complete a number of equations in text book.
Direction (Are the students clear about what they are doing and how to do it well?) Teacher explains clearly what pupils need to do and how to do it well i.e. to complete answers in the text book, to practice the equations.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) As set 2 for maths all students of similar ability, appear to have access to lesson as most students are completing work, some complete before others and are told to move on to another question set – providing challenge. Teacher explains and models new formula and asks question of students in order to answer – typically same three students who respond. Teacher explains two alternative methods, pupils can select the one they are most confident with – ensuring its accessible.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? Teacher assesses prior knowledge by recapping on previous lesson and calculations – checks for knowledge and understanding.

Teacher allows pupils time to complete the task (by stating time allowed and reminding pupils of time left) and walks around the class to assess answers given in exercise books. No clear assessment at end of lesson, bells rings and pupils begin to pack up.

Specifics / Critical Incidents

Are there particular telling moments and examples which it would be helpful to discuss?
One pupil asks another to check her answer, pupil looks at tells her its right – peer to peer review (although not directed by teacher) – potential for misunderstanding.

Appendix 2 Observation Notes Year 8 Science Class

(Questions adapted from Fletcher Wood (2016))

Date: 26th September 2019

Lesson details:

Year 8 Mixed ability science class Second lesson of the day 09:55
Classroom culture (Are the students focused on learning?) Pupils sat facing forward, no seating plan, some disruption, time taken to settle into lesson.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) Objectives laid out clearly in bullet point, clear what they need to do, also explained by teacher. Lesson activities structured around the objectives and tasks.
Direction (Are the students clear about what they are doing and how to do it well?) Teacher explains clearly what pupils need to do and how to do well, models an answer to demonstrate.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) No – one task involves working in pairs, two pupils sat on their own and therefore unable to participate, not encouraged to move and pupils remain where they are – do not complete the task. One pupil has head down, not challenged by teacher – not challenged by task? Task too easy/too difficult?
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? Teachers asks pupils to indicate they have understood at the start of lesson. Teacher walks around class, checking most pupils work and engaging, some disruption in class.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? The pupil was sat at a desk alone, about 5 minutes into directed task the pupil closed their exercise book and placed their head on the desk. After about a further 5 minutes the teacher asked if they had completed the task, the pupil raised their head, answered yes and put their head back down. The teacher responded ok and walked away, the pupil remained in that position for the remaining 20 minutes of the lesson.

Appendix 3 Observation Notes Year 8 Design Technology Class
(Questions adapted from Fletcher Wood (2016))

Date: 26 th September 2019
Lesson details: Year 8 Mixed ability design and technology class - cooking

Fifth (last) lesson of the day 14:05
Classroom culture (Are the students focused on learning?) Pupils follow seating plan, mixed across class. Pupils engaged early, appear excited for the lesson, all engaged and focused on the lesson and learning.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) Lesson objectives made clear in previous lesson, re-enforced this lesson. Activities clearly promote purpose.
Direction (Are the students clear about what they are doing and how to do it well?) Teacher explains clearly what pupils need to do and how to do well, models answers both practically and through explanation.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) Lesson is accessible to all, most students appear challenged. Teacher ask lots of questions throughout lesson, appears to follow a random sampling (i.e. no hands up). Responses are challenged to encourage higher level thinking and encourage some debate and peer to peer learning.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? Teachers using questioning techniques to assess understanding from most pupils. Recap at end of lesson to ensure understanding.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? Effective questioning techniques – teacher discussing use of yeast in cooking, teacher facilitates discussion about how yeast is an important ingredient to making dough, the discussion progresses this to effect on digestive system, stimulates discussion about other things that yeast is used in, what happens in the cooking process because of the yeast etc.

Appendix 4 Observation Notes Year 8 Art Class

(Questions adapted from Fletcher Wood (2016))

Date: 2 nd October 2019
Lesson details: Year 8 Mixed ability art class – making clay masks Fourth lesson of the day 12:15
Classroom culture (Are the students focused on learning?) Pupils follow seating plan, mixed across class. Pupils engaged early, keen to start lesson. Discipline and teacher authority evident.
Objectives (Is there a clear purpose to the lesson? How do the lesson activities promote that purpose?) Objectives of lesson are clear at start, activities promote this as presented in clear logical steps, lesson is practical and teacher makes clear what should be practically achieved at the end of lesson.
Direction (Are the students clear about what they are doing and how to do it well?) Teacher explains clearly what pupils need to do and how to do well, teacher practically models every step.
Access and challenge (Are all students able to engage in the lesson? Are all students challenged?) Lesson is accessible to all, most students appear challenged as it's a practical lesson. Pupils have autonomy in design of masks (i.e. shape, size & features), appear to respond well to this.
Assessment How does the teacher assess student understanding before, during and after the lesson? How is this used in their teaching? Teachers models and asks if all pupils understand. Very practical lesson, teacher moves around the room assisting students individually and stops the lesson at specific points to show next steps.
Specifics / Critical Incidents Are there particular telling moments and examples which it would be helpful to discuss? Behaviour management – one pupil towards the end of the lesson dismantles the clay mask back into a ball as not happy with it. Teacher responds with frustration as pupil now unable to progress with the next level as they had no base mask.

Appendix 5 Assisted Reflective Conclusions (ARC) Model Yr 8 Maths Class**Date: 26th September 2019****Critical incident (focus): Peer to peer assessment of answers**

<i>Experience</i>	
<i>Feelings</i> “What are your feelings regarding the experience?”	Positive – pupil had confidence in their peer to check work. Peer did this demonstrating support.
<i>Remember and Understand</i> “Can you list the aspects of the incident in the context of learning?”	Peer to peer assessment (AFL strategy). Potential for misunderstanding (check for errors).
<i>Evaluate and analyze</i> “What could be kept the same to ensure effective teaching and learning in the future?”	Develop peer to peer assessment as a formal strategy in the class, make class aware in that when completing students swop exercise books and review each other.
<i>Conclusions and actions</i> “What are your possible solutions to the issue identified?” “What could be done next?”	Teacher to facilitate peer to peer review of work so that teach can assess understanding. Ensure that teacher assesses pupils work to ensure no errors – this could be done individually (i.e. by reviewing books).
<i>Transformed experience</i>	

Appendix 6 Assisted Reflective Conclusions (ARC) Year 8 Science Class**Date: 26th September 2019****Critical incident (focus): Pupil with head down not challenged**

<i>Experience</i>	
<i>Feelings</i> “What are your feelings regarding the experience?”	Thoughtful – pupil had head down for most of the lesson, assessment that they had understood and completed the work was a question which required a yes/no response. Work not checked, pupil not challenged?
<i>Remember and Understand</i> “Can you list the aspects of the incident in the context of learning?”	Low level, closed ended questioning used to assess work and to only check is task complete, pupil not challenged, potential for misunderstanding. Pupil not engaged, not part of the learning.
<i>Evaluate and analyse</i> “What could be kept the same to ensure effective teaching and learning in the future?”	The teacher was calm in their approach and did not challenge pupil which may have impacted on that pupils learning it did not disrupt the learning of the class on the whole. However it is possible that this individual students needs were not met so would reflect on how to manage this in future.
<i>Conclusions and actions</i> “What are your possible solutions to the issue identified?” “What could be done next?”	To engage with the pupil, to challenge them through effective questioning strategies, to ascertain if learning was successful. To check pupil welfare, i.e. why head down. Would consider strategies of whole class engagement.
<i>Transformed experience</i>	

Appendix 7 Assisted Reflective Conclusions (ARC) Year 8 Design & Technology Class**Date: 26th September 2019****Critical incident (focus): Teacher questioning strategies**

<i>Experience</i>	
<i>Feelings</i> “What are your feelings regarding the experience?”	Very positive, teacher engaged all class in lesson, learning environment was positive for class. Pupils challenged throughout.
<i>Remember and Understand</i> “Can you list the aspects of the incident in the context of learning?”	Effective questioning strategies evident (Blooms Taxonomy), formative assessment methods clear throughout the lesson, pupils challenged and engaged in learning. Incidents of disruption dealt with quickly as not to disrupt class.
<i>Evaluate and analyse</i> “What could be kept the same to ensure effective teaching and learning in the future?”	Formative assessment approaches – pupils engaged and challenged. Questioning ensured that pupils were focused for majority of lesson.
<i>Conclusions and actions</i> “What are your possible solutions to the issue identified?” “What could be done next?”	Further develop questioning strategies – develop questions in advance of the lesson to further challenge, consider Blooms taxonomy. Consider a random sampling technique for questioning (i.e. lollipop sticks) and make all class aware of this technique.
<i>Transformed experience</i>	

Appendix 8 Assisted Reflective Conclusions (ARC) Year 8 Art Class**Date: 02nd October 2019****Critical incident (focus): Behavior Management**

<i>Experience</i>	
<i>Feelings</i> “What are your feelings regarding the experience?”	Interested, thought provoking. Evident that teacher had strong, respected presence.
<i>Remember and Understand</i> “Can you list the aspects of the incident in the context of learning?”	Teacher frustrated, pupil had technically completed the task and gone through the experience of constructing mask, whilst they had no practical output from the lesson they had learnt? Teacher scaffolded throughout for pupils and then instructed task.
<i>Evaluate and analyse</i> “What could be kept the same to ensure effective teaching and learning in the future?”	Practical modelling by teacher of what good looks like throughout lesson, teacher had strong, respected presence. Teacher checked for pupil understanding thought the class.
<i>Conclusions and actions</i> “What are your possible solutions to the issue identified?” “What could be done next?”	Whilst pupil had no practical output from the lesson (i.e. the mask), arguable that they had learned as they had gone through the learning experience. Calm approach with pupil to rebuild the mask independently, check understanding, build confidence.
<i>Transformed experience</i>	