

Overview

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Student Name: Jake Frederick

Student Number: 1901647

Assignment Title: A portfolio which illustrates a critical reflection of progress made on the planning and Implementation of three pedagogical principles.

Pathway: Secondary PGCE

Link to OneNote: https://uowtsd-my.sharepoint.com/:o:/g/personal/1901647_student_uwtsd_ac_uk/EptWrltXzXFCnAb3gM7nJvwBo3lUN_GgGmUujLC9hAj8qw?e=W6byqh

Good teaching and learning means employing assessment for learning principles.

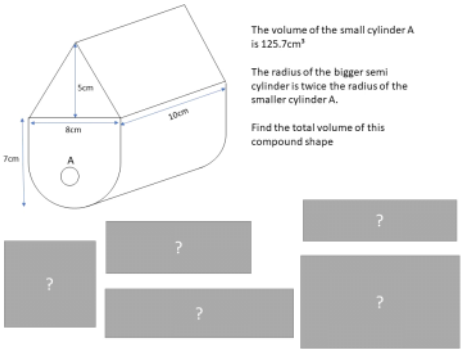
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Evidence 1

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Time	Activities/Methodology/Key Concepts (Teacher's Role – including key teaching points, differentiation strategies and key questions)	Pupil Tasks (Pupils' role –including differentiation, engagement in formative assessment and homework)
Opening phase (with links to prior learning)	Instruct pupils to stick the hinge question into their book and work through the hinge question at the front of the class, continually questioning individuals as a form of scaffolding on how to approach the question and what the next step would be -10 mins	Pupils will be attempting a hinge question that incorporates knowledge of the past few lessons Pupils will be offering possible solutions to this problem and will be scaffolded through the use of quality questioning.



The opportunity to use quality questioning on pupils with a hinge question towards the end of a topic was a great way to implement AFL

Evidence 2

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MATHEMATICS
Year 8
End of Term Assessment
Paper 2 Calculator

Name
Class
Teacher

W³
EBI

Mark
%

End of term tests
provided another
chance to
incorporate AFL

MATHEMATICS
Year 8
End of Term Assessment
Paper 1 Non-Calculator

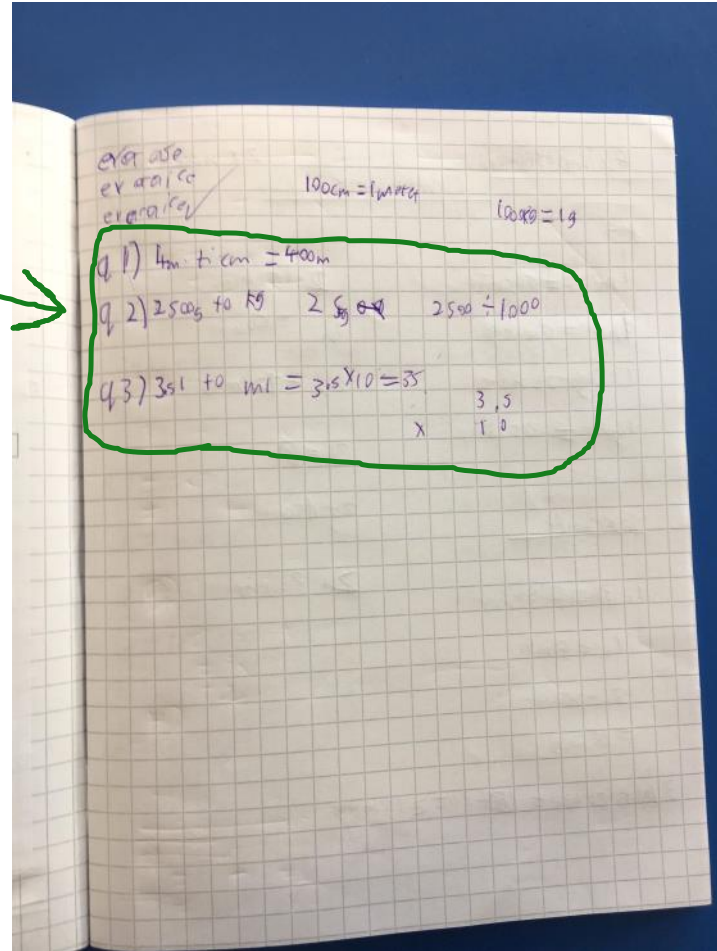
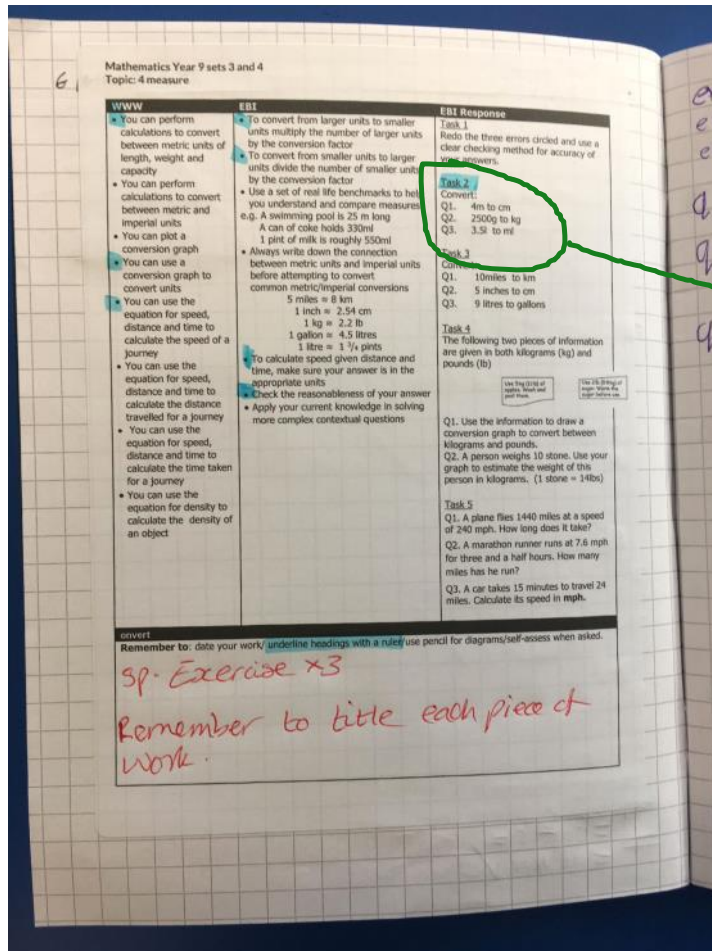
Name
Class
Teacher

W³
EBI

Mark
%

Evidence 3

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Good teaching and learning regularly reinforces Cross-Curriculum Responsibilities, including literacy, numeracy and digital competence, and provides opportunities to practice them.

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Evidence 4

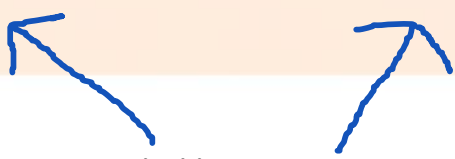
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Worded questions

A) Boxes that are 12 inches tall are being stacked next to boxes that are 18 inches tall. What is the shortest height at which the two stacks will be the same height?

B) Two neon lights are turned on at the same time. One blinks every 4 seconds and the other blinks every 6 seconds. In 60 seconds, how many times will they blink at the same time?



Worded hinge questions
allow me to introduce
literacy into my lessons

Evidence 5

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The topic of time allowed me to provide authentic context to practice every day numeracy skills.

Example Questions

	A	B	C	D	E	F
Newport	06:50		07:25	08:45	09:10	09:45
Cardiff	07:00	07:25	07:41	08:55	09:19	09:53
Swansea	07:11	07:41	07:51	09:04	09:31	10:02
Merthyr	07:18	07:59	07:59	09:11	09:38	10:11
Ponty	07:29	08:12	08:09	09:16	09:47	10:16
Aberdare	07:33	08:15	08:14	09:20	09:53	10:21
Caerphilly	07:45	08:30	08:30		10:05	10:40

 [BUS TIMETABLE](#)

A) I am travelling from Newport to Aberdare and need to be there by 8:20. Which bus should I take?

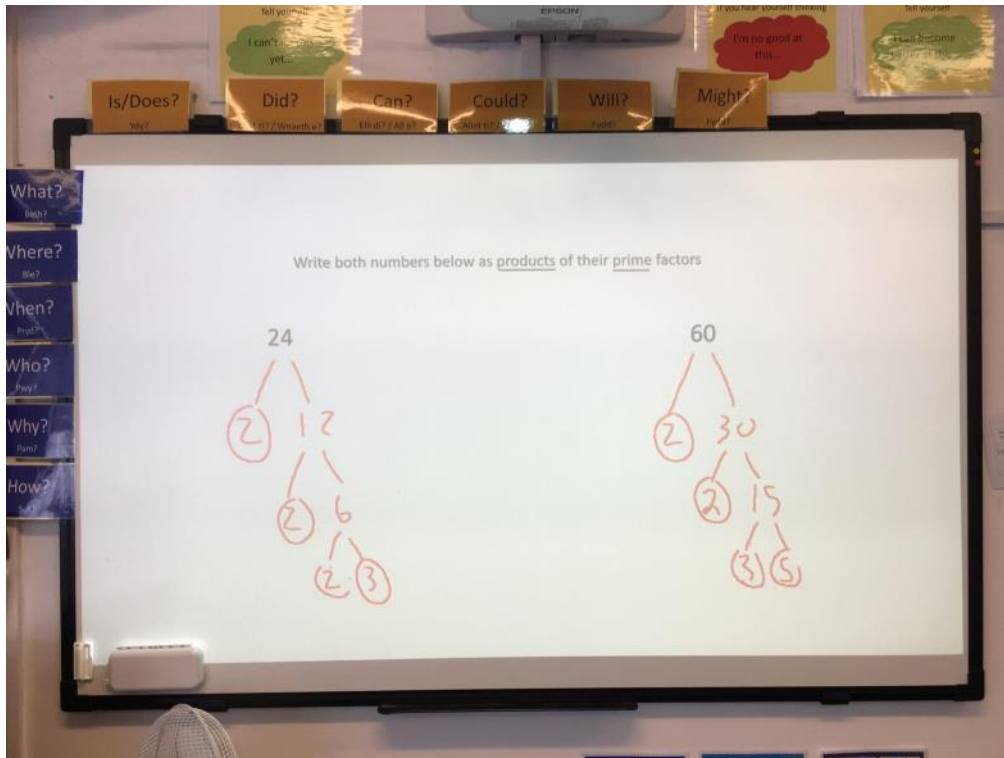
B) Which train from Merthyr to Aberdare is the quickest, A or D?

C) If I arrive in Caerphilly at 10:05, what time did I leave Swansea?

D) If I arrive in Ponty at 9:47 from Newport, how long have I been travelling for?

Evidence 6

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Within my lesson I planned time for lead learners to come to the front and work through their model solutions on the interactive whiteboard

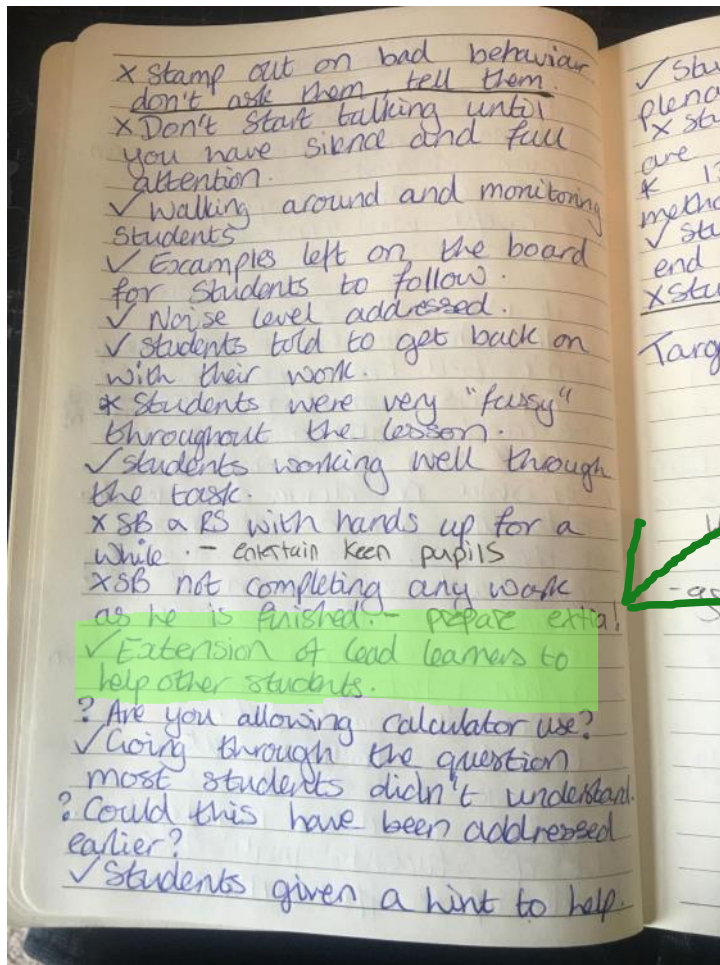
Good teaching and learning means employing a blend of approaches including direct teaching.

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Evidence 7

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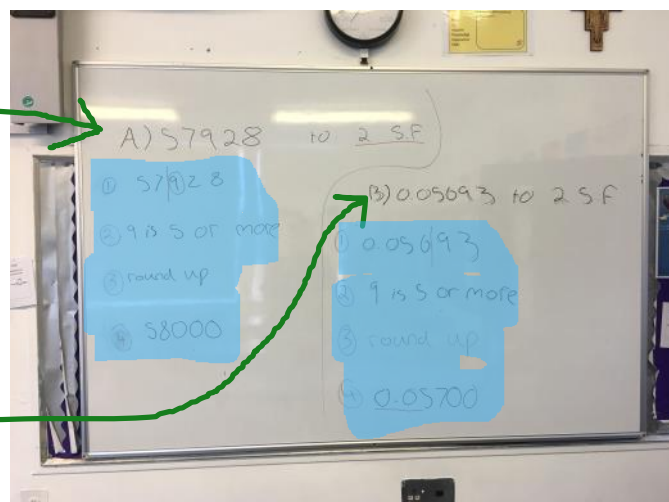
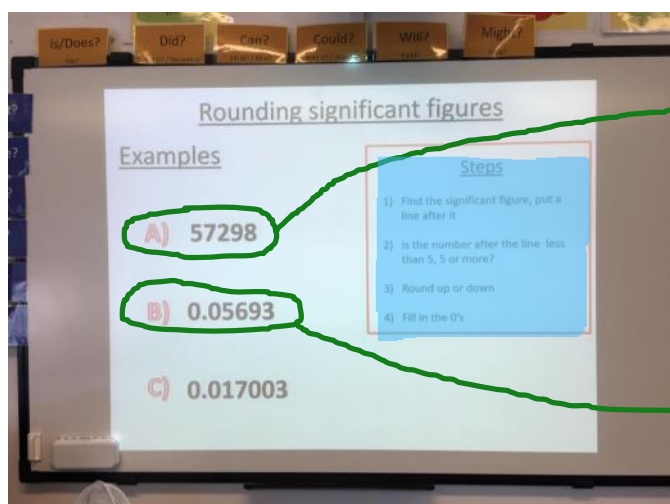
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Within my lessons I have started to use lead learners to supports the lower ability pupils in my class

Evidence 8

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Model solutions that follow the steps provided were worked through at the front of the class and then left on the whiteboard for pupils to refer to should they need extra help.

Evidence 9

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Question

A shoebox is 20cm long and 15cm wide. How much bigger is the length than the width in mm?



- A) convert the length of the shoebox into millimetres
- B) convert the width of the shoebox into millimetres
- C) What is the difference between the length and the width from A) and B)?

Worded question



Question

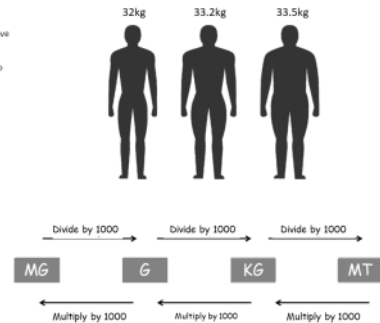
Jack has a mass of 33.5kg, his two friends Ana and Sam have masses of 33.2kg and 32kg.

How much heavier are Jack and Ana together compared to Sam on his own? Giving your answer in grams.



- A) Add together Jack and Ana's mass
- B) What is the difference between your answer to A and Sam's mass?
- C) Convert your answer to B into grams

Worded question



Question

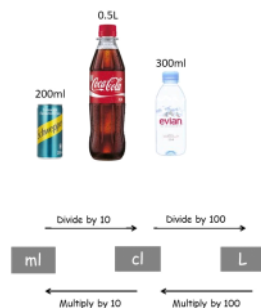
At a party, Alfie drank 200ml of lemonade, 0.5 litres of coke and 300ml of water.

How much did Alfie drink at the party in centilitres?



- A) Convert the lemonade into centilitres
- B) Convert the coke into centilitres
- C) Convert the water into centilitres
- D) Add your answer to A), B) and C) together

Worded question



In this lesson, my class were split into 3 groups. Each group worked through one of the different A3 sheet tasks showed here.

Critical Reflection

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Introduction

Good teaching and learning can encompass many different things in and outside of the classroom. (Donaldson, 2015) states a number of pedagogical principles that all teachers should be looking to implement or improve upon within their pedagogy. During my time on placement I have planned and taught lessons that directly involve or use many of the principles stated within (Donaldson, 2015). Within this assignment I am going to discuss effective teaching and learning and explore three of the pedagogical principles under consideration in more depth. I will also discuss my own progress on implementing these selected principles in my own pedagogy, using the illustrated examples to support me. I will conclude this assignment with a section of reflection, suggesting recommendations for further development as I continue my career in teaching.

Discussion of literature

Within this section of my assignment I am going to discuss effective teaching and learning. I will use a variety of literature to support me and will take into consideration all of the pedagogical principles outlined in (Donaldson, 2015). I will also be paying more attention to the three pedagogical principles I have chosen to specifically focus on, going into more detail with these principles as opposed to the others.

The first of the three pedagogical principles I have chosen to focus on is Assessment for learning (Afl). (Assessment for learning, 2019) states that 'assessment for learning is an approach, integrated into teaching and learning, which creates feedback for students and teachers in order to improve learning and guide their next steps' (p. 2). It is important to realise from this, that assessment for learning not only applies to the pupils, but also the teachers.

Afl can be broken down into three main steps:

- Where the learner is going
- Where the learner is now
- How can the learner get there

The first of these steps, where the learner is going, is achieved by informing the learner of what they are going to achieve or what they are aiming to do. This can be done by sharing lesson objectives at the start of the lesson and allowing learners to see what they are aiming for. This would also incorporate sharing marking schemes and success criteria, as again this is another way of allowing the learner to see what they are aiming for.

The second step, where the learner is now, is a process of identifying the current understanding or situation of the learner. This can be done through several classroom techniques such as questioning, testing and even general discussion. This is typically done after a period of learning, to allow the teacher to gauge what the learners have taken from a specific lesson.

The third step, how can the learner get there, allows teachers to make informed decisions about what the next step in the process of learning will be for an individual learner or group of learners. To add to this, this step also allows the learners to make their own independent decisions, from how and what to study.

This three-step cycle should be considered as an ongoing or continuous system as there is no definitive starting or end point, it can be represented by the following diagram.



Fig. 1

Assessment for learning (2019, 2)

In practice, there are many ways to incorporate assessment for learning into lessons. Questioning, feedback as well as peer and self-assessment are some of the most commonly used techniques amongst teachers today.

(Cambridge-Community, 2019) says that 'questions are a quick and important way of finding out what a learner understands about a subject', from this you can then use the information gathered from questioning to plan further teaching. The article also talks about feedback and states that 'feedback is the process in which learners come together with their teachers to discuss where they are in their learning', where they want to be in their learning, and how they are going to get there'. This is very similar to the three-step cycle that assessment for learning is based around and makes it easy to see why feedback is such a commonly used afl technique.

(Welsh Government, 2010) also talks about assessment for learning strategies/tools and says that afl can be broken down into the three main categories: questioning, feedback and again peer and self-assessment. This is an agreement with my previous statement about the main techniques used to incorporate afl. The article says that peer and self-assessment involves 'sharing and understanding learning and recognising good quality work.'

The second pedagogical principle I would like to focus on says that Good teaching and learning regularly reinforces Cross-Curriculum Responsibilities, including literacy, numeracy and digital competence, and provides opportunities to practice them (Donaldson, 2015).

(Donaldson, 2015) also states that 'Competence in literacy including competence in the spoken word, syntax and spelling, is essential for learning across the curriculum'. What this is saying is that literacy skills are needed in order to learn, the higher the level of literacy an individual has the more likely they are to learn, not just in quantity but also in depth too. With this in mind it should come as no surprise that literacy falls under cross curricular responsibilities principle, the further a learner's literacy skills are pushed and improved upon, the higher their rate of learning will be. Therefore, continually looking to develop literacy across all subject areas is something that all teachers should be looking to implement as it can only lead to improved learning.

There is often a lot of confusion about the difference between numeracy and mathematics. (Estyn, 2010) says that 'Numeracy is not the same as mathematics. Numeracy is a proficiency with number that is acquired through being taught mathematics well.' This proficiency allows learners to apply their number skills to real life situations, something which we as teachers should be pushing learners to be able to do. Because of this, enabling learners to develop their numeracy skills across all subject areas is naturally a part of good teaching and learning, and therefore comes under cross curricular responsibilities. (Estyn, 2010) also has a number of recommendations for the further development of learners numeracy skills. One of the main points they suggest is that schools should carefully plan their mathematics curriculum to ensure that pupils have the necessary mathematics skills ready to use in situations where they might elsewhere need them, hence becoming numeracy skills.

Digital competency has grown to become an essential skill to practice over the past few years. In the modern day, things like communication, entertainment, networking and learning as well as a number of other different things have become embedded with digital competency. Because of this, digital competency has become a major part of the cross curricular responsibility's principle. Allowing learners to improve in this area is again naturally apart of good teaching and learning. Another Estyn document on how to prepare for the digital competency framework has several points schools should consider. One of these points states 'Schools should map the DCF across the curriculum and ensure that there are no gaps in provision and sufficient progression and continuity' (Estyn, 2018). This again reinforces the idea of cross curricular responsibilities being key to good teaching and learning and is directly saying that digital competency should be a part of cross curricular responsibilities.

The third principle I would like to discuss within this assignment says that good teaching and learning means employing a blend of approaches including direct teaching (Donaldson, 2015). It is important to know here what is meant by direct teaching, as there is often a misinterpretation of meaning here. (Hattie, 2012) states that direct teaching is defined by 'The teacher decides the learning intentions and success criteria, makes them transparent to the students, demonstrates them by modelling, evaluates if they understand and re-telling them what they have been told by tying it all together with closure'. Breaking this down we can see that direct teaching is comprised of learning objectives, success criteria, practice and feedback, these are all things that are expected of good teachers.

(Rosenshine, 2008) says that direct teaching, especially in subject areas with well-structured topics, follow a certain pattern consisting of:

- Begin a lesson with short review of previous learning
- Begin a lesson with a short statement of goals
- Present new material in small steps, providing for student proactive after each step
- Give clear and detailed instructions and explanations
- Provide a high level of active practice for all students
- Ask a large number of questions, check for student understanding, and obtain responses from all students
- Guide students during initial practice
- Provide systematic feedback
- Provide explicit instructions and practice for seatwork exercises and monitor students during set work

Throughout my time at school as an observer and as a teacher, I have come across this direct teaching pattern time and time again. I have seen excellent lessons delivered with this structure that allow for many of the properties of good teaching and learning, which we have discussed throughout the assignment, to be fully utilised.

The principle in discussion says that good teaching and learning should also use a blend of approaches. This implies that direct teaching as we have defined above, is not always the best

approach. Depending on a variety of factors such as suitability to the topic, learner needs, ability of learners, size of class and many other things, a different style might be more suitable and more beneficial to the learner. A teacher who is able to recognise this and deliver a lesson through alternative methods would again be satisfying the qualities needed for good teaching and learning to take place.

Conclusions about progress on implementation

Within this assignment there are nine pieces of evidence that support me in my claims to be implementing the three principles I have discussed in the previous section. In this section of the assignment I will be discussing these pieces of evidence, giving my rationale for choosing them and exploring how they support me in the implementation of the selected principles.

The first piece of evidence is a section of a lesson plan I used; it shows time built into the plan for quality questioning to assess pupil understanding. I purposefully chose to do this as I believe this is a prime example of assessment for learning in terms of quality questioning. This allowed me to provide feedback as well as further plan any teaching that may be required around this topic. This is also in alignment with what I discussed about assessment for learning earlier in the assignment when referring to (Cambridge-Community, 2019) which talks about how questioning allows the teacher to assess understanding which then allows the teacher to plan ahead.

Evidence two shows a set of papers designed to assess year 8 at the end of term. These papers allowed me to test my year 8 class on all the different topics we had covered over the previous term. Similarly to my rationale for evidence one, I chose to use this piece of evidence as these papers allowed me to give quality feedback to the pupils as well as allow me to see what topics might need extra attention in terms of future planning. Going back to the three-step cycle of assessment for learning, this is a clear case of both me and the learners finding out where the learner is now.

The third and last piece of evidence I will use for assessment for learning is a dirt task, these are reflective sheets that go into the learner's books at the end of each topic. The teacher while marking the learner's book at the end of each topic can then use these sheets to tailor learning specifically to each learner by highlighting what went well and what could be improved upon. The dirt task sheet also has a variety of tasks on it, the teacher can select one or more of these tasks based on the learner's book for them to do. I have chosen this piece of evidence to support me as I believe this is a great way of fulfilling the 'how can the learner get there' stage of the three-step cycle. Assessment for learning (2019, 2)

Evidence four was selected to support me in my implementation of cross curricular responsibilities. The evidence shows a set of worded questions based around a topic that had been covered in the past few lessons. I chose these questions purposefully, as I believe converting these maths problems worded questions provides the learner with an opportunity to practice their literacy skills. This is in agreement with (Donaldson, 2015) which says that 'Competence in literacy including competence in the spoken word'.

The fifth piece of evidence is an example of me allowing the learner to further develop their numeracy skills. Although numeracy is a cross curricular responsibility, I believe this may be more important in my lessons as opposed to other subject areas as a lot of the skills they will need to use to tackle numeracy problems will be learnt in my subject area. The piece of evidence is a set of questions given to my class at the end of the topic time. However, the questions given out were given a real-life context to allow the class to see how the skills they have learnt over the past week could be used in real life situations. Hence becoming numeracy skills according to (Estyn, 2010).

Evidence six shows pupil's work that had been completed at the front of the class. Lead learners were selected to work through their model solution to a typical question at the front of the class

on the interactive whiteboard. This allowed me to use alternative teaching methods, while also giving the learners a chance to work with technology they might not have used before. Enabling learners to use technology like this was an ideal way to progress the learner's digital competency. While this may have been a small role, continually doing activities similar to this throughout my career will only result in learners being more comfortable with new technology as they are introduced in the modern day.

The seventh piece of evidence is the first to support me in the blend of approaches principle. It shows that I used a lead learner to support one of the lower ability pupils in my class by having the lead learner work through solutions to some of the problems with this individual. This was a very alternative way of teaching compared to what I had been practising to this point and allowed the learner to have input from another learner. This peer help as opposed to direct input from the teacher worked well and is something I have been continuing to use within my lessons.

Evidence 8 is a classic example of the direct teaching structured pattern that we discussed earlier in the assignment when referring to (Rosenshine, 2008). This particular piece of evidence shows a breakdown of steps to solve a typical rounding question. On the whiteboard, two examples have been solved using the breakdown of steps shown, and they have been left on the board for pupils to refer to as they progress through questions themselves. I have chosen to use this method of teaching on many occasions, as it allows me to scaffold the learners in my class while providing support throughout the class as needed. I can achieve this by roaming the classroom and monitoring pupils work as they work through selected questions.

The last piece of evidence I have provided for this assignment, evidence 9, shows how group work can be used to facilitate learning. I had split the class up into groups of three and assigned each group to a different A3 size worksheet. Each group was given 5 minutes to work together and solve the worksheet before moving onto the next. This still falls under the direct teaching category as I am specifically instructing them what to do and how to do it. However, working in this manner provides the opportunity for learners to learn from their peers as opposed to directly from me, which is a different take onto the standard format. This particular exercise worked well and at the end of the exercise I had the groups compare their answers and come to a conclusion on which were correct. I mentioned previously when discussing the blend of approaches principle that factors such as suitability to the topic, learner needs, ability of learners, size of class and many other things could affect how a directly taught lesson is delivered. I believe this is a prime example of this as my knowledge of the class including size and individual abilities of the learners allowed me to create this lesson in advance with careful consideration to the different groups made. Putting MAT students with lower ability students and preparing enough question sheets to get a nice group size all played a part in creating this activity.

Recommendations for further development

Through the process of creating this assignment and reflecting upon my own practice, it has come to light that certain aspects of my pedagogy with respect to the principles selected certainly have room for improvement.

My cross curricular responsibilities, specifically my digital competency aspect could benefit from having more in depth and more frequent activities incorporated into the lesson. Having learners engage with the interactive whiteboard is a good start but I need to make more of a push on this and start to implement more activities that help to develop learners' digital skills.

I also believe it would be beneficial for me to research into alternative teaching techniques as when considering the blend of approaches principle, I generally stick to the standard direct teaching layout that I previously discussed. The group work activities and lead learner examples I provided are a good starting point. However, I think looking into other methods such as peer to

peer instruction and project-based learning might be a good way to improve my own pedagogy.

References

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