

Overview.

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Assignment Title: Prepare a portfolio (as though you were sharing with a mentor or student colleagues) which illustrates a critical reflection of progress made on the planning and implementation of three pedagogical principles.

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Student Number: 1400276.

Pathway: P-PGCE.

Targets from previous assignment:

	Target	What I have done in this assignment:
Target 1	Keep to the assignment brief, so my work is logically structured and appropriate.	I have followed the assignment brief, that has been provided on Moodle. I have also planned and structured my assignment, in accordance with the advice provided.
Target 2	Widen my reading to include more books and academic texts.	I have followed the suggested reading list, and have also included more academic texts and books.

Link to OneNote assignment: <https://uowtsd-my.sharepoint.com/personal/1400276>

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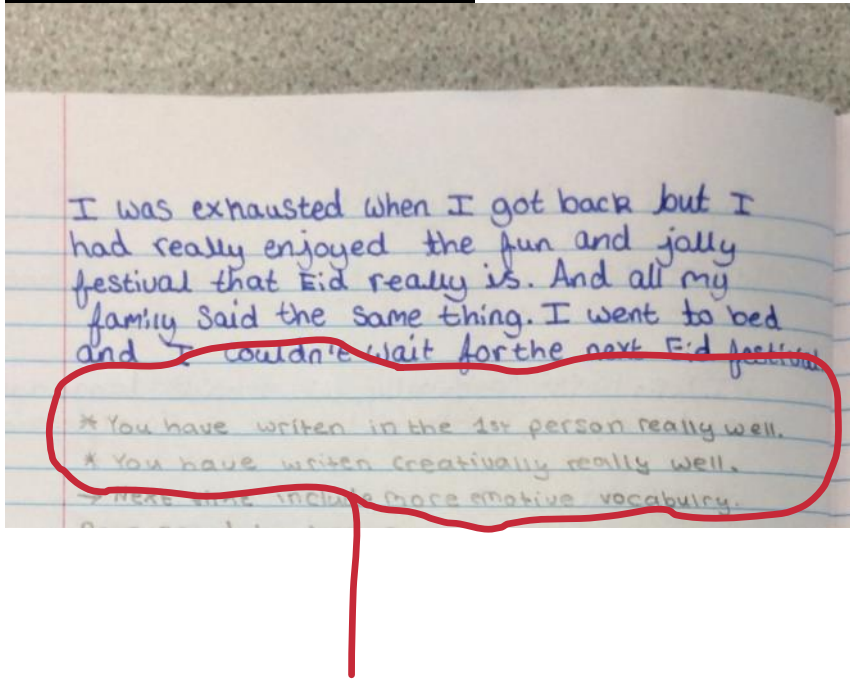
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Assessment for Learning Principles

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Illustrative Examples One and Two

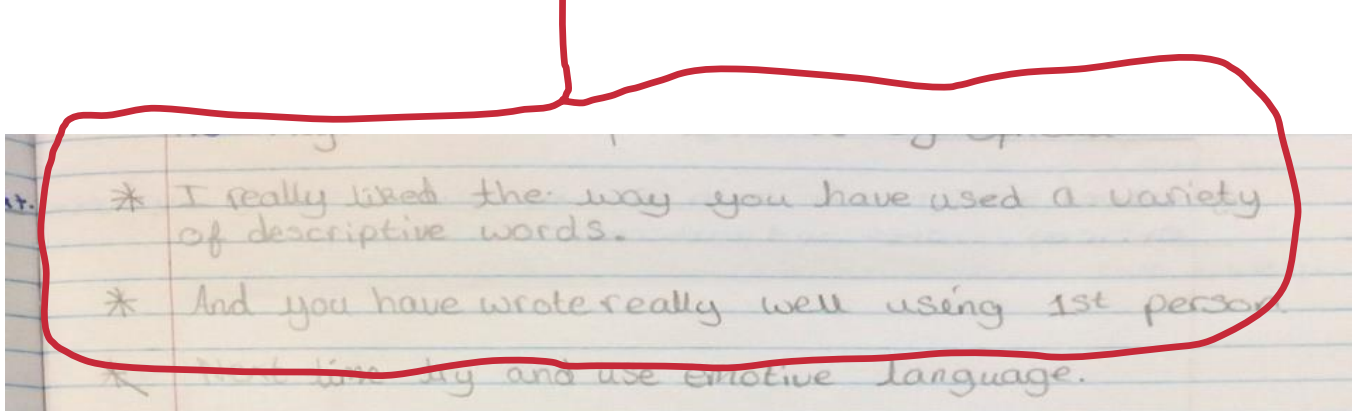


Here are two examples, of year six pupils using peer feedback to assess each other's work.

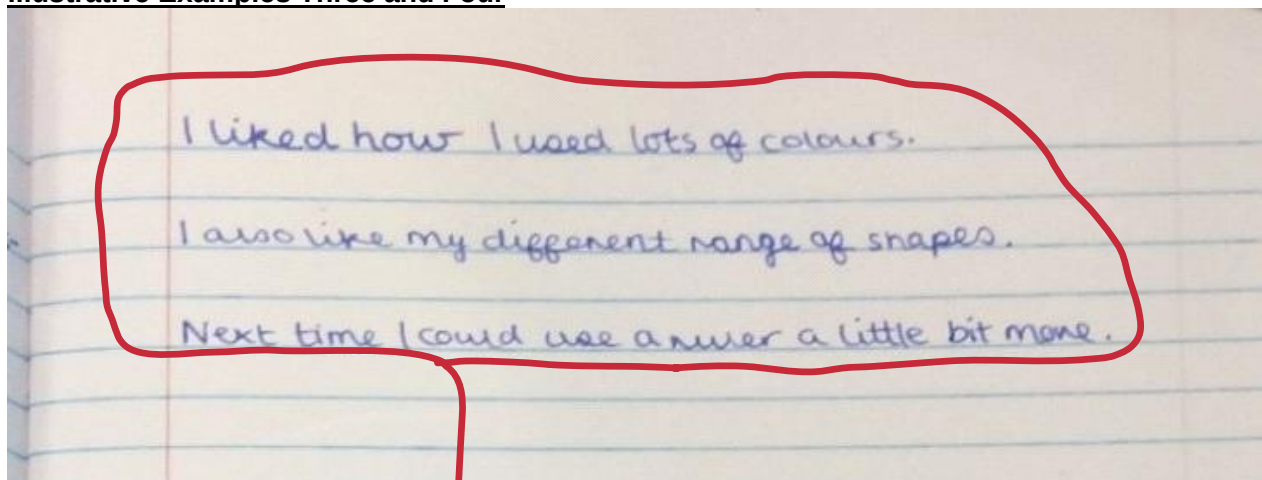
The focus of the lesson was writing a diary entry, as if they were celebrating the Islamic festival of Eid. The lesson included a cross-curricular focus upon literacy and humanities. Prior to the pupils completing the task, they created the success criteria together as a class. They were then provided with a set amount of time, before assessing their shoulder partners work, using the 'Two Stars and A Wish Format'.

I decided to use this format for the pupils to peer assess, as it allowed pupils to peer assess each other's work without difficulty. It requires pupils to provide two suggestions on where their peers excelled in their work, alongside a suggested improvement (Dyer, 2012). It was also a format that the pupils were familiar with, as we had used it during previous Health and Wellbeing sessions.

I believe that this method of assessment for learning worked well, as the pupils were involved in the creation of the success criteria. This resulted in nearly all the pupils being completely aware of what they were required to do, which influenced their peer assessment.



Illustrative Examples Three and Four

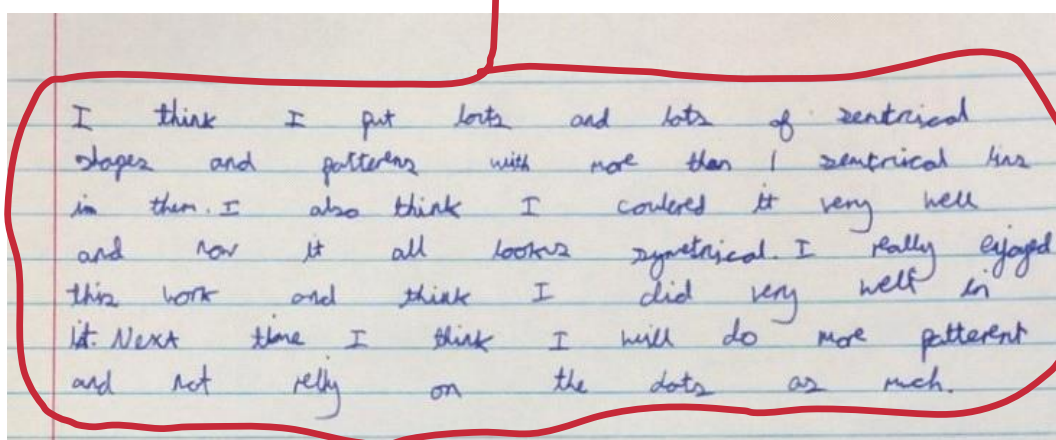


Here are two examples of year six pupils, self-assessing their own pieces of work.

This was during a cross-curricular lesson, where pupils were required to design a new cover for a Qur'an, using symmetrical shapes and patterns. Prior to the pupils completing the task, the teacher provided suggestions on how the pupils could start their self-evaluation. This was done, to ensure that all pupils felt confident in self-assessing their work.

I decided to encourage the pupils to self-assess their work, as I believe it to be an important aspect of improving learning. According to Andrade and Valtcheva (2009), self-assessment allows pupils to identify where they need to improve, alongside providing them with the opportunity to set realistic and personal goals. It also provided the teacher with an insight into how the pupils felt about their work.

I believed that overall, this method was a success. Nearly all pupils were able to successfully self-assess their work. I provided pupils with a sufficient amount of time, to confidently complete their self-assessment. NFER Classroom (2019) has noted this as being an important aspect of self-assessment, alongside allowing pupils an adequate length of time to make improvements on their work. In hindsight, I did not provide pupils with an opportunity to make improvements during the lesson. This is something that I will take into account, when I use self-assessment at a future date.



Illustrative Example Five

Plenary:

- Pupils will be brought back together as a class, to take part in the plenary.
- There will be a selection of cards containing key Islamic terms, which will be placed face down upon the table.

- to take part in the plenary.
- There will be a selection of cards containing key Islamic terms, which will be placed face down upon the table.
 - A pupil will come up to the front of the class and select a card. They will then have to provide a clue to the class, about the card they have picked. They are not allowed to specifically state what is on their card. (Example: who is the God of Islam? - Allah).
 - The teacher will model the first card, with the pupil who correctly guesses first coming to the front of the class.

Above is an example of a formative quiz within a lesson.

This took place during a year six Religious Education lesson, where the main focus was on Islamic celebrations. The purpose of the plenary, was for the pupils to recap the terminology that they had learned during the previous two lessons. This activity allowed me to quickly evaluate the learning of the whole class, as well as providing me with an insight into how successful my teaching had been.

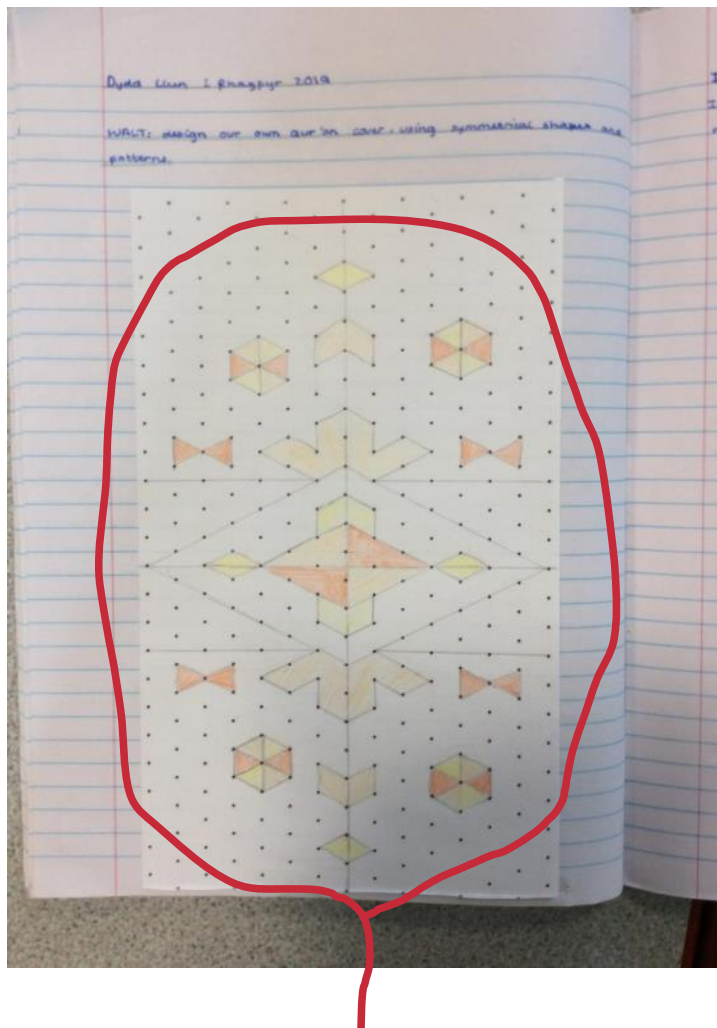
I decided to use this method, as it allowed me to provide instant feedback on the pupils learning progress. If a pupil showed signs of difficulty in creating a clue or providing a response, then I was at hand to assist them sooner than I would have done if it was a written, summative test. It also allowed me to notice if there were any gaps in the pupils knowledge (Cox and Clark, 1997). I chose to use this method as a plenary because it encouraged pupils to reflect upon their previous learning.

Once the lesson had taken place, I had a conversation with my class mentor. It was discussed that the use of a quick, formative quiz as a plenary worked incredibly well. The pupils were engaged and remained on task, features which the Department for Education and Skills (2004) note as being signs of a successful plenary.

Cross Curricular Responsibilities

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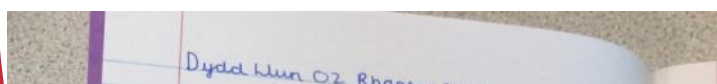
Illustrative Examples Six and Seven

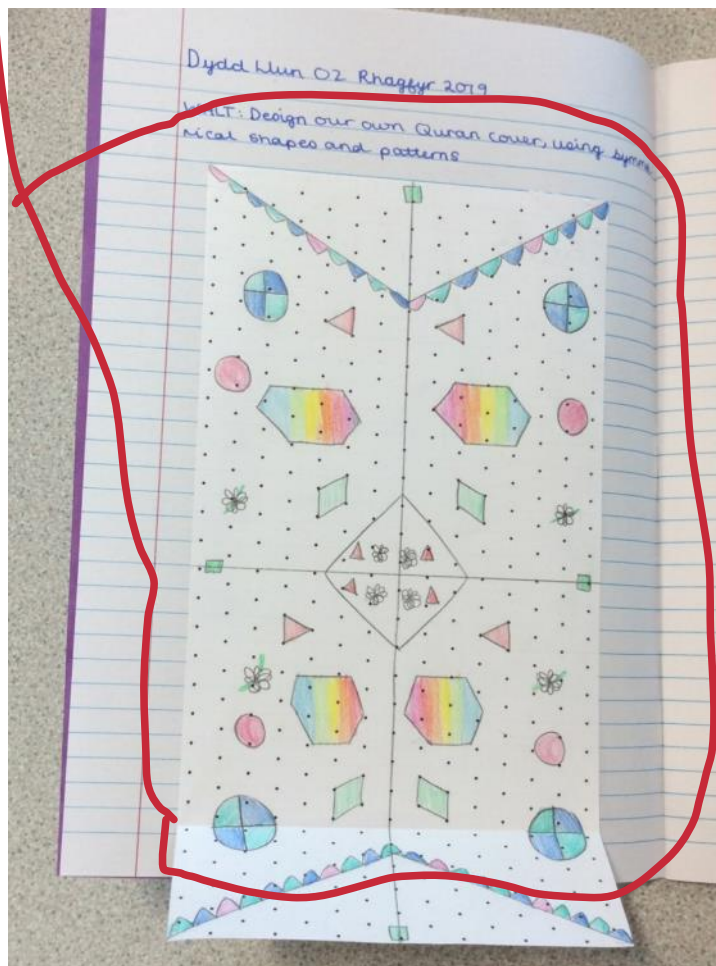


In this numeracy lesson with year six, the pupils were tasked with designing a new cover for the Qur'an, using lines of symmetry. This lesson incorporated the previously learned knowledge in both numeracy, and humanities. I introduced the pupils to the main task, by stating that a local Imam had been in contact and had asked the pupils to create a new cover. I did this, as I believed that it added a more realistic element to the lesson and engaged the pupils from the offset.

I decided to incorporate the symmetry design into this lesson, after I witnessed my class mentor introduce it to the pupils previously that week. I witnessed how nearly all pupils of various ability levels were able to engage with symmetry, so I felt as if it was a relevant and engaging enough activity. I included elements of R.E. within this lesson, as I had previously been teaching the pupils about Islam. I used this activity to reinforce previously taught knowledge, as well as enhance their understanding of symmetry.

I do believe that this task worked well, with most pupils engaging with it. Although, once I had discussed this lesson with other members of staff within the classroom, it was noted that very few pupils had understood the concept of the main task. I may need to consider improving my teacher modelling, in order for nearly all pupils to fully understand what is expected of them.





Illustrative Example Eight

Dydd Mawrth, 26 Tachwedd 2019
WALT- Answer real world numeracy problems on our own African
Charities by using our numeracy skills across the curriculum.
4.C.P: C.A.L 5, C.A.L 3, E.C.C. 4, H.C.I. 6.

African Charity Numeracy

1. Each day your charity web page receives a mean average of 35 donations of £5. How much money is raised in November?
2. The company needs to keep one tenth to pay the staff in the organisation. How much is this? Another 5% is required to pay for the rental of offices. How much is this?
3. If there are 340 volunteers working for your charity and 2,913 paid staff, how many people do you have to manage in total?
4. Each paid staff member must be provided with 4 work uniform shirts - a ratio of 1 person to 4 shirts, 1:4. If it costs you £10 for each uniform shirt, how much will this cost your business?
5. You pay a worker £6.50 an hour and he works 8 hours a day. How much does he earn in a day? You want to give him an extra £15.75 bonus because he works a Saturday, how much will you pay him on that day?
6. In three days your webpage gets the following hits: 231, 489, 350. Round these numbers to the nearest hundred. Now estimate how many hits the page could get in twenty working days, then divide this estimate by 20 to come up with a mean average estimate.
7. You transport aid to Africa on a plane. The plane takes off at 1.30pm and lands at 3.45am GMT (British time). How long has the flight taken?
8. Your charity website is offering a 25% discount on t-shirts. The original price is £20. How much is the discount? What is the new price of the t-shirt?

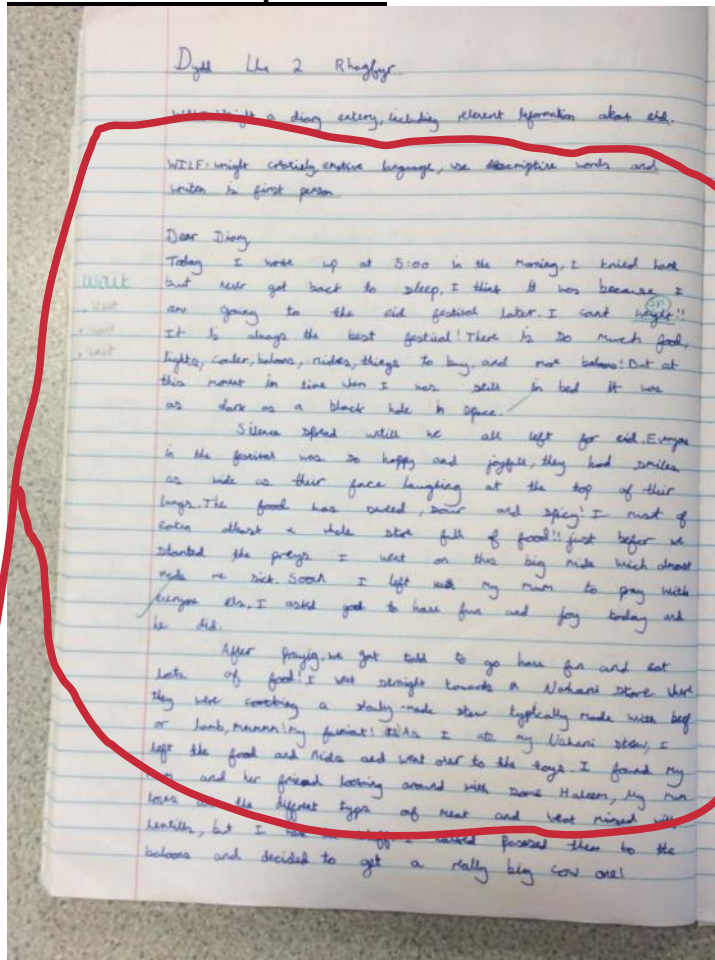


In previous lessons, year six pupils had been planning and creating their own African charity website. I planned a numeracy lesson, which involved a variation of questions about their African charity. This lesson included elements of numeracy and literacy, as well as being linked to their current term topic of Africa. I differentiated the questions, to suit pupils of all ability levels. Above is an example of the 'red' level, for the higher ability pupils. I had also planned to model examples of the questions, in order for pupils to access the learning.

I chose this topic, as the pupils were familiar and had shown engagement with it during previous sessions. Nearly all pupils were able to complete their African charity website design, so I felt that this session would take their learning to the next level.

Upon reflection, I felt that this lesson went well as it involved a topic that the pupils were familiar with. I also included questions and methods that I had witnessed the pupils using in previous lessons, so knew that they were comfortable with using them. On the other hand when I was monitoring the classroom during the main task, I realised how a minority of the pupils showed signs of difficulty in completing the task. In the future I may need to ensure that improve how I model the questions prior to the pupils completing the main task, and ensure that nearly all pupils are able to access the learning. I could also define potentially unfamiliar numeracy terminology, and not assume that all pupils are understanding of the terms.

Illustrative Example Nine



The main topic I focused on within my year six humanities lesson, was Islam. We

looked into an introduction of Islam, as well as traditional Islamic festivals such as Eid and Ramadan. During this literacy lesson, the pupils were tasked with writing a diary entry about celebrating the Islamic festival of Eid. Before the pupils embarked on completing the main task, they discussed as a class what the success criteria should be. They decided that the success criteria should be to include emotive, creative and descriptive words, as well as write their diary entries in the first person.

I chose this topic for an extended piece of writing, as I felt as if the pupils had sufficiently engaged with the topic of Islamic festivals. I wanted to see if they were able to take the information that they had learned over previous lessons, and apply it to a creative piece of writing. I felt like the lesson went successfully. This could have been a result of the topic, and how engaged the pupils had been in it. On the other hand, it could have also been due to the pupils being responsible for creating the success criteria, so they were aware of what work they were expected to produce.

Employing a blend of approaches including those that promote problem solving, creative and critical thinking.

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Illustrative Example Ten



This is a numeracy lesson, which I planned with year six pupils. The lesson took place outside, with the pupils using bamboo sticks to help calculate the area and perimeter of triangles. I differentiated this task by including missing sides, where the pupils had to use the given information to calculate the length of the missing side. I encouraged the pupils to use the bamboo sticks, to help them visualise the size of the triangles.

Donaldson (2015) has noted the importance of providing pupils with a stimulating environment, which encourages problem solving. I planned for this lesson to take place outside, as the outdoors provides pupils with a rich, exciting environment. As the pupils were placed within groups, it also provided each group with a sufficient amount of space for the pupils to use the bamboo sticks, to aid them in their problem solving.

I believe that I had planned this lesson well and had prepared engaging resources, that the children engaged with. On the other hand, I had not provided pupils with clear enough directions prior to them starting the task. This resulted in a minority of pupils becoming off task, and not using the resources as intended.

To combat this in another lesson, I will ensure that I provide pupils with a clear explanation of the task. This will be done through a class discussion prior to starting the lesson, allowing the pupils to verbally discuss and create the learning outcomes.

Illustrative Example Eleven



This was during a science lesson, that I planned with a year six class. The pupils worked with their shoulder partner, to measure the force of a variety of objects using a Newton meter. Prior to the pupils participating within this activity, they estimated the weight of the objects. This allowed the pupils to create comparisons between their estimations and the results they had collected, providing an opportunity for the pupils to then write a summary.

I planned this lesson after following the advice given to me by my class mentor. I encouraged the pupils to decide themselves which items they wished to measure, as I believed that this would encourage the pupils to be creative in their decisions. It could have also resulted in the items being more personal to the pupils, therefore increasing the pupils engagement within the lesson. I also planned for the pupils to provide estimations of the weight of the items, to encourage them to think critically. After receiving feedback from my class mentor, it was identified that this was a successful lesson, with nearly all pupils engaged within the task. Each section of the lesson was clear, with the timings of each task being conveyed to the pupils. It was noted that nearly all pupils enjoyed estimating and accurately measuring in Newtons, with the majority of pupils following what I had modelled.

Illustrative Example Twelve

Differentiated Teaching and Learning Activities

Intro:

Planned by Lucy Williams- class mentor. LONG MULTIPLICATION

Main:

Part One

- Pupils will first be asked to write down what they think the definition of 'Volume' is, upon their whiteboards. They will be given one minute, before being asked to show their answers. Teacher will then provide them with the definition.
- Pupils will then be shown a variety of empty containers (e.g. jam jars, tea mug etc). They will be first be asked to place the containers in order of smallest to largest (in terms of volume).
- Pupils will then be asked to fill containers with popcorn, to see if their estimations were correct.
- A discussion will take place as to why it was difficult to estimate with popcorn- too much gaps, popcorn too big etc.
- Pupils will then fill the containers with rice and check their estimations again.
- A discussion will take place as to why their estimations are more likely to be correct- smaller objects, less gaps etc.

This is a year six maths lesson, that focused upon the volume of 3D shapes. Pupils were required to estimate the volume of a variety of containers, before using popcorn and rice to develop their estimations. This allowed a class debate to take place, with the pupils discussing the accuracy of the method they used.

I did this because it encouraged the pupils to critically solve the problems, whilst also being hands on and creative whilst completing the task. It provided the pupils with visual representations of volume, which I believed would aid them in completing a set of calculations.

After a discussion with my class mentor, it was believed that the use of popcorn and rice was a good stimulus, with nearly all pupils engaged within the task. On the other hand, after marking the pupils work, I noted how very few understood how to calculate the volume. This could be due to the fact that I moved the learning on too quickly, when perhaps the pupils were not ready too. In the future, I will break down calculations and differentiate the tasks, to ensure all pupils are able to access the learning.

Critical Reflection

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This essay will be critically reflecting upon the progress made in planning and implementing three pedagogical principles, during the Professional Teaching Experience. This took place in a local primary school within West Wales, where an estimated two hundred pupils are enrolled within single-aged classes (Estyn, 2017). The student-teacher was based in a year six class, with the thirty-four pupils being grouped by levels of attainment.

The three pedagogical principles in question are assessment for learning, cross-curricular responsibilities, and a blend of approaches which encourage pupils to think creatively and critically, as well as problem solve (Donaldson, 2015). Conclusions will be made and justified in regard to the planning and implementation of the chosen three principles, as well as suggested ways forward to ensure that these continue to develop.

Pedagogy has been defined as the collection of teaching techniques and systems, which ultimately enables the teacher to deliver the lesson content to their class (TES, 2018). Donaldson (2015) states that the selection of chosen methods take into account the developmental and attainment level of the pupils in question, with an amalgamation of theories and knowledge ensuring that they learn sufficiently. It can therefore be assumed that in order for schools and pupils to achieve high standards, then the quality of the teaching must also be of a great standard (Husbands and Pearce, 2012).

Although Coe et al (2014) have argued that defining good teaching is not a simple task, there is a strong consensus on the defining features of successful pedagogies. It is important that teachers provide pupils with opportunities that motivate and engage them, as well as provide them with sufficient enough challenge (Department for Children, Education, Lifelong Learning and Skills, 2009). To allow this to successfully take place, it can be assumed that teachers would therefore need to have an understanding of where the pupils are in their learning, and where they need to go next. Assessment for Learning is one of the pedagogical principles which allows this to comfortably occur.

Assessment for Learning is a type of formative assessment, which provides an insight into where the learners are, what they need to achieve and how they can achieve this (Gault, 2015; Department for Children, Education, Lifelong Learning and Skills, 2010; Gibbs, 2001, *cited in* Hargreaves, 2005). It has been highlighted as being a major aspect of improving the learning outcomes of pupils (Estyn, 2018; Husbands and Pearce, 2012). This could be due to it having to take place constantly within the classroom environment, ensuring that the pupils learning is always evolving (William, 2002). On the other hand, it could also be due to the pupil centred characteristics that it possesses.

Assessment for Learning encourages teachers to make learning objectives explicit to their pupils, ensuring that they therefore know what they are to be assessed against (Gault, 2015). It can be argued that if pupils are unaware of said learning objectives, then they would therefore be unsure as to how to improve. Alongside this, feedback is also an important factor in conveying this information to pupils. According to Sadler (1989, *cited in* Hattie, 2012) and Black and Wiliam (1998) the aim of feedback is to bridge the gap between where the pupil currently is in their learning, and what they need to achieve. Many pupils may not understand the meanings behind a simple grade, and as a result would be none the wiser of where they are situated in

their learning (Gault, 2015). Black and Wiliam (1998) have also argued that a focus upon rewards, such as grades, results in pupils attempting to achieve a good mark, and does not encourage them to improve their learning.

Despite feedback being an important feature of Assessment for Learning, it needs to be of a good quality for the desired improvements to take place (Husbands and Pearce, 2012; DCELLS, 2010). Good quality feedback has been defined as that which is explicit, focused upon the task and improving the learning outcomes, rather than creating comparisons between pupils (Deans for Impact, 2015; Black and Wiliam, 1998). Feedback provides pupils with an opportunity to enhance aspects of their learning, due to the solid guidance they receive on how to do so (Black and Wiliam, 1998). It comes as no surprise, that feedback has been noted as the most influential aspect to increase learning outcomes for pupils (Husbands and Pearce, 2012).

Another important aspect of is the use of peer and self-assessment, both of which have been viewed as essential elements of Assessment for Learning (Black and Wiliam, 1998). Pupils are able to help each other identify strengths and weaknesses in their learning, alongside producing targets for improvement (Topping, 2009). Gault (2015) has stated that it is important for pupils to have an active involvement in advancing their learning, noting that their learning is more likely to improve if they are able to self-identify what they are currently able to achieve, and where else they need to amend. The Department for Education and Skills (2004) has claimed that pupils are more likely to make prompt progress in their learning, if they have a solid understanding of where they need to improve. Black and Wiliam (1998) have also argued that if formative assessment methods are to be successful, pupils need to be able to self-assess themselves, enabling them to understand the learning objectives.

The second pedagogical principle that will be focused upon, is cross curricular responsibilities. Donaldson (2015) has stated that good teaching ensures pupils are provided with opportunities to practice numeracy, literacy and digital skills across the curriculum. It comes as no surprise that a significant amount of pupils learning takes place outside of the classroom, with a variety of outside influences having an impact upon their learning (Barnes, 2011). It can therefore be argued that the curriculum should not be structured into subject disciplines, with skills being taught for set periods of time (Donaldson, 2015). John Dewey (1902, *cited in* Rowley and Cooper, 2009) was also of the viewpoint that creating a boundary or resistance between subjects, does not benefit the pupils learning.

Cross-curricular teaching has become an increasingly prominent feature of education within Wales. The Literacy and Numeracy Framework supports teachers in planning for numeracy and literacy skills to developed across the curriculum (Department for Education and Skills, 2013). Alongside this, Donaldson's review into the Welsh Curriculum has stressed the importance of pupils being provided with opportunities to develop their digital skills, due to the increasing reliance of technology within the modern world (Donaldson, 2015).

Despite the identified importance of cross-curricular teaching, some have expressed their worries in regard to this. Donaldson (2015) has noted how it may be a testing for teachers to ensure that cross-curriculum is consistently the focal point of lessons, and for the experiences to be genuine instead of a second thought. Rowley and Cooper (2009) have also stressed the difficulty some educators may find in developing an appropriate balance between subjects. On the other hand, Barnes (2011) has pointed out that the experiences pupils have within lessons need not be as time consuming or extravagant as first thought, they only need to engage them and support them in improving their learning.

There is also a variety of literature, surrounding what constitutes as good cross-curricular teaching. Estyn (2016) have noted how a primary school within South Wales, have developed a range of cross-curricular themes, ensuring that pupils have a variety of opportunities to develop their key skills. The school has seen a significant improvement in the learning outcomes of their pupils, as well as the pupils ability to develop and apply their skills across the curriculum (Estyn, 2016). The student-teachers placement school, where their Professional Teaching Experience took place, has also been included within good practice identified by Estyn. Through the use of a skills tracking system, teachers were able to identify what skills had already been covered and what areas needed working upon (Estyn, 2017).

The third and final principle that will be focused upon, is the employment of approaches which promotes pupils critical-thinking, creativity and problem solving (Donaldson, 2015). These are seen as skills that are becoming increasingly more important to develop, to allow pupils to thrive in the future (Vincent-Lancrin et al, 2019; Rosenshine, 2008). Mills and Kim (2017) have stressed the importance of pupils developing sufficient enough problem-solving skills, for when they experience issues in the real world that are not easily solved. John (2019) has also noted the importance critical and creative thinking, in ensuring pupils can contribute towards an innovative future.

There are several suggestions on what constitutes as good teaching, in regard to this principle. Estyn (2017) have reported on a primary school within Newport, that has noted an improvement in their pupils creative and critical thinking skills, since the introduction of philosophy-based activities. John (2019) has provided an example of encouraging pupils to see difficulties, as a normal aspect of learning. This would therefore allow pupils to understand that failure is an opportunity to improve (John, 2019). Rosenshine (2008) has also stated that by dividing tasks into smaller steps, with explicitly stating the lesson objectives, would see an improvement in the development of problem-solving skills.

During the Professional Teaching Experience, the student teacher planned and implemented the pedagogical principles, that have been previously discussed in the literature review. The student teacher was based within a year six class, following the curriculum for Key Stage Two. This next section shall be critically reflecting upon how the planning and implementation went during the placement and shall be written in first person, to allow sufficient reflection to take place.

Illustrative examples One to five, demonstrates my planning and implementation of the assessment for learning pedagogical principle. As previously discussed in the literature review, assessment for learning has been viewed as an important aspect of improving the learning outcomes of pupils, as it provides both them and the teachers with an insight of where they currently are within their learning and where they need to improve (Estyn, 2018; Gault, 2015; Husbands and Pearce, 2012; DCELLS, 2010). I incorporated assessment for learning within a variety of my lessons, and overall found it relatively easy to develop.

As seen in the illustrative examples one to four, I planned for pupils to undertake both peer and self-assessment. These aspects have been regarded by many, as being an important aspect of Assessment for Learning, due to the pupils being encouraged to have ownership of their learning (DCELLS, 2010; Black and Wiliam, 1998). During my Professional Teaching Experience in the year six class, I witnessed pupils doing this on many occasions. This has been noted by Estyn, who in the recent inspection report, highlighted that this was a strength of the school (Estyn, 2017).

Prior to the pupils undertaking the tasks, I ensured that they had a solid

understanding of the learning objectives. During the lesson illustrated within examples one to two, pupils were required to write a diary entry as if they were celebrating the Islamic festival of Eid. I planned previous lessons, to ensure that the pupils had enough knowledge to feel confident in undertaking this task. During the lesson warm-up, I encouraged the pupils to create the success criteria together as a class. This was done through class questioning, which according to Black and Wiliam (1998) prompts class discussion and greater thinking. I felt as if it was important for the pupils to be involved within creating the success criteria, as it would provide the pupils with a clearer understanding of what they were to be assessed against, as well as encourage them to take ownership of their learning (Estyn, 2018; DCELLS, 2010). Sellman (2009, *cited in* Husband and Pearce, 2012) have also noted that involving pupils in the creation of the learning objectives, can lead to an improvement in not only academic skills, but also increase pupil engagement within the school. I differentiated how I conveyed the success criteria to the pupils, with the lesson associated illustrative examples three to four. Instead of involving pupils in the creation of the success criteria, I opted to teacher model this instead. Teacher modelling is seen as a method which prevents pupils developing misconceptions in regard to their learning (Riches, 2019).

I felt as if my development in this pedagogical principle was overall a success. For example, I noted how in being given responsibility for creating the success criteria, most of the pupils were engaged with their learning and successfully peer assessed each other's work. On the other hand, very few pupils completely understood the success criteria, and therefore did not produce sufficient enough feedback. In the future, I will ensure that I increase the wait time during questioning, to ensure that all pupils are able to participate and provide suggestions (Black and Wiliam, 1998). In regard to pupils self-assessing, this was also successful. The majority of pupils were able to complete the task, and therefore able to sufficiently self-assess their work. Despite this, I realised how a minority of pupils struggled with the task and did not follow the previously discussed success criteria. In hindsight, this was due to failure on my part. After reflecting upon the lesson, I realised that I may not have provided the pupils with sufficient enough examples of the success criteria. This will be something that I work upon improving in the future, to ensure that all of my pupils are able to successfully access the learning.

Another aspect of Assessment for Learning that I developed, was the use of questioning. This was done through a whole class quiz format, where they recapped Islamic terminology. Upon reflection, it was noted that nearly all the pupils were engaged and stayed on task. As well as this, many pupils were also able to correctly recap the terminology. Although this went well overall, there are some aspects that I would alter in the future. I would change the lesson to make it more interactive and would use software such as Kahoot. This would have also helped me develop the pedagogical principle of cross curricular responsibilities, ensuring that I helped pupils grow their digital competence skills (Donaldson, 2015).

Illustrative examples six to nine, demonstrates my development in planning and implementing the cross curricular pedagogical principle. In hindsight, I felt as if achieving this successfully was rather difficult. Although I knew my strength in this pedagogical principle was ensuring that the literacy aspect was met, I struggled with the numeracy side. This could have been due to my lack of confidence in numeracy, which had an evident impact upon my planning and ability to support pupils in their numeracy lessons. Many have highlighted the importance of teachers possessing a good level of content knowledge, in order to successfully convey information to their pupils (Donaldson, 2015; Coe et al, 2014; Husbands, 2010 *cited in* Husbands and Pearce, 2012). It can therefore be assumed that a lack of content knowledge, would impact upon the pupils learning outcomes. To prevent this from happening in the future, I will ensure that I have improved upon my content knowledge before the

lesson.

I also did not plan for digital competence cross curricular frequently enough. Donaldson (2015) has stressed the importance of pupils developing digital competence skills, across the curriculum, in order to thrive within the modern world. To ensure that I incorporate this more in previous lessons, I can use software such as Kahoot for my plenaries or encourage the pupils to be more independent in their research.

Illustrative examples ten to twelve demonstrates my development in planning and implementing the third pedagogical principle- an employment of approaches which encourages critical and creative thinking, alongside problem solving (Donaldson, 2015). Overall, I felt like I achieved varying levels of success for the pedagogical principle. I did initially struggle with this at the beginning of my placement, as Illustrative Example ten displays. This was during one of my first lessons, and although I believed that many of the pupils understood the lesson objectives, after reflecting upon the lesson and pupil work, it was noted how a minority had a solid understanding of the task. This could have been due to a lack of explanation I had provided pupils with prior to the lesson. Day and Goldstone (2012, *cited in* Deans for Impact, 2015) have stated how pupils need to be provided with a solid enough level of background understanding, in order to understand the problem.

After noting my weaknesses in this pedagogical principle, I took these into account for planning the lesson shown in Illustrative Example Eleven. I ensured that I provided pupils with a clear and detailed explanation of the work I expected of them, also providing explicit time limits. From this, I found that nearly all pupils successfully completed the tasks to a high standard.

I continued to work upon my implementation of this principle throughout my time at the school, and Illustrative Example twelve demonstrates one of my final lessons. In hindsight, it did appear to be a good idea for a lesson, and the pupils were extremely excited over the prospect of using popcorn to calculate the volume of shapes. After reflecting upon the lesson, it was noted how very few pupils were able to correctly answer the questions. This could have been due to me moving on the pupils too quickly, and not checking that nearly all were able to access the learning. In the future, I will ensure that all pupils are comfortable with completing the task, prior to moving on.

To conclude, despite the variety of opinions on what accounts as 'good teaching', there has been a resounding similarity in certain aspects of the advice given. These shall now be used to suggest further recommendations for development. It has become clear through both the literature review and critical reflection, that increasing the wait time during questioning is something that needs to be incorporated within lessons (Black and Wiliam, 1998). Although it is more aimed at developing Assessment for Learning, it would ensure that pupils feel more confident in answering questions and could therefore help develop the third pedagogical principle of a blend of approaches. Alongside this, pupils should also be provided with a solid explanation of the lesson objectives (Rosenshine, 2008), ensuring that they feel confident prior to starting tasks.

A further final recommendation to be made, is to ensure that the teacher has a solid understanding of the content knowledge, to ensure that they feel confident in conveying information to the pupils (Coe et al, 2014). This would also help educators feel able to sufficiently plan cross-curricular lessons, something that Donaldson (2015) has stressed as being explicitly important within the new Welsh curriculum.

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