

**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 incident**

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Chapter 1 - Introduction to Investigation

1.1 Research Rationale

During a non-participative observation conducted during a bridging experience at a Secondary School, this Investigation recorded four critical incidents of interest and chose one of those four to research further and in-depth. Information regarding all four of the incidences observed can be seen in Appendix (3-6).

Critical incidents are moments which make you stop and think, raise questions or doubts about teaching practice, and which demand a better understanding of its meaning in a wider pedagogical perspective, being a process of reflective practice (Tripp, 1993). Incidents are not necessarily dramatic events in the classroom and at first instance may not appear even significant, and could be more common or frequent events which occur in day-to-day teaching (Tripp 1993). Analysing critical incidents allows this Investigation to critically evaluate the causes, effects and impacts of an incident as well as ways in which the observer might learn from it in future teaching practice. It will therefore aim to describe the chosen incident for further Investigation while observing a quick snapshot of the classroom environment, proposing next steps related to theory and learning practice to create strategies which might mitigate such incidences hereafter.

1.2 Observation - School and Class Context

The School where this Investigation conducted its research is a designated Welsh-medium secondary school for pupils aged between 11 and 18 years in South Wales (Estyn, 2016). The school was opened in 2013 and there are 821 pupils on roll of which 12.7% of pupils are eligible for free school meals, lower than the national average of 17.4% and fewer than 1% of pupils live in the 20% of the most disadvantaged areas in Wales (Estyn, 2016).

The class which gave the Investigation an opportunity to delve deeper into critical incident analysis included students in Year (8). The chosen incident which this Investigation sought to study related to ineffective, closed questioning in classrooms and the effects that negative reactions from the teacher can have on wellbeing and involvement. This was chosen due to an interesting incident which included the effects observed on a particular student, which after misunderstanding the objectives of an activity and being prompted to answer a question, was unable to. This led to a row from the teacher who later forced the student to copy a model answer from another peer. This unexpected incident caused feelings of neglect and humiliation for the student which for remainder of the class became detached and disengaged. Additional information regarding the context of the incident can be found in Appendix (4) and relevant information and breakdowns of the chosen School can be found in Appendix (11, Figures 5-8).

Chapter 2 - Research Methodology

2.1 Chosen Methodology

As mentioned in the introduction to this study, the chosen methodology used is that of “critical incidence analysis” and a model of Tripp’s critical incident analysis can be seen in Appendix (I2). This Investigation will use this methodology along with field study notes (Appendix 1 and 2) to better understand an incident witnessed in the classroom and focus on the goal to learn about learning and why incidences can have good, bad, and interesting points which should be investigated further in the interest of ensuring that future practice is effective (Mohammed, R. 2016 p.26). This methodology will ensure that the observer gains the role of a reflective practitioner in the analysis of critical incidents, being an important element of a new common approach to pedagogy for professional learning and maintaining high standards, pushed by the new curriculum in Wales.

2.2 Critical Incidents – Tripp (1993, 2012)

According to Tripp critical incidence analysis is an excellent way to reflect on educational practice, based on direct observations in classrooms gained first-hand providing a snapshot of the environment and a means of finding a focus for reflective practice research (Tripp, 2012, p24). Its aims are to describe the nature of an underlying issue that has provoked a reaction or feeling during a teaching situation leading to reflection using a “selective focus”, providing the observer scope for examination, development of professional practice, and an insight into possible next steps that aim to improve delivery (Tripp 2012 p24). This methodology emphasises that teachers can reflect on their practice by articulating their experiences because they have the potential to shape practice, perspectives, ideas and experiences and can guide professional development, serving to be enable the observer to become a reflective practitioner, while developing a career that enhances problem solving capabilities along with beliefs and values held in teaching (Mohammed, R. 2016 p.26). The discussion and contemplation of critical incidences make sense of a seemingly random and frequent experience that occurs during teaching pedagogy, and in the case of experienced teachers who hold real knowledge in the form of expertise sourced over years of teaching in schools, who may find quick solutions to remedy their cause and effect, this critical incident analysis is applied as a method in this case study to assist the observer as a beginner in their future practice and to create strategies which could mitigate similar incidences hereafter (Mohammed, R. 2016 p.25).

Though analysis and reflection on teaching situations in this Investigation is confined to Tripp’s model, there are various other perspectives that can also aid the reflection process such as (Dewey 1933; Schön 1983; Kolb 1984; Hatton and Smith 1995; Gibbs 1988), yet Tripp’s paradigm is useful as it provides categorisations of the incident which provokes interrogation during the snapshot of the classroom (Mohammed, R. 2016 p.26).

Furthermore, as Farrell (2015) notes, the incorporation of narratives in the chosen methodology for self-reflection serves as a trusted source to highlight the emotional experience in the classroom while attaching a deeper analysis to it (Farrell, TSC. 2015). This therefore, would allow the observer to refer back when experiencing a similar event in future to deal and mitigate the problem experienced by another student, or provide the scope for additional tweaks to next steps to create a more effective result for a future incident of similar nature. This serves to provide a template which will constantly evolve as incidences occur, are tackled, evaluated and weighed against next step methods which if necessary, can be revisited and adapted for better practice. A model which provides a visual representation of how critical incident analysis works can be seen in Appendix (12).

2.3 Observation Sheet and Field Study Notes

The proposed framework by Fletcher-Wood (2016) was adopted to coincide with the model proposed by Tripp (1993) to create a structured field study and observation sheet that captured the information necessary for further examination. This format was adopted in this Investigation's collection of primary, qualitative data and can be seen in Appendix (1 for Critical Incidences 1 and 2, and Appendix 2 for Critical Incidences 3 and 4).

2.4 Nonparticipant Observation

Nonparticipant observation refers to the researcher not getting involved and remaining as a passive observer, without interfering in the classroom and creating a natural observation which draws conclusions from watching and listening to the incident unfolding (Kumar, 2014. P174). Observations are purposeful, systematic and a selective research method which watches and listens to an interaction as it takes place, allowing the observer to gain first-hand knowledge by being in or around the social setting being investigated (Kumar, 2014. P174). This is the most appropriate method, combined with critical incidence analysis, as it allows the Investigation to learn about the interaction not merely by observing what is happening and studying resulting behaviour but also feeling it (Gil and Johnson, 2002 cited from Kumar, 2014). However, it is imperative that observations do not judge by subjective criteria, but ensure that the focus is on how well pupils increase their learning, reflecting on how the structure and range helped pupils to make progress in their learning or whether they hindered class objectives (Estyn, 2014).

2.5 Ethical considerations

In the interest of advancing research quality, building research capacity and fostering engagement for the pursuit of improved knowledge and understanding of all aspects of education for the wellbeing of students in classrooms, it is important to consider ethical principles to this study (Bera, 2018 p 2). The aim of this study is to improve the observers' practice as a beginner and it is a prerequisite that research, proposed next steps and references to

literature are ethical, justifiable and sound while respecting the privacy, autonomy, diversity and values of individuals that were observed during the non-participative observation (Cohen, L. Manion, L. and Morrison, K. 2007). This has been taken into consideration when presenting the outcomes and findings of the investigation and were undertaken when conducting the primary data research through passive involvement by observation and reflection (Bera, 2018 p6).

2.6 The Four Purposes

Given that Donaldson (2015) pushes the importance of developing the health and confidence of children to build mental and emotional wellbeing and resilience in the classroom as one of his four purposes, to create successful futures for students under the new curriculum for Wales, this incident interested and encouraged the study to conduct further research related to questioning methods in teaching practice and to student wellbeing and involvement. Additional information regarding the chosen critical incident can be found in Appendix (4) and field notes from the observation can also be seen in Appendix (I).

The importance of confidence as one of the four purposes in Donaldson's recommendations for a new curriculum for Wales combined with reports such as those published by 'Mind Over Matter', commissioned by the National Assembly for Wales' Children, Young People and Education Committee (2018) encouraged this study to look into levels of wellbeing and involvement in the classrooms and the effects that lower levels recorded on Leuven Scales for Wellbeing and Involvement can have on students (Appendix 7 and 8), due to recent publications which state that levels of stress and anxiety among pupils are rising. The Good childhood Report (2020) argues that the mental wellbeing of students is in decline and a recent report by the OECD also indicates that in Wales, the wellbeing of students is not as strong as OECD averages, highlighting that the majority of pupils (63%) in Wales sometimes or always feel worried, which is around 30% higher than the OECD average (49%) and over half of pupils in Wales (54%) say that they sometimes or always feel miserable, being around 40% higher than the OECD average (38%) (Estyn, 2020). The new curriculum looks to foster mental and physical wellbeing and also raises the importance of the theme by including the study of "health and wellbeing" in one of the six new areas of learning and experience for students, which looks to incorporate additional subjects into Welsh schools aimed at ensuring the school setting is a healthy one, where children are supported by a holistic approach to health and wellbeing (Welsh Government, 2015).

Chapter 3 - Literature Review

3.1 Scaffolding and Questioning methods in Education

As noted in the field notes, the critical incident investigated relates to poor questioning methods in the classroom which upon reflection, could have been pitched at a higher and more difficult level to that which the student could understand after not having grasped the concepts which were previously introduced in a passive learning environment. Craik and Lockhart (1972) argued that teachers should be aware that information can be processed in a variety of ways and that students may need more participative and active forms of learning rather than direct instruction to ensure information is processed deeply and that opportunities are made to discuss learning prior to evaluation (Craik, FIM and Lockhart, RS. 1972). Dewey also expands on influence that direct teacher-student experience can have on the development of a students' mind and concurred that a student shouldn't be a passive recipient of knowledge, being better served with an active contribution to aid the process of their own learning, meaning that children should have chances to enable them to link content to existing knowledge (Dewey, J. 1933, 1938). As a result of the incident, it could be argued that the teacher failed to establish the fact that learning should be matched with a students' developmental level, and research by Vygotsky (1978) has shown that though the capability and mental development of students is thought to be of the same level in a class, learning under a teacher's guidance and in only a dictated manner, can later in practice show that it actually varies to a high degree (Vygotsky, L.S. 1978). Whereas one more able and talented student can acquire and develop on an idea easily, another might not and could lose a sense of belonging if made to feel humiliated by comparison and when questioned regarding an activity which revises the topic publicly.

This allows the research to study what Vygotsky developed as a concept of learning which he coined as "the zone of proximal development" which more recently has led to the idea of scaffolding activities (Vygotsky, L.S. 1962 cited from Daniels, H. 2001). The idea relates to the distance and difference between the actual development of a student and what the learner can do without help as determined by independent problem solving, to the level of potential development of what a student can achieve as determined through problem solving under guidance and encouragement or in collaboration with a teacher (Vygotsky, 1978, p86). When the student is in "the zone of proximal development" during a particular task, referring to the skills that the student is close to mastering but has not yet achieved, the provision of appropriate assistance could give the student enough encouragement and a better platform to acquire and complete that task successfully (Vygotsky, 1978, p86). Vygotsky also claimed that what learners can do collaboratively and with help today, they could do independently and more competently tomorrow and as Cazden (1988) states, the goal is to facilitate "performance before competence" (Cazden, C.B. 1988). Scaffolding provides a template and set of activities from the educator which support and lead the student through "the zone of proximal development", being tailor-made to the needs of all students at different developmental capabilities in the classroom with the intention of providing the

correct platform for introduction to new ideas and the correct additional platforms to achieve full understanding (Vygotsky, 1978, p86). Fleming concurs with this way of teaching and argued that optimal learning demanded that students received instruction tailored to their learning styles (Fleming, ND and Bonwell, C. 2019). In this case, the teacher could control the elements of the task that is beyond the students' capability and focus on what is within range before advancing to more difficult elements of learning which can be misunderstood (Wood, Bruner and Ross. 1976. P90).

Vygotsky, Bruner and Wood et al, concur that educators should plan lessons with as much scaffolding as possible, to provide cohesive lessons with active support to enable the student to achieve a goal that would be further than an unassisted effort, and as they become independent in their thinking through the scaffolded acquisition of knowledge, support can gradually fade (Wood, Bruner and Ross. 1976 p.90). Silver (2011) concurs with the use of scaffolding and structured interaction and considers guidelines for instruction that should assess current knowledge and experience, relate content to what is understood, give a task in manageable chunks and the use of verbal cues, modelling a skill, providing hints and adapting material or activity to assist all students at all levels (Coppie & Bredekamp, 2009). However, Murray & Arroyo (2002) indicate that the learner should avoid being bored and being confused and frustrated yet material should not be too difficult or easy because boredom and confusion can lead to distraction, frustration, and lack of motivation, therefore care is needed to ensure that activities are scaffolded in the right way for the correct access and challenge for all (Murray, T and Arroyo, I. 2002).

Conversely, Stone (1998) expressed the concern that the metaphor of scaffolding can lead to viewing the teacher-learner interaction in the classroom as one-sided in nature and if applied to classroom teaching, might take educators back to a pre-Piagetian traditional way of teaching through direct instruction (Stone, A. 1998 cited from Verenikina, 2008). The cognitive constructivism of Piaget views learners as active constructors and discoverers of knowledge, on the other hand Vygotsky's social constructivism which is built on Piaget's ideas of active learners, focuses on social interaction in learning and development and the quality of teacher-learner interaction (Budrova & Leong, 1996). Highlighting the limitations of scaffolding, Stone (1998) reveals that several educational and developmental psychologists are questioning the theoretical and practical value of the metaphor but concludes, the metaphor should not be abandoned (Stone, 1998, p.351).

3.2 Behaviour, Well-being and Involvement in the classroom

Maslow's hierarchy of needs (Appendix 10) could explain the resulting behaviour witnessed in the classroom after the incident occurred. According to Maslow's hierarchy, to fulfil the need for self-esteem, lower levels in the hierarchy, that of physiological, safety and needs for belonging must be established and accomplished (Poston, B. 2009). If in this instance the result of questioning the student leaves the level of belonging in the classroom as low, where the student in this case was being viewed negatively by the teacher and peers in that group, he or she could develop social anxiety and may withdraw themselves in future due to the feeling of not fitting in (Poston, B. 2009). This hierarchy could show that the lack of confidence after feeling insecure by the event, causing the student to avoid answering, could have been a detriment to his or her sense of belonging by feeling less able than others to answer. Students with low self-esteem could have a low opinion of themselves and as a result, inferiority complexes could generate which might create psychological problems in future and when trying to use and access their full potential due to negative "self-talk" (Poston, B. 2009).

Similarly, if the student is used to copying from another peer as the result of poor questioning methods which inadvertently discouraged the student from engaging in the lesson objective, this event could have impacted the students' future potential, which could lead to further disengagement and frequent copying when made to feel inferior to others in the classroom. The student in this example, became reserved and might have lost their safety needs, which was not maintained by the teacher during the event when questioning the student. This resulting behaviour leading to copying another peer, could have also been accepted as a way to regain a sense of belonging in the classroom, and if this was accepted by the teacher as a remedy to the misunderstanding and inability to answer, this behaviour is likely to continue when a similar incident occurs again and could further damage the students' self-esteem and future possibility of contributing to the classroom (Poston, B. 2009). This goes against the aims of the new curriculum to create healthy confident individuals (Welsh Government, 2015).

Chapter 4 - Discussion

4.1 Next Step Strategies for Effective Teaching

Next step recommendations for future practice would seek to incorporate the 'collective brain' in the interest of allowing confidence to be raised, basic needs such as those mentioned by Maslow to be met while encouraging students to continue and go one further in the hope that they develop their confidence, their involvement and their well-being as pushed by the new curriculum for Wales. As mentioned in the literature review, behaviour resulting from the incident in the classroom could have encouraged the student to disengage and detach themselves from the lesson aims thus failing to achieve the lesson objective. It could also be argued that poor questioning caused a barrier to the acquisition of the students' need for a sense of safety, belonging, self-esteem and self-actualisation in the classroom, lowering levels of wellbeing and involvement to lower ranks as shown by Laevers in the Leuven Scale in Appendix (7 and 8). Ineffective questioning research implies that students can be discouraged from learning and this could in turn, cause a failure to meet and acquire learning objectives and provide a damaging environment for students to learn from. Next steps need to ensure that questions are rephrased, changed, scaffolded and redirect students when in doubt or when feeling discouraged or humiliated in answering, in order for them to get a feel for the topic being taught and direct them to where their understanding should be (Daniels, H. 2001).

Action Plan -

The recommended action plan would provide a variety of questioning methods such as assertive questioning and reasoning but through using "Buzz groups" and "Snowball groups" that could allow the class to share part of their answers until all answers have been harvested in a "blame-free" context, keeping student comfort at its maximum (Petty, G. 2006. P143). A combination of these questioning strategies, reciprocal teaching (Model shown in Appendix 15) and groupwork could increase participation rates and avoid 'pose, pause, pounce' strategies which might make students feel humiliated, encouraging 'constructivist' teaching methods that raise the sense of the content being taught through building from the gist, developing the question and creating effective reflection while increasing participation that does not allow students to become "passengers" of their learning, but contributors through collaborative effort and the collaborative brain (Petty, G. 2006. P56). This links back to Maslow's theory which argues that a group of peers working together may increase motivation and may be more effective than questioning individual students in open class discussions (Petty, G. 2006. P55).

"Buzz groups" could get a collective response and discussion for the whole class to evaluate and to agree on a "class answer" (Petty, G. 2006. P107). This method of cooperative learning could enhance achievement and could improve

behaviour, self-esteem and attitudes to learning, allowing accountability and motivation to be interactive and in a constructivist way (Petty, G. 2006. P143). This would be more suitable than reproductive tasks or ineffective questioning, which is lower on Bloom's taxonomy (Model shown in Appendix 13) and discourages the learner from processing material (Petty, G. 2006. P43). However, through reasoning, assertive questioning and work in "Buzz groups", this could force students to process and apply knowledge, and is relatively high on Bloom's taxonomy and the Leuven Scale for wellbeing and involvement (Petty, G. 2006. P43).

"Snowball" methods (Model provided in Appendix 16), similarly, allow students to write down thoughts and answers, sharing in pairs or threes, before collaboratively constructing an answer in a larger group to agree on a "group answer" (Petty, G. 2006. P214). Individuals from each big group in turn can contribute a part of their idea which can even be boarded or expanded on by the teacher to encourage guided discovery. Afterwards, assertive questioning can "teach by asking", to raise curiosity and creative thinking while "un-teaching" any misconceptions (Petty, G. 2006. P214). This "Snowball" method involves more student interaction because it encourages participation, collaboration and understanding while producing a collective "best answer" (Petty, G. 2006. P214). The method could "lift all boats" and get all students to engage and learn together, acquiring the learning objective using "the collective brain". Coupled with a combination of questions prepared to ensure students are given the correct scaffolding to reach the same goal and ideas such as the traffic light system (Appendix 1) to highlight any doubts, this could ensure that students avoid the possible consequences of misunderstandings by giving lower abled students the confidence to change the colour of their traffic light, highlighting a confusion and enabling an appropriate reaction. Although observed during the observation, the recommended Action Plan would also encourage the use of this system but stress that frequent use and referral is necessary to ensure effectiveness. This could create high scores on the Leuven Scale for wellbeing and involvement and ensure students are kept comfortable in their learning by simply showing their position and feeling by colour, red if they are lost, amber if they are quite confident and green if they are happy and understand.

Another next step strategy in the recommended action plan to trial is the use of "effect size studies", where the class could be divided into "test" groups (Appendix 14). One group could be tested by a change in teaching style or in activity, and the other with a different activity allowing comparisons to be made to see if the "treatment" has had an effect (Petty, G. 2006. P56). The control group is taught using conventional methods whereas the experimental group is taught under the same conditions except for one difference, being the "treatment group" (Petty, G. 2006. P56). Questioning methods could be practised this way and in similar "Buzz" and "Snowball" groups within the same class, which include different "treatments" to see if one method is more effective than the other. This could allow teaching to find "best-practice" methods and is in line with the aims of the Welsh Government to encourage teachers to take on the role of a reflective practitioner.

What's more, in order to fulfil the aims of the new Welsh curriculum to create healthy, confident individuals, there must be an establishment and satisfaction of deficit needs and basic needs proposed by Maslow, in order to push that student. This links back to the very basics of psychological needs, which is that students need to feel good about themselves (Poston, B. 2009). Later and when all of the basic and deficit needs are met as per the hierarchy of needs, the individual is able to establish a much stronger set of coping mechanisms when adverse circumstances confront the individual, allowing the student to be better equipped with the ability to problem solve and confront challenges confidently in future. Combined with the above next step strategies, the recommended action plan also encourages that the teacher "scan" the classroom to confirm the wellbeing and involvement of students using both "Leuven" scales and Laevers' "Process Orientated Self Evaluation Instrument" (Appendix 9). This could ensure that students are comfortable and are kept confident (Laevers, F. 2005). The five-point scale (Appendix 7 and 8) looked to measure wellbeing and involvement as central indicators in an educational setting and Laevers noted that if there was a low level recorded in both, the likelihood of a students' development being threatened increased (Laevers, F. 2005). Wellbeing is linked to self-confidence, a good degree of self-esteem and resilience whereas involvement refers to being intensely engaged in activities and is a necessary condition for deep level learning and development (Laevers, F and Heylen, L. 2003). The higher the levels of wellbeing and involvement we can achieve, the more we can add to mental development and when there are high levels of wellbeing and involvement being recorded, deep level learning is taking place (Laevers, F. 2005). As a result, when using the above next steps as per the recommendations of the action plan, it could be considered good practice to measure the success of each through using these scales and evaluation instruments.

In summary the recommended **Action plan** proposed by this Investigation would include:

- Traffic light system (as seen in Appendix 1)
- Assertive and Reasoning Questions with a Reciprocal teaching method and Scaffolding (seen in Appendix 15)
- Buzz Groups
- Snowball Method (as modelled in Appendix 16)
- Effect size studies to find "Best Practice" (as modelled in Appendix 14)
- The use of the Leuven Scales and the Process Orientated Self Evaluation Instrument to test successfulness and maintain wellbeing and involvement (As shown in Appendices 7-9)

4.2 Limitations to study for future consideration

It is important that reflections are made on the limitations of this study. Firstly, this Investigation was conducted during COVID19. The pandemic might have affected the mental wellbeing of pupils, who have had to face new situations through the absence of peer groups and opportunities for social interaction causing strain with returning to school and learning in different ways, or curtailing the attainment of goals considered fundamental for their future prospects (Estyn, 2020). Currently, COVID19 forces schools to reorganise classrooms to provide more space between students and limit close monitoring, hampering the extent to which effective questioning skills are used and reduces the amount of time which the teacher can spend on the success of the pupil in achieving the lesson objectives, due to the need clean tables, chairs and materials before and after class begins. Covid 19 measures could have curtailed possible techniques to guide student learning and could have contributed to stress in the classroom. In other circumstances without COVID, students might have gained further assistance and reflection to ensure that the lesson objectives were achieved and this study might have gathered more robust data from a "normal" classroom environment.

Another limitation to this study includes the number of problems with using observation as a method of primary data collection, which usually requires a highly trained observer to increase validity and reliability (McCuen, RH. 1996). It can be argued that as a beginner, observations might not have been as descriptive or relevant compared to a teacher who has experienced a longer career. Additionally, when beginners observe, one may watch keenly and lack detailed recording whereas another could take detailed notes and lose interaction (Kumar, 2014. P174). Furthermore, when individuals or groups become aware that they are being observed, this may change their behaviour in a negative or positive way, linked to the Hawthorne effect, that distorts what is observed and which does not represent normal behaviour (Kumar, 2014. P174).

In addition, though this Investigation chose to use a particular methodology, that of critical incidences and their analysis through a non-participative study, this Investigation could have adopted other models to create a more robust evaluation which could have led to more effective next steps. According to Gibbs (1988), who proposed the reflective model for classroom analysis, a deeper understanding of the situation in the classroom could be found by drawing on the emotions and personal experiences not only felt by the observer but by considering other people's perspectives of the incident at the time, along with others who hadn't experienced the incident such as other Teachers or colleagues (Gibbs, G. 1988). This avoids observer bias leaving more scope for verification through multiple perspectives and a more comprehensive insight into the matter, creating a more effective and tailor-made personal action plan that avoids only one interpretation (Kumar, 2014. P174). Rolfe et al, Kolb and Brookfields concur with this type of reflective model, who similarly devised an approach which drew on multiple sources in the interest of improving practice, making

more sense out of what happened in the classroom by asking whether the situation was bad for the observer, and if it was a bad experience for others too (Rolfe et al, 2001 and Kolb, D.A. 1984. Brookfields. 1990). Brookfields went one further and thought that it was important to include additional perspectives when critically reflecting on practice and encourages educators to view practice through four lenses as a habit for ensuring the health and wellbeing of learners. Through the four lenses, additional reflections can be found creating a more complete assumption which could open additional investigation. An incident which is observed might have happened elsewhere in different circumstances and different environments and remembering that an individual crises can usually be a collectively experienced dilemma reiterates the importance of collaboration when dealing with incidences in the classroom (Brookfields, 1998). The use of four lenses or other models mentioned could have created a more robust conclusion and recommendation for next step teaching and could be a far more powerful method in pushing wellbeing in pedagogy and developing wellbeing and involvement as per the new curriculum for Wales put forward by Donaldson (2015).

Chapter 5 - Conclusions

Based upon the findings of the research it can be seen that much like the nature of critical incidences, solutions will need to be re-evaluated at a later point, revisited and reviewed to judge effectiveness and re-adapted for its continued success in mitigating problems mentioned in this Investigation.

The research found that contributors to education such as Vygotsky, Leuven and Bloom should encourage teachers to provide a series of questions which look to scaffold students' learning, maintain student comfort and wellbeing, extend their knowledge with reflection and critical thought and to gain confidence to question questions. These methods foster critical thinking and knowledge application and should be used as frequently as possible when setting assignments, creating debates, or opening classrooms for discussion. Questioning techniques should also be reviewed by teachers to help create effective classroom learning that permit students to thrive and set out the tools necessary for pupils to understand and tackle problems through confidence and comfort, as per the aims of the new Welsh curriculum and the four purposes as proposed by Donaldson. This forces pupils to use their mind rather than guessing what the answer to a question is, being an important gauge to the understanding and misunderstanding of topics which the teacher can later assess for further reflection and adaptation, becoming a reflective practitioner helping students attain the learning outcome in every class and at every level.

Chapter 6 - References

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Chapter 7 - Appendices

The purpose of the following appendices is to provide the detailed information that may add value to the understanding of the research that has been conducted in this Investigation. This includes the raw and qualitative data resulting from the primary methods used and the non-participative approach taken while undergoing the investigation. Information pertinent to the study is attached and are organised as follows:

- I. Appendix 1 - OBSERVATION / FIELD NOTES SHEET 1 - CRITICAL INCIDENT 1 AND 2**
- II. Appendix 2 - OBSERVATION/FIELD NOTES SHEET 2 - CRITICAL INCIDENT 3 AND 4**
- III. Appendix 3 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 1**
- IV. Appendix 4 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 2**
- V. Appendix 5 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 3**
- VI. Appendix 6 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 4**
- VII. Appendix 7 - Figure 1 - THE LEUVEN SCALE FOR WELL-BEING**
- VIII. Appendix 8 - Figure 2 - THE LEUVEN SCALE FOR INVOLVEMENT**
- IX. Appendix 9 - Figure 3 - DR FERRE LAEVERS - PROCESS ORIENTATED SELF EVALUATION INSTRUMENT**
- X. Appendix 10 - Figure 4 - MASLOW'S HIERARCHY OF NEEDS**
- XI. Appendix 11 - Figures 5-8 - BREAKDOWN OF SCHOOL OBSERVED FROM ESTYN REPORT (2016)**
- XII. Appendix 12 - Figure 9 - CRITICAL INCIDENT MODEL AS DEVELOPED BY TRIPP (1993)**
- XIII. Appendix 13 - Figure 10 - BLOOM'S TAXONOMY**
- XIV. Appendix 14 - Figure 11 - EFFECT SIZE STUDY A AND B**
- XV. Appendix 15 - Figure 12 - THE RECIPROCAL TEACHING PROCESS**
- XVI. Appendix 16 - Figure 13 - SNOWBALL TEACHIING**

7.1 Appendix 1 - OBSERVATION / FIELD NOTES SHEET 1 – CRITICAL INCIDENTS 1 AND 2

(Questions adapted from Fletcher Wood - 2016)

Date and time of bridging experience: 28th, 29th and 30th of September, 2020 Year group: Year 8, 30th September - 13.15-14.15 This Class contained 2 incidences which were recorded and referenced in this Investigation
Lesson details - Context and focus - Map reading, measuring distances and describing places - Subject - Humanities and Geography using cross curricular activities in literacy and numeracy - Ability range - Varied ability with students being mixed after effective classroom reorganisation using traffic light system with coloured cards allowing students to indicate the level of understanding regarding the task to the teacher. I liked this method and will look to try and incorporate this in my action plan. The Teacher, after having seen the reactions of students using the traffic light system, rearranged the class and group members to create a rich collaborating culture. Red cards showed misunderstanding of tasks, amber the gist and green confident understanding of the activities that were to be completed. - Class conducted indoors and split into 2. 1 section of the class was used for groupwork and map reading skills (Group 1), while another section of the class (Group 2) was used for report writing and descriptive analysis.
Classroom culture (What is the classroom 'vibe.'? What do attitudes, dispositions, behaviours towards learning seem like at this point in time?) - Classroom showed an energetic and lively set of attitudes having recently had their lunch break without the chance to go outside due to poor weather conditions. - Behaviours begin to change compared to classes seen during morning sessions and students are less engaged and inclined to learn, critically think or develop ideas.
Objectives (What happens in the environment that communicates the purpose of the experiences? What can be observed regarding the way lesson activities relate to these purposes?) - Lesson has been planned through a graded approach to the acquisition of skills needed to effectively read maps and describe the local environment and surroundings using a report structure and descriptive language. - Students reviewed existing knowledge gained in previous classes to link past to present and to develop skills with a PowerPoint model that reviewed existing knowledge gained previously.
Direction (What can be observed that helps learners understand what they are engaging in? What in the environment helps them understand how to achieve well?) - PowerPoint and a model to revisit prior knowledge, brainstorm ideas and to get students engaged. The model revised and revisited numeracy skills to accurately gauge the correct distance between places from the Map. - Materials provided for each group to undertake their research. These included ONS Maps, rulers, a boarded methodology to allow students to translate distances measured from the Map to the correct distance between sites. - The traffic light system allowed students to highlight when there are misunderstandings in the class while undergoing their research and when there were insecurities when writing conclusions in reports.

Access and challenge

(What can be observed in the environment that enables engagement of learners? What can be observed regarding levels of challenge?)

- For learners that completed the activity quickly, the teacher prepared additional questions which looked to revise their Map reading skills and to encourage the transfer of knowledge learnt from STM to LTM. This also allowed MAT students to provide additional descriptive information in their report.
- While writing, a boarded structure gave students the correct organisation of a description of a place. For learners of a lower ability a handout was provided with sentence starters, terminology and additional prompts that students could use to organise writing.
- The traffic light system gave students the confidence to let the teacher know when they were incapable of completing the task and when they needed help.

Assessment

(Can anything be observed about how student's existing knowledge is used? Can anything be observed regarding the development of knowledge during or after the experience?)

- Warm up task looked to review their numeracy skills and prepare them for the lesson. The teacher activated their prior knowledge from previous sessions and a model provided a review of the mathematical route to transferring knowledge from a map to a qualitative report describing places and local geographies.
- Before providing a schema for their report writing, the teacher asked groups to brainstorm the typical subheadings, terminology and organisation needed to create a report. This was fed back to the class and modified, corrected and made clear before students continued with their writing.

Specifics / Critical Incidents

(Are there moments which cause you to consider aspects of practice when you come across them in future teaching?)

- Critical incident 1 - This type of boisterous behaviour from confident students would be a challenge in future practice. I would consider reorganising the class again and having a gender variety in each group to reduce the possibilities of unpredictable situations such as this. I also would not consider such a hands-on activity for a class after lunchbreak and would use this plan when another session with the same group, such as the morning, would arise given that this year group had 3 Humanities lessons a week.
- Critical incident 2 - I think in future practice during such an incident I would seek to use a similar traffic light system but ensure I keep referring to it to raise effectiveness and to avoid the humiliation of a student when questioning to contribute. I liked the use of the traffic light system and would like to include it in my recommendation for next step teaching, but it is important that it is used frequently to maintain its success in practice.

7.2 Appendix 2 - OBSERVATION / FIELD NOTES SHEET 2 – CRITICAL INCIDENTS 3 AND 4

(Questions adapted from Fletcher Wood - 2016)

Date and time of bridging experience: 28th, 29th and 30th of September 2020 - Year group: Year 7, 29th September - 09.00-10.00 - This Class contained 2 incidences which were recorded and referenced in this Investigation
Lesson details - Context and focus – Literacy skills related to end of unit review of cooking verbs and terminology related to Science unit, which covered boiling water and Bunsen burners. - Subject – Science - Ability range - Varied ability with the class organised into groups with varied abilities, gender and a collaborative effort to complete the tasks set.
Classroom culture (What is the classroom 'vibe.'? What do attitudes, dispositions, behaviours towards learning seem like at this point in time?) - Classroom - had an engaging start and were on task prior to the 2 critical incidences which occurred during the session. The teacher reviewed prior knowledge as a starter and gave the students visual representation using a video to explain the boiling process and reintroduce terminology covered in previous sessions to prepare them for this end of unit, collaborative, literacy activity. - Behaviours – prior to the incident students were engaged and participated frequently, but when disruptions continued to occur the class became disengaged due to the “proud culprit” who also affected the groupwork which was to be completed by students. Another student became angry and upset that the work was not completed successfully which led to a “one minute silence” by the teacher towards the end of the lesson to explain that frequent use of English in class was not accepted and to explain that the class would be reorganised in future.
Objectives (What happens in the environment that communicates the purpose of the experiences? What can be observed regarding the way lesson activities relate to these purposes?) Lesson – A PowerPoint and video helped students revisit the topic and content covered in previous lesson and a structure was provided to scaffold and assist students in the completion of the activity. A model was later used by a successful, best answer, from another group which allowed students to copy, correct and reflect on their groupwork.
Direction (What can be observed that helps learners understand what they are engaging in? What in the environment helps them understand how to achieve well?) - Students were put into buzz groups to brainstorm ideas and share their understanding before undertaking the literacy activity. - A model with prompts, terminology and some ideas of ways to give instructions was boarded using another example to give students a template.

Access and challenge

(What can be observed in the environment that enables engagement of learners? What can be observed regarding levels of challenge?)

- To extend their answers and to improve literacy skills, the teacher asked students to think of different ways of giving instructions and step-by-step guides, boarding good answers which the class could refer to if needed. This provided lower ability learners with a template for their work and MAT students were encouraged to go one further by thinking of additional steps for the activity.

Assessment

(Can anything be observed about how student's existing knowledge is used? Can anything be observed regarding the development of knowledge during or after the experience?)

- Warm up – revisiting prior knowledge and discussion after watching a video about giving instructions while cooking
- Closing down – the use of a successful group as a model for the teacher to allow other students to copy or correct their work in their workbooks
- A review by demonstrating how boiling water works and using pasta as a demonstration and a guideline for students to learn from and expand.

Specifics / Critical Incidents

(Are there moments which cause you to consider aspects of practice when you come across them in future teaching?)

- Critical incident 3 – Frequent interruption from one student caused distraction and disengagement by speaking English frequently in class. Though at first the teacher used humour to mitigate the incident, the “proud culprit” continued and caused disruption in the class, causing the group which the student was working in to lose the aims of the task and fail to complete in time. The teacher used a countdown timer to ensure students knew the time limits that were imposed but this led to a “one-minute silence” due to the disruption continuing to deter others from completing the task.
- Critical incident 4 – Student became angry due to the lack of success in completing the groupwork due to the incident which included frequent English in the classroom. This gave a knock-on effect to the peers in that group which meant that all were off task and not able to complete the activity in time. This led to a one-minute silence where the teacher explained that English in the classroom was unacceptable and needed to be within limits. The teacher also mentioned that in future the class would be reorganised to test different group members and their success in future.

7.3 Appendix 3 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 1

CRITICAL INCIDENT IDENTIFICATION RECORD - 1	
Details relevant to the research context. Date/time. Age/Stage of group. People involved. Contextual information from field notes.	Date ~ 30th September Time ~ 13.15 - 14.15 Age ~ Year 8 Stage ~ Mid to end of Unit, Map Reading Skills Class ~ Humanities and Cross Curricular (Literacy + Numeracy) People Involved ~ 2 students which later caused a group of 4 to be off task
What happened? A detailed description of what you observed and what thoughts on pedagogy and practice occurred to you as a result, looking towards your research.	1. After having set the class into 2 groups, to complete a Map Reading activity (Group 1) and a writing activity describing local geography (Group 2) students began a boisterous, energetic, loud and playful vibe causing disruption. This could be due to poor weather conditions leading to lunch break being spent indoors. 2. Once in their groups, a group of 4 boys completing the Map Reading Skills activity caused disruption by using rulers as swords. One student struck another peer with a ruler, across the head. 3. Although the strike was not hard and did not cause pain, it caused a scene and took the attention of the whole class. The student which was struck produced "fake tears" to create a humorous scene. 4. The teacher, though angry to have lost the attention of group 2, questioned the group about their playful behaviour and asked if it was useful to the task, but mentioning complications from Covid made the situation hard to mitigate, causing a lot of time lost and the group took a long time to get back on task.

7.4 Appendix 4 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 2 - CHOSEN C.I FOR STUDY

CRITICAL INCIDENT IDENTIFICATION RECORD - 2 - Chosen Incident.

Details relevant to the research context. Date/time. Age/Stage of group. People involved. Contextual information from field notes.	Date ~ 30th September Time ~ 13.15 - 14.15 Age ~ Year 8 Class ~ Humanities - Map Reading and Report Writing ~ Cross Curricular (Literacy and Numeracy) People involved ~ 1 student in group 1 (Map Reading) used the Incident (1) to disengage from the activity. Pupil was sat at the back of the class in a group which did not encourage students' participation. Pupil played with pencil case, off task and when questioned during feedback, could not answer questions.
What happened? A detailed description of what you observed and what thoughts on pedagogy and practice occurred to you as a result, looking towards your research.	1. Student sat at the back of the class was not engaged in Group 1 Activity - Map Reading skills due to incident (critical incident 1) which distracted the class. Additionally, peers did not participate well and did not engage with the student. 2. Student continued to distract and disengage themselves from the activity, being off task, lost and unclear about the ways to measure distances between places on a map. 3. During feedback, the teacher asked closed questions and asked the student to participate in the class feedback. The questions were boarded and a model was given but the student misunderstood the task and did not use the traffic light system to make misunderstanding known. In confusion during the closed question which was asked to the student, the student replied - "I don't know miss, I didn't get it". 4. The student received a row from the teacher for not having made the misunderstanding known and for not concentrating. The student was told to copy from another peer which earlier refused to work cooperatively with the student. 5. The student was left humiliated and uncomfortable and further detached themselves from the class. 6. The traffic light system wasn't pushed enough to raise its effectiveness and maintain its use, and though information was boarded the student did not understand aim and did not understand the questions related to task. The student also did not know the aim of the lesson and the powerpoint model used at the start of the class was not aimed to all abilities, containing questions provoking a deeper understanding of the task. Due to the student misunderstanding from the beginning, low self esteem led to a failure in the acquisition of the learning objective and discomfort feeling inferior.

7.5 Appendix 5 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 3

CRITICAL INCIDENT IDENTIFICATION RECORD ~ 3	
Details relevant to the research context. Date/time. Age/Stage of group. People involved. Contextual information from field notes.	*Date ~ 29th September *Time ~ 0900 ~ 1000 *Age ~ Year 7 *Class ~ Science *Cross Curricular Activity to end unit ~ literacy and writing skills to review looking verbs which linked to topic taught. *People involved ~ A student decided to speak English rather than Welsh frequently in the class. This caused numerous disruption and generated more English being spoken by peers leading to bad behaviour and interruption from the "prone culprit" of the incident.
What happened? A detailed description of what you observed and what thoughts on pedagogy and practice occurred to you as a result, looking towards your research.	1. While being given a breakdown and scaffolded description and model by the teacher which was later to be completed in small groups, to benefit from think, pair and share techniques, a student frequently interrupted by asking the teacher for translations which in some cases were not relevant to the task. 2. Though the teacher initially used humour to highlight that it was not acceptable to use English that frequently in class, the student took advantage of the humorous engagement and attention and continued in a similar manner. 3. The group which the student was working with could not complete the task in the given time due to the frequent disruption. 4. The teacher gave frequent reminders with a Countdown clock on the board prior to asking for feedback. 5. Rushing to complete, peers in the group were angry with the student because the work was inferior to other groups who'd managed to finish in time. 6. The teacher then needed to spend more time during feedback to ensure that the group copied ideas from a model which was quickly boarded for them. 7. The teacher continued to get disrupted by the student, leading to a "one minute silence" at the end of the class, later leading to a discussion on English in the classroom and a loss of more time providing feedback to link activity to the unit previously studied.

7.6 Appendix 6 - CRITICAL INCIDENT IDENTIFICATION RECORD - INCIDENT 4

CRITICAL INCIDENT IDENTIFICATION RECORD ~ 4	
Details relevant to the research context. Date/time. Age/Stage of group. People involved. Contextual information from field notes.	* Date ~ 29th September * Time ~ 0900-1000 * Age ~ 74r. * Class - Science * Cross Curricular activity ~ Literacy and writing skills to review cooking verbs and writing instructions/steps using connectors and correct cooking verb terminology which related to Unit and topic taught. * End of Unit and Activity to Review understanding of boiling water. * People involved - 1 student which was angry and upset due to (Critical incident 3) disruption caused by peer causing poor output which did not complete task well.
What happened? A detailed description of what you observed and what thoughts on pedagogy and practice occurred to you as a result, looking towards your research.	* linked to Critical Incident 3, 1. Student was angry due to the disturbance caused (Critical Incident 3) which led to the group failing to complete the task successfully. 2. Though the Teacher feedback with a model which was copied into workbooks, the student was upset by the failed, rushed attempt by the group to complete the task. 3. The teacher made the class do a "one-minute silence" to cool down the level of English spoken and regain control, but the student was still upset and decided not to speak or engage with the "proud culprit" 4. The teacher apologized and mentioned that next class the student would be sat in a different place to see if a reorganisation could reduce English spoken in class and to allow the student in this incident to work with other peers in future.

7.7 Appendix 7 - Figure 1 - THE LEUVEN SCALE FOR WELLBEING

Available at - <https://emotionallyhealthyschools.org/wp-content/uploads/2020/09/sics-ziko-manual.pdf>

THE SCALE FOR WELL-BEING		
LEVEL	WELL-BEING	SIGNALS
1	Extremely low	The child clearly shows signals of discomfort: • whines, sobs, cries, screams; • looks dejected, sad or frightened, is in panic; • is angry or furious; • shows signs feet, wriggles, throws objects, hurts others; • sucks its tomb, rubs its eyes; • doesn't respond to the environment, avoids contact, withdraws; • hurts him/herself: bangs its head, throws him/herself on the floor..
2	Low	The posture, facial expression and actions indicate that the child does not feel at ease. However, the signals are less explicit than under level 1 or the sense of discomfort is not expressed the whole time.
3	Moderate	The child has a neutral posture. Facial expression and posture show little or no emotion. There are no signals indicating sadness or pleasure, comfort or discomfort.
4	High	The child shows obvious signs of satisfaction (as listed under level 5). However, these signals are not constantly present with the same intensity.
5	Extremely high	During the observation episode, the child enjoys, in fact it feels great: • it looks happy and cheerful, smiles, beams, cries out of fun; • is spontaneous, expressive and is really him/herself; • talks to itself, plays with sounds, hums sings; • is relaxed, does not show any signs of stress or tension; • is open and accessible to the environment; • is lively, full of energy, radiates; • expresses self-confidence and self-assurance.

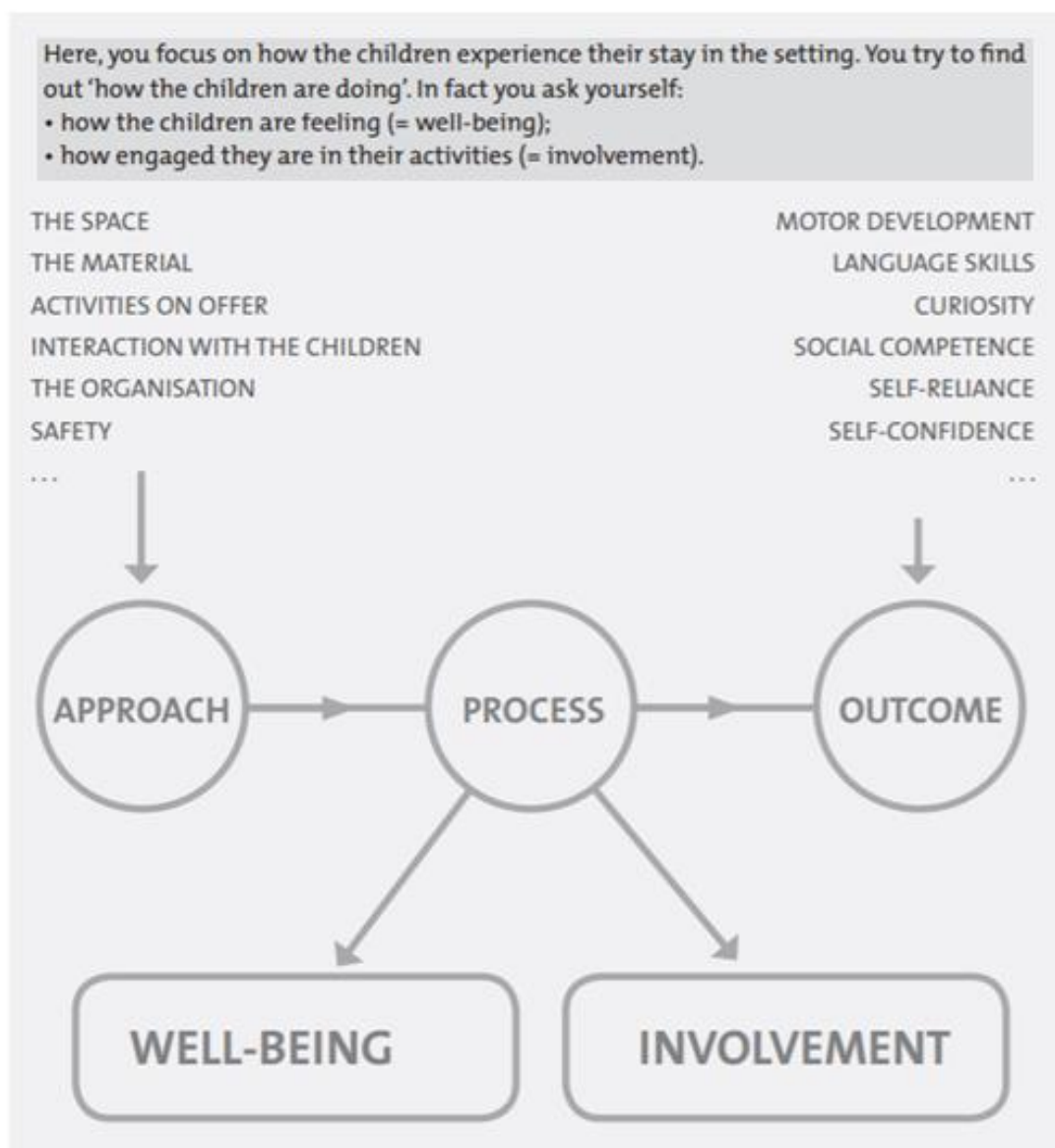
7.8 Appendix 8 - Figure 2 - THE LEUVEN SCALE FOR INVOLVEMENT

Available at - <https://emotionallyhealthyschools.org/wp-content/uploads/2020/09/sics-ziko-manual.pdf>

THE SCALE FOR INVOLVEMENT		
LEVEL	INVOLVEMENT	EXAMPLES
1	Extremely low	The child hardly shows any activity: • no concentration: staring, daydreaming; • an absent, passive attitude; • no goal-oriented activity, aimless actions, not producing anything; • no signs of exploration and interest; • not taking anything in, no mental activity.
2	Low	The child shows some degree of activity but which is often interrupted: • limited concentration: looks away during the activity, fiddles, dreams; • is easily distracted; • action only leads to limited results.
3	Moderate	The child is busy the whole time, but without real concentration: • routine actions, attention is superficial; • is not absorbed in the activity, activities are short lived; • limited motivation, no real dedication, does not feel challenged; • the child does not gain deep-level experiences; • does not use his/her capabilities to full extent; • the activity does not address the child's imagination.
4	High	There are clear signs of involvement, but these are not always present to their full extent: • the child is engaged in the activity without interruption; • most of the time there is real concentration, but during some brief moments the attention is more superficial; • the child feels challenged, there is a certain degree of motivation; • the child's capabilities and its imagination to a certain extent are addressed in the activity.
5	Extremely high	During the episode of observation the child is continuously engaged in the activity and completely absorbed in it: • is absolutely focussed, concentrated without interruption; • is highly motivated, feels strongly appealed by the activity, perseveres; • even strong stimuli cannot distract him/her; • is alert, has attention for details, shows precision; • its mental activity and experience are intense; • the child constantly addresses all its capabilities: imagination and mental capacity are in top gear; • obviously enjoys being engrossed in the activity.

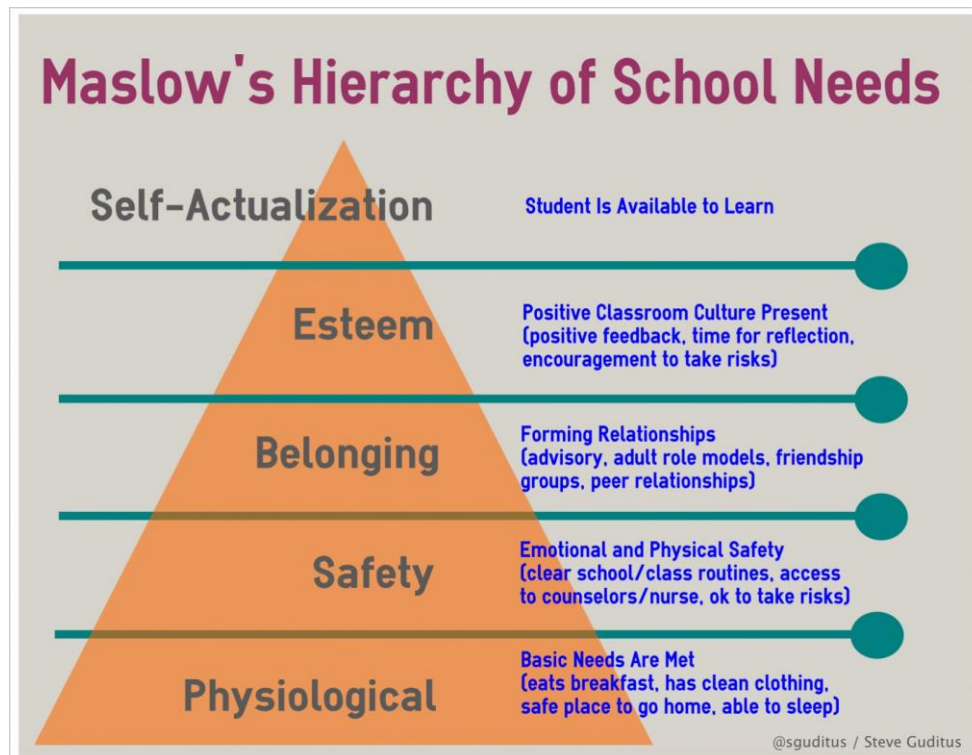
7.9 Appendix 9 - Figure 3 - Dr Ferre Laevers - PROCESS ORIENTATED SELF EVALUATION INSTRUMENT

Available at - <https://emotionallyhealthyschools.org/wp-content/uploads/2020/09/sics-ziko-manual.pdf>



7.10 Appendix 10 - Figure 4 - MASLOW'S HIERARCHY OF NEEDS

Available at - [http://etec.ctlt.ubc.ca/510wiki/Maslow%27s Hierarchy of Educational Needs](http://etec.ctlt.ubc.ca/510wiki/Maslow%27s%20Hierarchy%20of%20Educational%20Needs)



7.11 Appendix 11- Figures (5-8) - BREAKDOWN OF SCHOOL OBSERVED

Figure 5 - Summary of School

SUMMARY	PUPILS	RESOURCES ▼	ATTAINMENT ▼	BENCHMARKING ▼	ATTENDANCE	CATEGORISATION	PE & SPORT
950 Number of Pupils, 2019	10% Free school meals (FSM) - 3 year average (Secondary only) 2019	16.5 Pupil Teacher Ratio (PTR) (Secondary only) 2019	94.6% % Attendance during the year (Secondary only) 2019	£4807 School budget per pupil 2019	Green Support Category 2019	381.2 Capped 9 points score (interim measures version) 2019	42.7 Literacy points score 2019
39.9 Numeracy points score 2019	43.1 Science points score 2019	33.2 Welsh Baccalaureate Skills Challenge Certificate points score 2019					

Figure 6 - Number of Pupils - Breakdown per Year Group

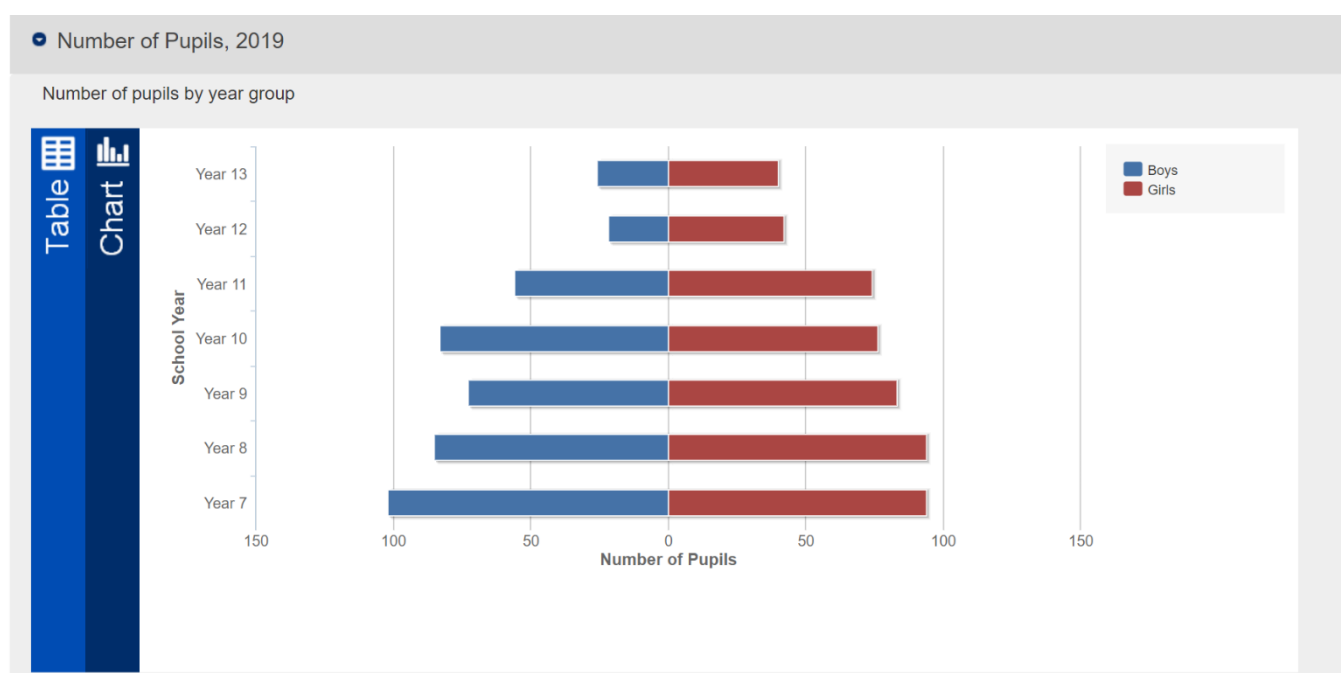


Figure 7 - Breakdown of Pupils known to be eligible for free school meals, a comparison between School and the Local and National Authority levels

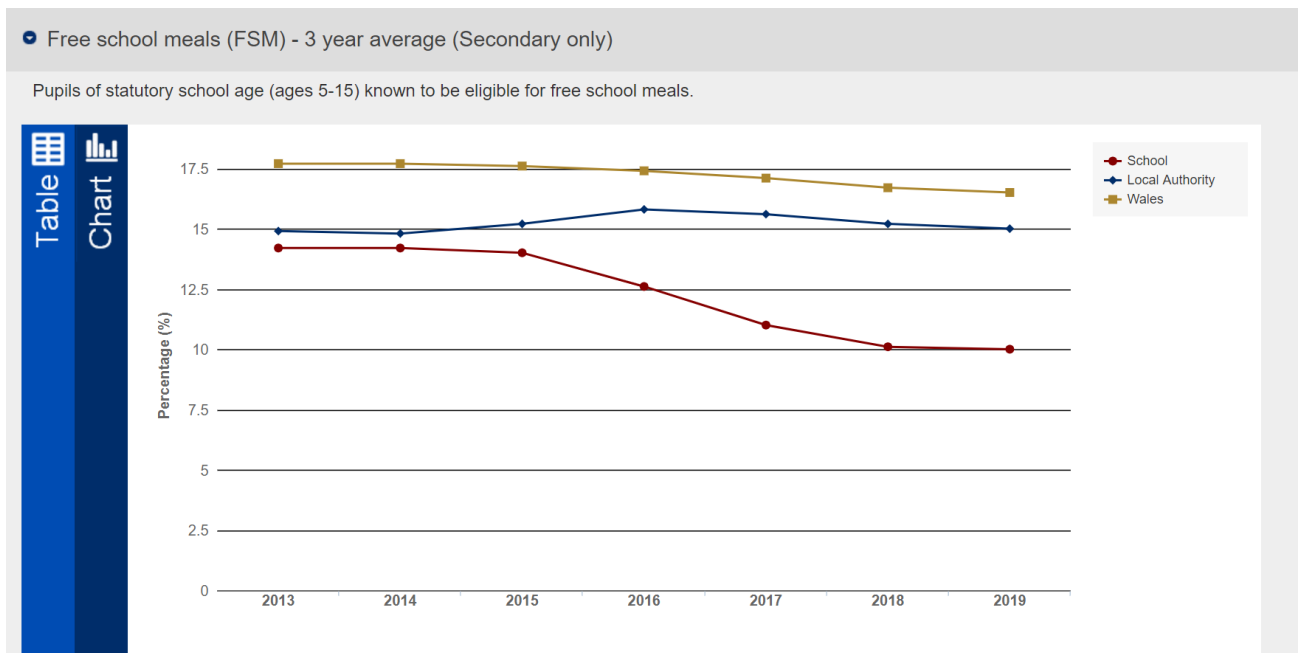
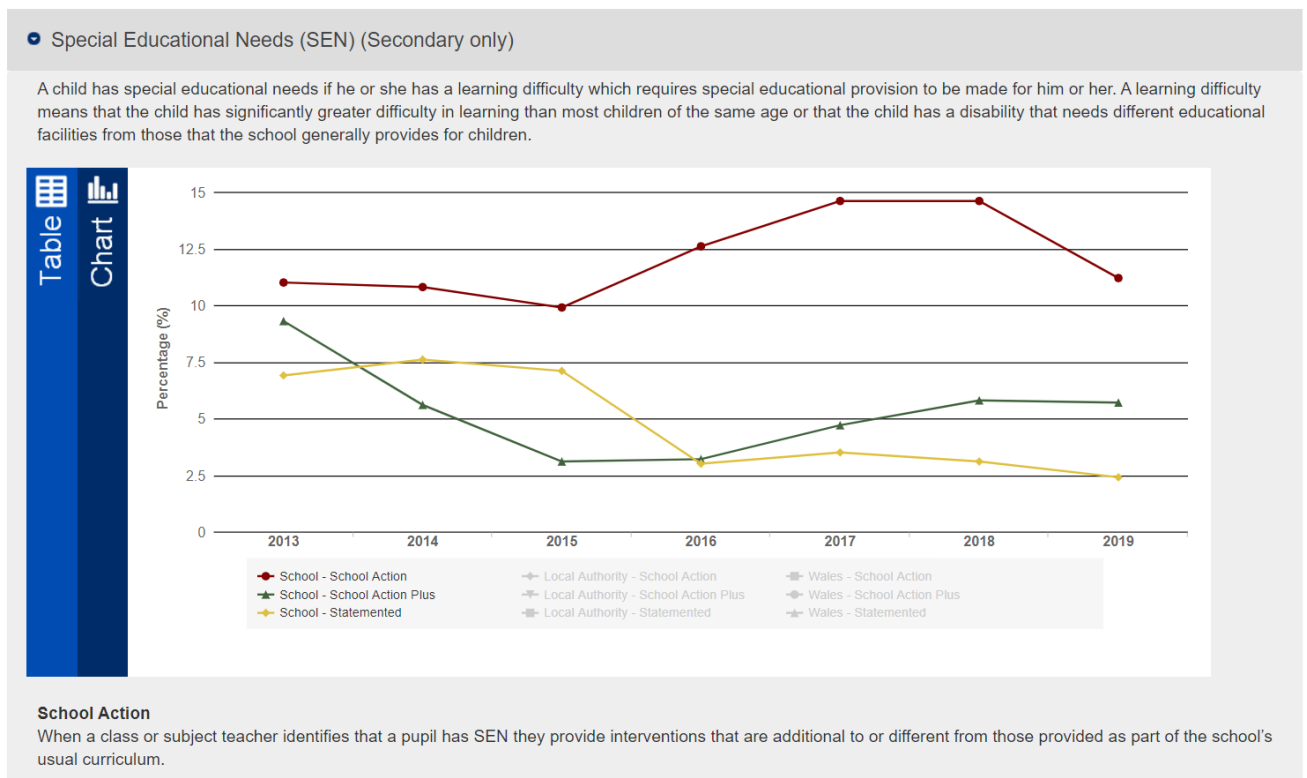
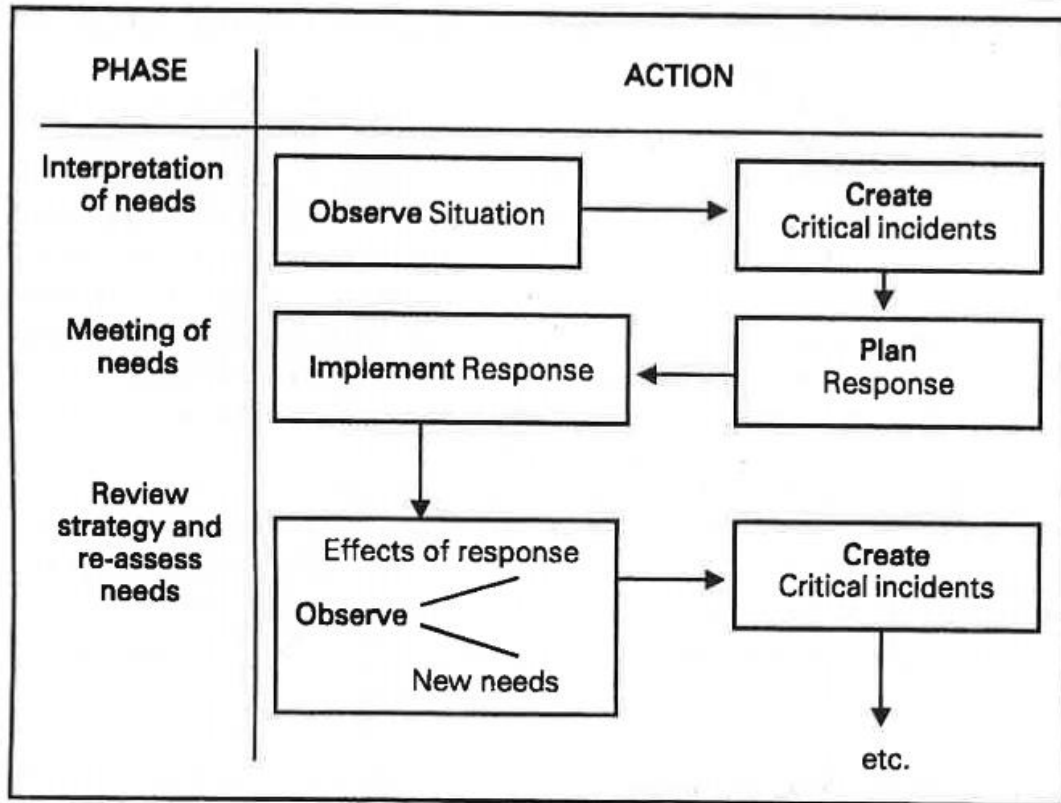


Figure 8 - Breakdown of SEN students at School A



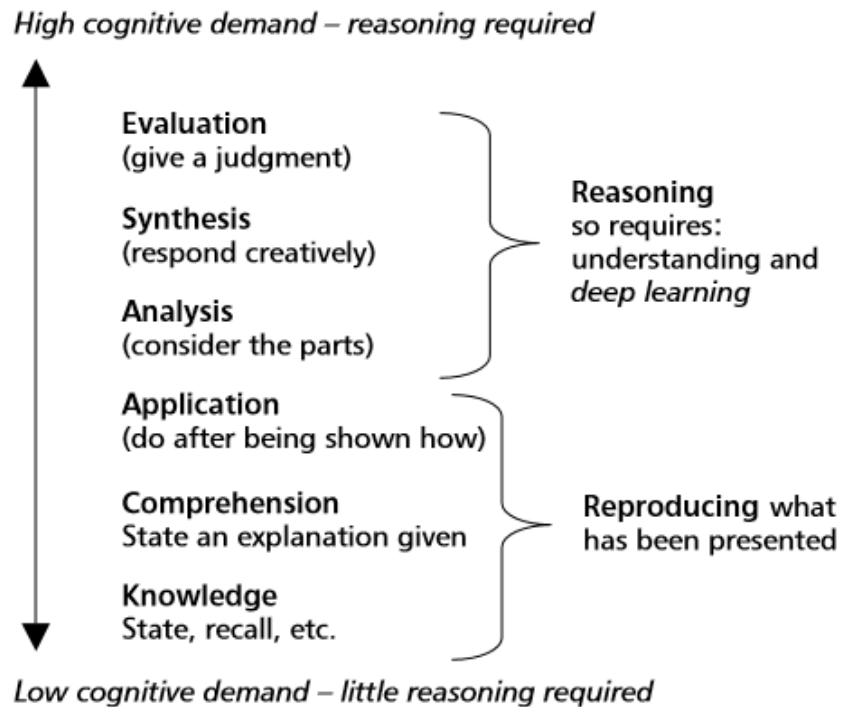
7.12 Appendix 12 - Figure 9 - CRITICAL INCIDENT MODEL AS DEVISED BY TRIPP

Acquired from - Tripp (1993). *Critical Incidences in Teaching*. Routledge.



7.13 Appendix 13 - Figure 10 - BLOOM'S TAXONOMY

Acquired from - Petty, G. 2006. *Evidence-Based Teaching: A practical approach*. 2nd Edition. Nelson Thomas Ltd.

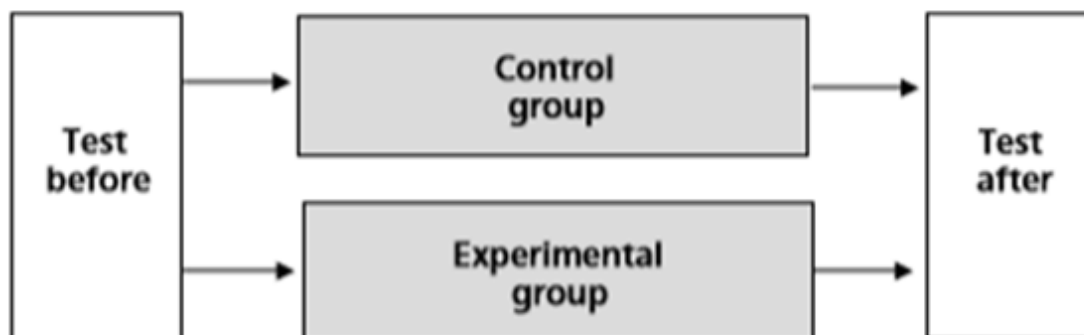


Bloom's taxonomy

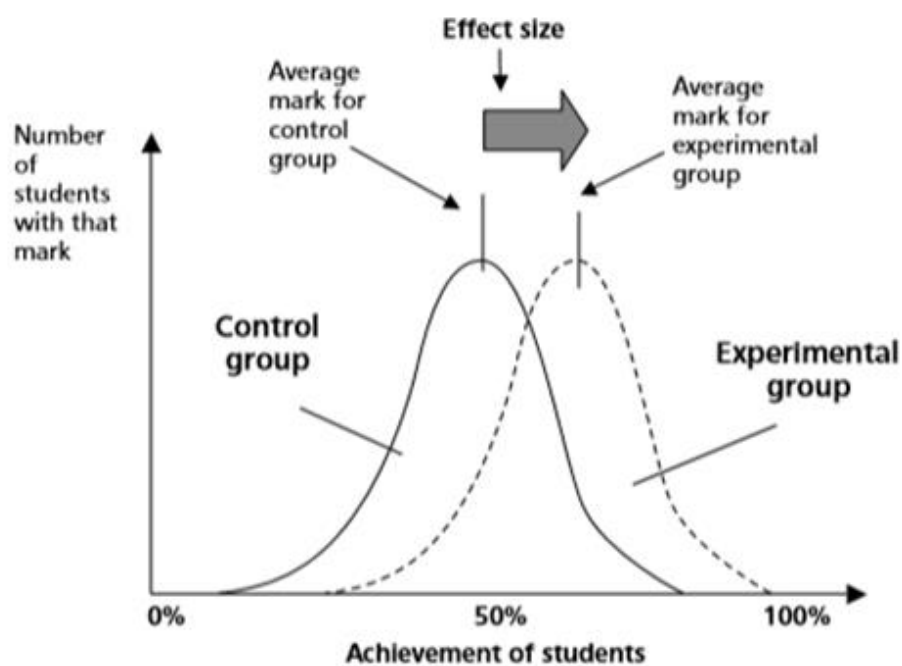
7.14 Appendix 14 - Figure 11 - EFFECT SIZE STUDY A AND B

Acquired from - Petty, G. 2006. *Evidence-Based Teaching: A practical approach*. 2nd Edition. Nelson Thomas Ltd.

A -

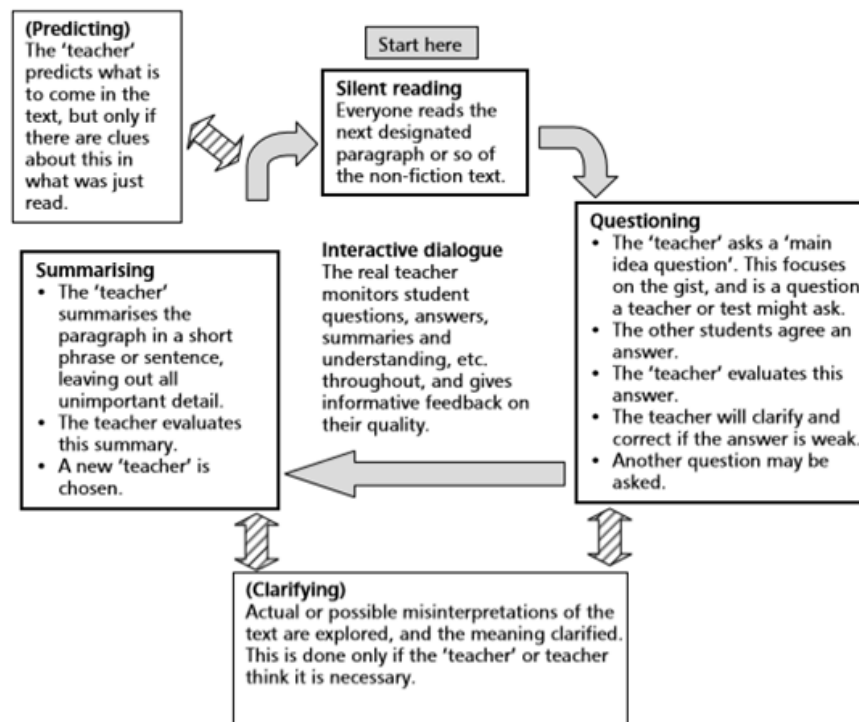


B -



7.15 Appendix 15 – Figure 12 - THE RECIPROCAL TEACHING PROCESS

Acquired from - Petty, G. 2006. *Evidence-Based Teaching: A practical approach*. 2nd Edition. Nelson Thomas Ltd.



The reciprocal teaching process.

7.16 Appendix 16 - Figure 13 - SNOWBALL TEACHING

Acquired from - Petty, G. 2006. *Evidence-Based Teaching: A practical approach*. 2nd Edition. Nelson Thomas Ltd.

