

LEVEL 6 ASSESSMENT SPECIFICATION

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An investigation into the impact of a 'hands up or no hands up policy' on learner performance and engagement.

With new changes to the curriculum in Wales, teachers and practitioners are developing their teaching and learning techniques. During my return to my first Professional Teaching Experience, I carried out research within the classroom based on Assessment of Learning. I decided to see how a 'hands up and a no hands policy' can affect pupils learning, motivation and concentration in the classroom. I selected this particular area because I noticed how frequent some pupils would answer questions which can sometimes over shadow other pupils. By using a 'no hands up policy' I wanted to see how this random selection would not only allow pupils opportunity to answer but to also see how this approach would affect concentration. The research took place at School X a 11-16 mixed gender school in Neath Port Talbot, the particular class in which the research was carried out was a year 7 class of mixed ability. The mixed ability ranged from very high achieving pupils to students who have a Learning Support Assistant. This year 7 class is dominated by several pupils, who are always eager to answer questions and participate in the lesson, I believed this class met the criteria.

With the official launch of the new curriculum for Wales, teachers and schools are beginning to think about what they can do to improve education, testing their theories out and then sharing their results with colleagues. Long gone are the days of a teacher standing in front of their classes talking at pupil's lesson after lesson. Teachers play a vital role in students' lives and are intrusted with educating them (Dylan and McGuire, 2011). As time has progressed teachers have moved past being specialists and are now generalist teachers. There is a high expectation that teachers will be flexible, resourceful and dedicated to the profession. With teachers playing such a vital role in pupils' lives, it is inevitable that the key to educational change will come from them. Although teachers are there to implement a curriculum, they have to redesign that curriculum to fit with their school and pupils (Dylan and McGuire, 2011). Boudersa (2016) argues that teachers play a crucial role in education and preparing teachers for the profession and the waves of change that comes with it is a high priority for most education systems around the world. Establishing how important a role teacher's play in curriculum development, I decided to look further into how exactly a

teacher can support change. It is a given that a teacher's main role is to teach children important information around a given subject. Alongside this teacher must develop assessment strategies to see how well pupils are retaining information (Black et al, 2003). When investigating the presence of formal assessment in the classrooms it can be non-existent, arguably this could be to the pressure it puts on a department to make significant changes to the departmental plans and policies. However, the evidence shows that simple changes have the ability to make improvements on results of conventional tests (Black et al, 2003).

In order to effectively assess pupils, a success criteria needs to be implemented, this allows teachers to see what specific skills and knowledge the pupils should gain (Angelo and Cross, 1993). There is an array of assessment techniques that teachers can use including; learner-centred, teacher-centred and formative assessment. For my research I decided to focus upon learner-centred assessment, allowing me to focus on how the dynamics of a classroom can improve learning. (Angelo and Cross, 1993). Lambert and McCombs (1998), suggest that considering the importance that has been placed on academic performance, it is essential that as teachers we are able to identify what works well for learners. In order to do this, we need to be able to observe how they behave and react during lessons. These observations allow us insight how each pupil learns and what suits their needs. Brown (2003) agrees with Lambert and McCombs (1998) suggestion that in order for academic achievement to be made, perhaps teachers need to shift away from teacher-centred approaches and move towards the new shift of learner-centred approaches. Brown (2003) also discusses how this change will enable teachers to support and meet the demands of the 21st Century, which has provided new advances within the law, technologies and diverse student needs that need to be met. In order to form an overall holistic positive approach, it is important to consider how much impact learner-centred practices can benefit pupils. Understandably, the main positive that is the focus of this practice is the academic performance improvement. However, it can be noted that when this type of practice is carried out the research highlights other skills which develop. Including lifelong skills which carries forwards through lifelong learning and the development of social and emotional skills. Both contributing to the overall holistic learning journey pupils go through (McCombs and Miller, 2007).

There is opposition to the idea of learner centred practices and assessments, Kain (2003) argues that previous studies have shown that pupils were more receptive to the more traditional methods of teaching. With this in mind, it is important to consider how learner-centred approaches impact pupils; resilience, complacentness and self-drive. In some cases, learner-centred practices can lead to pupils finding a comfort zone and staying there rather than yielding the rewards of self-drive through being in the 'struggle zone' (Gregory 1997). If this continues throughout a pupil's education it can arguably reduce their receptiveness to challenge and not prepare them to be ready for challenge in the future (Hansen and Stephens, 2003). With new things emerging in the teaching profession on a regular basis, teachers time is becoming more and more elusive. In order for learner-centred practices to take place teachers need to be able to, in an ideal world, equally spend time getting to know individuals learning needs and what can be done to support them in a learner-centred way. In theory this would be an ideal world, but as Brown (2003) points out it is the majority of the time it will not work out this way. Meier (1995) also illustrates how within educational facilities there is not only a diversity in the way pupils learn but also diversity within culture, religion and gender. Although, ultimately the basic principles of teaching remain effective to all learners at some level, their motivation and drive can be affected by what some students from different cultures or social background experience (McCombs and Whisler, 1995). Even in theory, why when and how learners are taught can affect how they engage and react to a lesson even if all learners were on a level playing field. Understanding how these differences occur is essential for ensuring that all learners will reach the same knowledge of the topic by the end of the lesson (McCombs and Whisler, 1995). Green (1999) supports McCombs and Whisler (1995) claim that ultimately all learners have the capacity to learn, process and recall knowledge if the teaching strategies are effective to each learner. This allows learners to be on an equal playing field where they will all receive the equal opportunity for success in the classroom and therefore in life. Gardner's (1993) research into the identification of a total of eight intelligences suggests that in order to achieve equality in the classroom each learner must be provided with the opportunity to fine tune their area of strength in relation to the eight intelligences. Therefore, when assessing how well learners are achieving it is important that we do this in a variety of ways to ensure each learner has the opportunity to excel in a way which supports the way they learn in the classroom. As well as considering how learners learn, it is also important to take into consideration how emotions can affect a child's

learning and development in the classroom. Sylwester (1994) argues that emotion can have an effect on the attention and learning of children. If there is a high precedent for learners to produce work that is a level which is expected of them and if learners do not meet this requirement then the feeling of failure and disappointment from a teacher can impact the child's mentality. Of course, for both adults and children, the feeling of failure and disappointment has an effect on our physical health as well as mental health (Sylwester, 1994). If learners begin to associate these feelings towards a teacher or subject then it becomes near enough impossible for them to have the equal opportunity to develop their intelligences (Gardner, 1993). In turn, this lack of equal opportunity leads to negative impacts on learners including, lack of motivation, poor performance in summative assessment and a heightened stress level (Green, 1999). With taking all this into consideration it is important that teachers recognise needs of all learners, not just learners who have Additional Learning Needs. When planning lessons from a Scheme of Work, the variation in tasks is essential in ensuring every child has the opportunity to answer questions and develop their knowledge and academic ability in a way that enables them.

The issue with the development of learner-centred practices is ultimately going to rely upon a school having the funding and opportunity to create student-centred learning Environments (SCLEs). Having everyone on board to make the change is half the battle, the other is ensuring that a school has the ability to provide the SCLEs. These learning environments need to be suitable to allow learners to enquire, investigate and report using the appropriate resources (Hannafin and Land, 2000). With the development of the Digital Competency Framework in Wales, the need for technology in the classroom is at its highest. Combining technology and learner-centred practices will be a big undertaking for schools across Wales, especially those in the most deprived areas. With the Welsh Government (2016) setting high expectations of DCF in the classroom across the curriculum, teachers are expected to utilise the use of technology in the classroom. They are encouraged to use DCF as a formative assessment tool which will allow teachers to have a more comprehensive understanding of a learner's progress, how they are accelerating in some areas and how they can support learners in areas of weakness. Learners, especially of secondary school age are technology savvy, and in some instances may perform better with the use of technology in the classroom and have the chance to find their niche through the use of DCF in the classroom.

The use of formative assessment in the classroom leads to a more learner-centred approach. Formative assessment allows learners to take charge of their own development on a lesson by lesson basis rather than a summative assessment. Summative assessment especially annual assessment does not allow learners to take charge of their learning. By this point in the school year it is too late for learners to develop and progress in the classroom. Of course, schools will almost definitely have to continue using summative assessment to ensure that overall the school is able to provide provision for learners. The use of homework allows for teachers to periodically re-assess learners understanding and knowledge as well as providing feedback for learners on how they can improve (Boston, 2002). The particular use of effort grading for homework is a useful reflection tool for learners. The use of effort grading in the classroom is tailored to individual learners and does not have the same emotional impact as levelling or grading (Sylwester, 1994). Therefore, there is a reduce in pressure on learners and encourages learners to put more thought and effort into homework tasks because a lower achieving pupil can get an 'outstanding' effort grade. This confidence boost could allow for learners to want to achieve better and work harder ultimately allowing all learners to have the opportunity to academically achieve the best they can (Bonesronning, 2010). Summative assessment does not allow learners to create goals for themselves that are personal. Whereas formative assessment allows learners the opportunity to set meaningful targets that will support them to reach their own personal goal, this control allows for learners to become more motivated (Cauley & McMillan, 2010).

This empowerment learners have on their own learning makes learner-centred approaches much easier to carry out in classrooms. Learners are granted the opportunity to be proactive in their own learning in every aspect with teachers facilitating the opportunity to learn and develop (Nicol & Macfarlane-Dick, 2007). Simultaneously as learners can assess their own learning through formative assessment, teachers can also gauge understanding. However, it is important that teachers use formative assessment and not just record it. Throughout a lesson, teachers should be noting what areas learners are struggling and are comfortable with and use this information during the lesson and in the future (Leahy, 2005).

This literature has altered my teaching methods and views. I find myself assessing learning constantly throughout my lessons. Looking at the quality and understanding of learner's work, looking at low and high ability learners. It is easy to assume that high achieving learners will automatically understand and be able to complete tasks. However, I have discovered that

sometimes, especially with more practical and creative tasks it can more often than not be lower ability learners that flourish. The use of questioning in the classroom to assess learning can also be beneficial to both teacher and learners. Teachers are quickly assessing knowledge through the answering of questions and learners can reflect on their own work and evaluate if they need to make alternations to their own work. The option of opening up a question to the whole class for volunteers compared to random selection would naturally make learners want to answer correctly. The benefit of teacher random selection allows for all learners to develop their concentration and learning skills, it also allows for them to build confidence. Through selecting out of the whole class, teachers have the opportunity to increase confidence in learners who know the answer but do not put their hands up (Cotton, 1988). Using all this information I decided to focus on the use of formative assessment in the classroom with regards to a 'hands up no hands up policy'.

At School X there is a use of varying techniques and practises in regard to the assessment of learning, including the use of formative and summative assessment. The department has a heavy focus upon formative assessment. Although summative assessment is used for yearly reports to identify what the pupil has achieved at the end of their school term or year, it can be restrictive. It does not allow for teachers to observe how the pupil has actually processed and learnt that information. Whereas formative assessment can take place on a day-to-day basis, this allows for the pupil to establish what they do and do not know and therefore a teacher is able to plan effectively for the future lessons (NFER Accessed 09/05/19).

School X's decision to incorporate both seems like the logistical choice, it allows day-to-day teaching to be easier and smoother for both the teacher and the pupil. Whilst simultaneously having a summative report allows pupils to monitor their own progress and provides hard data for the school. The use of formative assessment in the Geography department of School X is noted in the departments Scheme of Work for each topic. There are set questions and targets the pupils should meet by the end of the topic. These are met through various tasks in the lessons planned. Alongside this homework tasks are set which not only reiterate the topic but also encourage learners to be independent and creative. The benefits that are gained through homework are discussed by Boston (2002), stating that

homework tasks allow for feedback for both teacher and pupil. This feedback allows reflection for both parties, teachers are able to see how their lessons have communicated to pupils and pupils can establish what their strengths are and areas for improvement. School X have also considered how they mark pupil's homework tasks. Levels are used for summative assessments such as literacy and numeracy tasks, whereas homework tasks are graded by pupil's effort level. This use of effort level is a real eye opener for the pupils, for example a pupil who achieves Level 7 in a summative report does not necessarily have an outstanding effort grade. The effort grades are based upon each individual child and do not take ability into account. This method does mean that teachers have to spend quality time getting to know the pupils in their class order for the method to be effective. In turn this method can allow for pupils to academically achieve more argues Bonesronning (2010). At School X it was clear that at both ends of the academic spectrum pupils cared about what effort grade they received for their homework task. Highlighting to high achievers that they needed to continue putting effort into their work and for more low ability classes they were recognised for their time and effort into what may have been a difficult homework task. Considering the formative assessment that School X has in place, I opted to follow the departments framework. Both pre and post test results were awarded an effort grade based on the individual's effort and for data collection a summative assessment. Pupils were only informed of their effort grade levels not their summative grade.

The purpose of this research is to assess the impact of a 'hands up or no hands up' policy. Assessing whether this makes a difference to performance, progression and knowledge of a topic. After considering the wider literature on formative assessment and following School X's department policy, I decided upon the use of pre and post testing incorporating the use of a 'hands up no hands up policy' with a mixed ability year seven class. This class is dominated by a handful of learners who are always eager to answer questions and get involved in all aspects of classroom life. With the odd exception the majority of the time the only hands up in the room come from these learners. It is clear that the other learners in the class have developed a reliability of questions being answered by these learners. In order to test learner's concentration through formative assessment. I began to collect data by carrying out what Cranmer (2018) would refer to as a pre-test,

learners completed a test that was comprised of different types questions. These questions included; spelling test, selecting the right answer and extended writing answers. After this pre-test I changed the approach in which I ask questions in the classroom. Rather than allowing a free for all where learners but there hands up if they want to answer, I used names on lollipop sticks for randomisation. During this lesson, I asked the normal class teacher to make notes and comments on what she was observing in the classroom. This allowed me to full focus on the lesson but use observations from a third party. In the next lesson, learners completed the same test as previous but this time it would be a post-test (Cranmer,2018). The intervention of using randomisation between each test was used to ensure that there was progression for learners.it allowed me to develop a strategy where I could ensure the progression through the use of questioning techniques. The use of a pre and post-test, especially in this case, allows for hard data to be created and makes findings easier to interpret and analyses. The use of this is highly supported by some academic researchers such as Burke Johnson and Larry Christensen (2008). However other researchers highlight that there can be draw backs with this method. Marsden and Torgerson (2012) argue that the progression between the pre-test and the pro-test could be due to other factors not just the intervention that took place. It is important to note however, that there will always be some draw backs with all research methods. As well as the research methods, it is also important to consider the location and environment of the research taking place. this in its self is a benefit of the research, learner's familiarity with the class teacher could allow for them to feel more comfortable and relaxed during the research lesson. There are various studies carried out that evidently show a good relationship between learners and teacher allows for the increase in the learners learning and understanding (Handal and Vaage,2005). On the other side of this view is that when examining research carried out in the classroom where there is a relationship already established can create a bias view. Before beginning the sequence of lessons allocated for the research, I provided learners with a letter informing them of what the research was for and how they could withdraw their participation if they or their guardians did not want them taking part. This letter provided enough information to ensure that the research was ethically carried out correctly (Ary et al 2009). The use of action research in the classroom allows for the teacher to develop their own skills and can assess and reflect on their own teaching practice which is a positive for both the teacher and the learners (Mitchell et al, 2009). Arguably however, action research

takes a lot of planning and preparation for the teacher to ensure that it is carried out effectively and ethically. In order to effectively research teachers need a clear idea of what the intervention will be, the duration of the intervention and how often the intervention will take place (Saracho,2014).

In order to be able to successfully evaluate my research, I followed a sequence of four lessons. the first lesson, learners sat what Cramner (2018) would call their pre-test. Learners answers a series of questions relating to Antarctica. The majority of the class performed poorly in relation to what they are capable of. The highest mark was 14/40 and the lowest 1/40. This poor performance is linked to the lack of formal teaching in the classroom. This pre-test was for me to highlight areas in which learners had very little knowledge or misconceptions they had.

During the next lesson in my sequence, I used a 'hands up policy' too how much the learners would engage with the lesson considering their performance in the test. The first task learners completed was a Mystery Photograph, learners answered the 5Ws in relation to the photo. Observations show that the whole class seemed engaged with the image and most were willing to engage in conversation and suggest what the photo may be showing. This task discussion was dominated by a selection of learners that are always enthusiastic and willing to participate in classroom activities. Learners then moved on to a task regarding the physical features of Antarctica. This activity required learners to identify physical features on a map and to calculate the distance between Antarctica and other continents using scale. When asking for a volunteer to show the class how they got their answer, it was again the same learners dominating the classroom. As this is a mixed ability class, there were some learners who find maths difficult. These learners began to 'switch off' and disengage with the lesson. I carefully explained to the learners how to measure scale and went through one question with them. Learners began to answer the remaining questions and seemed engage. However, as the questions became more difficult engagement dropped and yet again the same learners were dominating the answering of questions. This was an effective task as it allowed learners to work on their numeracy skills as well as their geographical skills. However, the crossover was difficult for some learners and therefore disengagement began to take place. After completing this task, learners watched a video which reinforced the information they had received during this lesson. Overall, learners were engaged with this

video. I stopped and paused the video to ask questions about what they could see, the contribution of answers came from more learners than usual. Learners seemed more confident in their answers because the information had just been provided for them. There was still a fight for dominance in the class with the same pupils adding to other people's answers and contributing prior knowledge to the discussion. As the short video continued most learners were still engaged with the lesson, a select few were more interested and focused on gluing in sheets to their books or colouring. This highlighted that even when using multimedia in the classroom learners can still quickly become disengaged with the lesson. Moving on from physical features, learners began looking at animal adaptations. I showed learners two images, one of what an emperor penguin looks like in the present day and what scientist estimate a penguin looked like previously. Learners were required to spot the difference between the two images. Overall the engagement and enthusiasm of this task very high. Learners who do not usually contribute to class discussion were keen to point out some of the differences between the two images. However, when I questioned them further and asked why they thought the penguin had changed in this way, they were reluctant to offer an answer. Again, the dominant learners in the class were more than happy to hazard a guess and contribute to the discussion. This highlighted that through the use of some tasks I am able to differentiate tasks to allow all learners to access the lesson and contribute to class discussions in a meaningful way (Gardner, 1993) The plenary task of this lesson was to complete an exit ticket. The exit ticket required learners to write down three things they learnt, two things they want to know more about and one thing they did not understand. After looking through the exit tickets, there were no learners who provided one thing they did not understand. Naturally this would imply that the lesson went well and there were no issues. However, looking at learners work in lessons it was clear that there were areas that some learners were struggling with. Especially, the physical features of Antarctica.

The third lesson in the sequence was my intervention lesson, this lesson I implemented a 'no hands up policy'. Learners were randomly selected using lollipop sticks, upon entering the classroom I repeatedly reminded learners that I was using this method and during this lesson I would only ask the learner whose name was on the lollipop stick. Learners were provided with a starter task 'pick any animal that we have here in the UK, how as it adapted to its environment.' All learners seemed to engage with this question and attempted to note down what they could when I again repeated it would be random selection in the

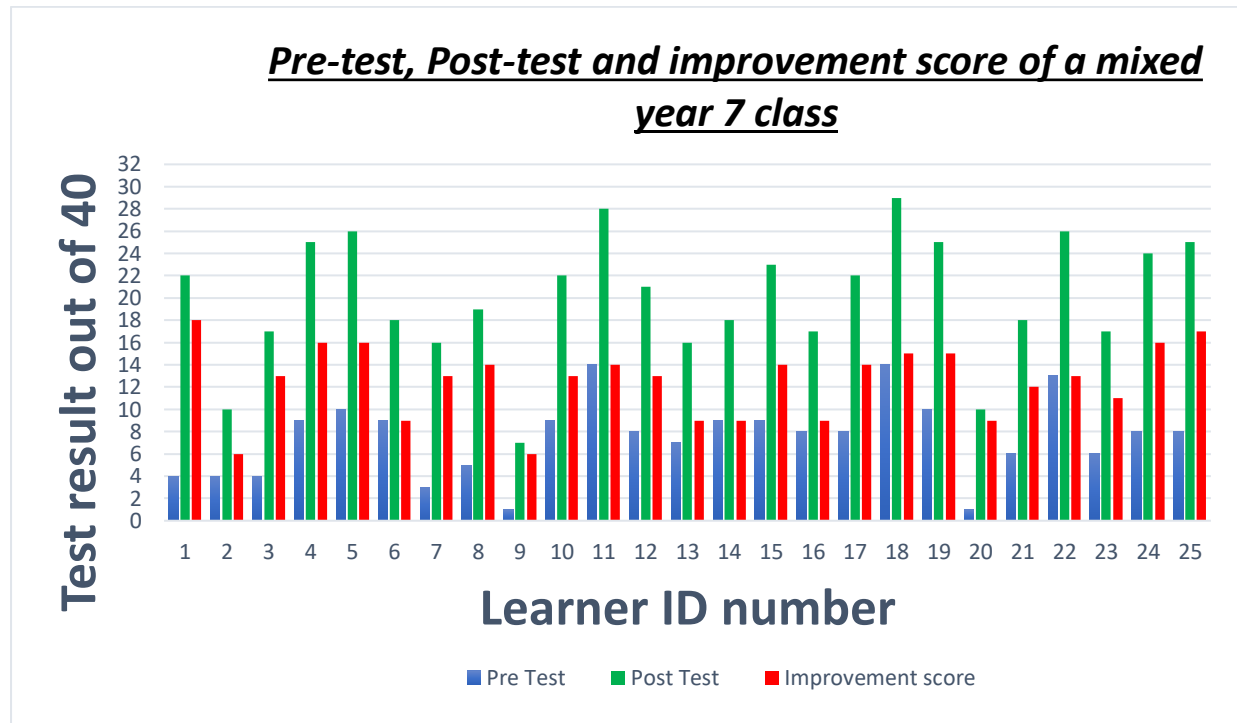
lesson. The two pupils that were selected to share their answer for this starter, were two pupils who are very capable. These learners work is often correct and methodical, but they lack the confidence to share their answers. When they had shared their answers, I ensured that I praised them for their contribution, this seemed to settle the whole class (Handal and Vaage, 2005). The main task of the lesson was to complete an adaptation worksheet on the animals that live in Antarctica. As a class we went through each animal and learners made notes from the board and the discussion on each animal. The pace of this task was pretty high paced, and most learners found it fine to keep up, but a few did struggle. As we went through each animal, I further questioned learners to encourage them to critically think about why the animal needed to adapt this way. Concentration during this task was very good, the random selection of learners ensured that they all attempted to stay as focused as they possibly could in case they were selected to answer. When learners were unsure of what the answer may be, I provided some prompts but eventually these learners got the answer. This did take up a lot of the time in the lesson however, something which I did not account for. At this point in the lesson the usual learners who contribute seemed uninterested and disengaged with the lesson, they became frustrated when I repeatedly told them to put their hand down because it was not their turn to answer. The overall enthusiasm for this task was very pleasing, learners were very keen to ask questions and find out more information on the animals we looked at. It was unclear whether the enthusiasm was because the learners were actually engaged and concentration on the lesson because of the random selection or because they were actually interested by the subject. My teaching in this lesson had vastly improved and gave me good opportunity to work on my knowledge and questioning skills compared to the same lesson I taught with other year seven classes. Overall this task seemed much more effective with this class (Mitchell et al 2009). The main case study for animal adaptation in Antarctica was the penguin. Learners were showed a video on how penguins have adapted to the harsh conditions of Antarctica. From observations made, all learners were engaged in the video and when asked a question the learners seemed entirely confident with their answer and sometimes the learner further extended their answer using key ideas and concepts of adaptation. Learners were again keen to ask questions and find out more information in the penguin. Comparing the effectiveness of multimedia videos in this lesson compared to the previous lesson was very interesting. Again, difficult to determine why exactly it had this effect on learners. The video was followed on by

a labelling task of the penguin's adaptations to the Antarctica. Learners were provided with a drawing of a penguin and labels were provided on the board for learners to add to their penguin. Learners were very quick to complete this task and asked if they could add the information they had learnt from the video onto the penguin. There was also an extension question 'why are all these adaptations important to the penguin?' The high ability learners in this class are usually the only ones who have the opportunity to complete an extension question. However, roughly two thirds of the class had answered the extension question. From reading a mixture of answers from the class, the accuracy and quality of the work was very good and even excellent from some surprising learners. Learners then moved onto vegetation adaptation in Antarctica, learner's prior knowledge of plant requirements was very good and helped this discussion move quicker than usual. Learners who were randomly selected provided good factual answers on the processes of plants and when further questioned why this might be difficult in Antarctica there were some very good responses. At this point in the lesson, engagement had dropped. However, the lack of engagement could be seen in several of the learners who are usually fully engaged and willing to participate in the classroom, something which the observer noted. The observations show that after being repeatedly told they could not answer unless they were selected, their motivation and concentration seemed to be lacking. As McCombs and Whisler (1995) note, it is difficult to ensure you are meeting all learners needs consistently throughout the whole lesson. At the end of the lesson, learners were required to fill in another exit ticket of the same format. There was a clear difference in the exit tickets between the two lessons. the three things I've learnt were mostly factual in nature and used key terms. The two things I want to know more about were very specific and highlighted an area of interest that learner clearly had. Lastly, the one thing I did not understand was completed by some learners this lesson. these were very specific points and came from learners who never usually say they do not understand. For example, a female learner in the class who has a slight stutter will not contribute to lessons and will not ask for help or support if she does not understand the task. However, on the exit ticket she noted one thing she did not understand. 'What is the anti-freeze inside the Ice Fish.?' This is a very specific question, which shows keen interest in the topic. The exit tickets from this lesson highlighted to me how useful exit tickets can be in the classroom. It allows learners who lack confidence to ask and answer questions, showing that they have understood and engaged the lesson but that they are also interested in further

developing their knowledge. Giving learners opportunity to feel comfortable with communicating to the teacher is an effective way to ensure that you can maintain a good relationship with all learners in the classroom (Handal and Vaage, 2005)

The fourth and final lesson in the sequences was the post-test, learners completed the exact same test they had previously completed. Learners were unaware they would be repeating the test and their workbooks were kept in the classroom. Therefore, the results of the test show a true reflection on what information they did or did not retain during the lesson which is useful for comparative purpose. During the test learners seemed focus on answering the test, I informed learners that I had high expectations of them drastically improving their test score. The completion of the test marked the end of the data collection.

Using the data, I collated from both the pre and post-test I was able to produce a bar graph illustrating all the learner's pre-test, post-test and their improvement score. Presented below is the bar graph in question. As Johnson and Christensen (2008) discuss, the use qualitative test results allow for the data to create visual representations of findings.



The bar graph shows that every learner performed better in the second test after the intervention had taken place. The biggest improvement can be seen from learner No.1, with an improvement score of 18. When cross referencing learner number to learner name, learner No.1 is in fact the female learner discussed previously. This could suggest that the intervention and the use of exit tickets has improved her confidence in the classroom and in turn improved her test score. The lowest improvement score is 6, from learner No.2 and No.9. both these learners are males. These two learners are repeatedly noted for lack of engagement within the lesson. Learner No.9 also had the lowest post-test score, this male student has behavioural issues which affect his concentration in the classroom especially towards the end of the school day. Interestingly, the highest score in the post-test was unexpectedly not a learner who is considered to be a high achiever and during lessons does not participate. Learner No.18 achieved 29/40 marks in the post-test, during the intervention lesson this learner made some excellent contributions regarding plant life cycles and adaptations. After completing the research, I assessed this learner's workbook, and the quality and accuracy of her work throughout previous Geography lessons was very much that of a high achiever. For learners who display a lack of confidence an intervention such as 'no hands up' can be the confident boost that they need to progress further within each subject. For learners who lack confidence in their ability, the use of grading is more effective argues Sylwester (1994). I had estimated and made note prior to carrying out the post-test who I thought would achieve the three highest marks in the post-test out of the entire class Improvement score. Only one of these learners achieved a mark out of forty high enough to be in the three highest achievers. Learner No.22 is a female student, who often dominates discussions in class and is always eager to answer or add to answer someone else has given. This learner is a very consciousness member of the class and always strives to achieve her best, however, her engagement in the intervention lesson did decline after she had, had the opportunity to answer one question. In regard to this learner and others like her in the class, the use of summative assessment is essential for them as they like to be able to see how they have achieved and how they want to surpass this next time. As Boston (2002) suggests, there will be some learners who have a preference of summative assessment over formative. The two other learners were No.4 and No.15, both these learners are males and again similarly dominate the classroom and often have opposing views to others. During the intervention lesson neither learner was selected to

answer questions and observations show that their engagement in the lesson rapidly declined as the lesson progressed.

The bar graph shows that on face value the intervention lesson was effective in ensuring academic progression. However, as previously noted the validity and reliability of this information needs to be examined. It is clear that there are benefits from completing a pre and post-test, it allows teachers to evaluate how much learners are engaging with the topic and can correct any misconceptions or common mistakes. This method could be used every time learners begin a new topic; the pre-test is carried out therefore teacher can access gaps in knowledge. The intervention can then consist of filling those knowledge gap by using a mixture of 'hands up or no hands up' questioning. Then a post-test towards the end of the topic gives learners and teachers an idea of what the strengths and weaknesses are for all learners. However, in order to successfully correlated how random selection can affect engagement and concentration in lesson, it would be more reliable for a third party to make the observations of learners. This ensures that learners are getting the full attention of the teacher and can therefore get the most out of the lesson. the effect of the intervention lesson is very interesting, with the observer noting how the usual most dominant learners slowly beginning to disengage with the lesson and not showing the same level of enthusiasm and interested as they usually. Of course, this has a negative effect on these learners and needs to be considered if a teacher or department made a change to the new teachers questioning learners. However, it is important to note the positive affect this approach had on other learners, it allowed them opportunity to give their opinion, answer questions and improve their academic activity. With consideration to the effects on all learners it would be most beneficial to use a variation of questioning techniques to ensure all learners are able to access the lesson at an equal level and have opportunity to engage with the lesson. It is also important to consider that the improved performance by all learners is not directly linked to the intervention. There could be other environmental factors that influenced the post-test. For example, between having the intervention lesson and completing the post-test learner may have covered the topic in another subject such as science. The predominant result of this research is the impact that changes in practise can have on certain learners within the classroom. The effective use of exit tickets can allow teachers to assess quickly learners who have engaged in the lesson and those who are completing the exit ticket without actually thinking about it. The specific facts, interests and questions that were included in the

intervention lesson really allowed me to consider and reflect on my own practise. It allows reflection on what was potentially covered in enough detail and areas which need further clarification. Based on this piece of research I would encourage teachers to consider their use of questioning technique in the classroom and the use of exit tickets. It is important to ensure that we are encouraging high achievers to critically think and formulate their own opinions. However, encouraging lower achieving learners to contribute to class discussions is equally as important. All learners deserve the opportunity to access each lesson equally. This does mean that teachers may need to potentially approach tasks or discussion in a different way, but the results outweigh this.

There are several limitations to this study to consider when looking at the reliability of the results. Firstly, the class its self consists of a mixed ability class. Therefore, there would automatically be clear disparities between the results from both tests. In order to effectively assess the intervention lesson, it would be more effective to have learners of the same ability in the class. It is difficult to make interpretations of improvement scores of a test that would be more challenging for lower ability learners. Another limitation is the lesson being led by the researcher; this can lead to bias. A teacher has a clear idea of what they expect learners to achieve by the end of a lesson and a researcher has assumptions about how they think the research will turn out. This combination can lead to the bias of examining the results of the intervention, pre and post-tests. It would make the research more valid and reliable if the two roles were separate, so the risk of bias is taken away. It is also worth noting that if the research is carried out in a mixed ability class there needs to be provision to ensure that the teaching strategies that are used allow each learner to access the lesson on an equal level (Green, 1999). Although what Green (1999) suggests is a logical approach Meier (1995) questions if this type of teaching is even possible in the classroom, particularly with mixed ability classes. During the research I was fortunate enough to have a third party in the classroom that was able to make notes and comments on learners' engagement and concentration in a lesson. if a fully qualified teacher were too taking on this research it would be extremely difficult to make accurate and reliable observations of learners whilst simultaneously teaching learners (Saracho,2014).

Another major issue is the research its self. It is natural to assume that over time learners will progress in tests and assessments. Learners knowledge from the pre to post-test would naturally increase and become more accurate, therefore it leaves the test results redundant and does not actually prove that the intervention its self was effective in furthering

knowledge and engagement within a lesson. As Marsden and Torgerson (2012) discuss, there could be an array of different environmental factors that could have influenced the results from the research. It would be more effective to have a control group that follow a 'hands up policy' and another group where a 'no hands up policy' takes place. Both groups having the same ability, resources and teacher would allow for a more accurate comparison of the questioning techniques. This is something to consider for future research.

The research has allowed me to establish that a mixture of questioning techniques would be the most effective way to engage a class that enables all learners to be involved in the lesson. I have also seen how exit tickets are a beneficial plenary that is beneficial to both teacher and learner, this is something that I will carry forward in my professional development.

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