

Overview

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Pathway: Primary

Targets from previous assignment:

	Target	What I have done in this assignment...
Target 1:	Consider developing counter arguments further.	I have engaged with debates surrounding the pedagogical principles examined in the piece. I have also made clear when my own ideas diverge from or develop sources I've used eg. Upitis et al.
Target 2:	Extend your reading of academic and professional literature even further as a means to enhance your practice and professional development.	I have read a variety of sources that have informed this assignment including; books, peer-reviewed journals, Estyn reports and Welsh Government guidance.

Link to OneNote: https://uowtsd-my.sharepoint.com/:o/g/personal/1100271_student_uwtsd_ac_uk/EjSjoOAMrKFKjfmhSy8w-4kBqGIPOw6uFppHIK_7iQXiVw?e=A2XhWP

Illustrative example 1: Success Criteria

Opening phase (with links to prior learning)	Ask learners what needs to be included in an invitation so that someone has all the details needed to attend. Write learners answers on a whiteboard. Demonstrate to learners on a separate whiteboard how to correctly produce an invitation including the name of the person receiving it, what the event is, the date, time, and an RSVP.	Learners to create success criteria.
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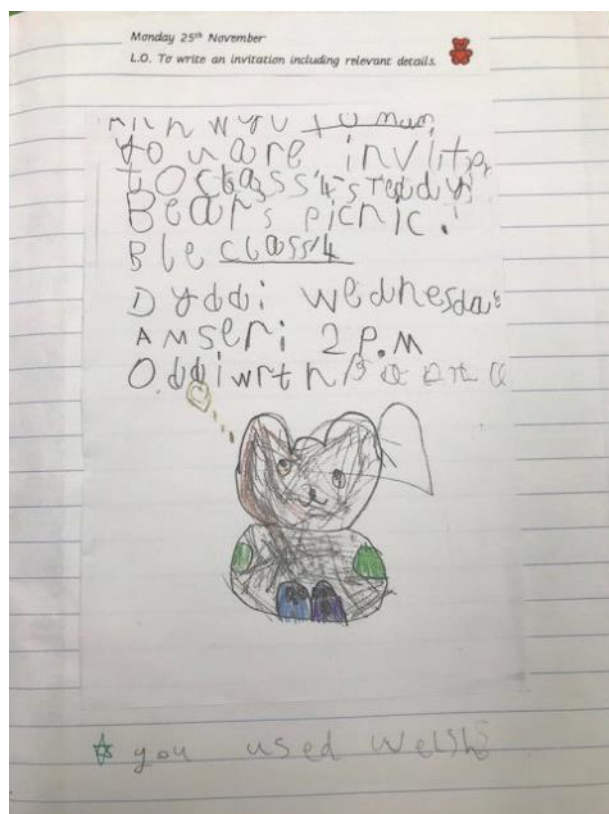
The example above is taken from a lesson plan for a language, literacy and communication lesson which I planned and taught. I instructed the Year 2 learners to create their own success criteria and Taylor (2015, p. 191) asserts that this 'encapsulates what Black and William meant in the child being at the heart of assessment' as it allows learners to take control of their learning. Allowing the learners to do this did produce higher quality work as they had a better understanding of what they needed to do to complete the task successfully, and also could work more independently. To progress further with this aspect of AFL I will continue to allow the learners to create the success criteria as I did not implement this technique as often as I could have. After seeing the benefits of using it I aim to take it forward into my practice.

Illustrative example 2: Think, Pair, Share

Opening phase (with links to prior learning)	Ask the children what they think our different senses are using think, pair, share. Watch the video, pausing it after each sense is described and learners to think, pair, share what else a nice scent might be, for example. Use the randomiser to choose learners to share with the class.	Think, pair, share.
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Throughout PTE1 I regularly used the AFL and questioning technique think-pair-share. In this knowledge and understanding of the world lesson, learners learnt about how we and animals use our senses to make sense of the world around us. I used this strategy throughout my placement as I have seen it used effectively in class while working as a teaching assistant prior to the start of the PGCE course. Learners in my Year 2 class were not familiar with this AFL strategy and I found they were more engaged during the opening phase of lessons where I used this technique. Clarke (2008, p. 42) states that "Children are learning and teaching when they are in talk partners" and I found this to be true while listening to learners working collaboratively with each other. Rather than simply listening to me teaching, learners learnt a great deal from each other and actually articulated ideas and thoughts that I had not anticipated. This led to the opening phases of my lessons being more engaging for the learners and they brought more understanding and knowledge into the lessons that followed. Furthermore, I used a randomiser on the computer to choose a learner to share the ideas they had discussed with their partner. This ensured that there was no danger of only certain learners regularly being chosen and also motivated learners to actively take part in dialogue with their partner as they may be chosen to speak in front of the class. As I move forward in my practice I want to extend my use of questioning techniques by also using pose, pause, pounce, bounce to discuss ideas in the classroom.

Illustrative example 3: Peer assessment



As demonstrated above, learners peer-assessed each other's literacy work. Black et al. (2007, p. 50) argued that peer-assessment drives learners' motivation, and this was true when I used this technique as learners were proud to share their work with their peers. Learners needed support while assessing each other's work, and particularly found it difficult to view a peer's work through a critical lens. However, with support they did improve in assessing their peers work both verbally and in writing. This gave learners the opportunity to identify what elements of a piece of work make it a good piece of work, and also to start thinking about how their own work could be improved.

I can improve in this aspect of AFL by introducing self-assessment also. As learners found it difficult to assess others I hadn't introduced this yet, as Black et al (2007) suggest that peer-assessment should be mastered before learners are able to self-assess themselves.

Illustrative example 4: Adapting lessons based on learners' needs

Evaluation of Pupil Learning	
Evidence of Learning (including attitude to learning over time))	During the opening phase of the lesson learners were taught as a whole class to read 'quarter past' and 'quarter to' on the clock, and practised physically moving the hands on the clock. Although learners appeared to remember 'o'clock' and 'half past' during the opening phase, when they worked with myself at the focus task it became apparent that some learners were still struggling with this and that for the majority 'quarter past' and 'quarter to' were too advanced for them yet.
Next Steps for Progress	The time worksheets for tomorrow have been adapted and I have removed 'quarter to' as the learners are not ready to progress this far yet. Also, I will be putting the clock on the interactive whiteboard regularly during registration to practise reading it with the whole class.

The example above demonstrates how I have adapted a lesson to suit the needs of the learners in the class. In hindsight, I could have done this better by questioning learners prior to the opening phase of the lesson planned so that I had time to adapt the learning before this first lesson. However, this was a learning opportunity to ensure that I am certain that I know where learners are in terms of their progression. As the Welsh Assembly Government (2010) state, "assessment for learning is finding out where a learner is, knowing and making explicit where the learner needs to get to and most importantly showing the learner how to get there". Making these changes made the next lesson more accessible for the learners, while still challenging them to progress.

Illustrative example 1: Numeracy

Teaching & Core Learning	1. Instruct learners to wash hands and then take learners into the cooking room. Allow learners to make a choice when deciding upon the filling of their sandwich. Guide learners through the process of making their sandwich, ensuring that they follow all safety rules. Take photos of learners when making their sandwiches, ensuring there are photos of each group at the different stages that they used in their previous instruction writing. Before learners cut their sandwiches into two halves, ask them what shape they think that cutting it diagonally will make. How many triangles will they make when they cut the sandwich diagonally in opposite directions?	1. Learners to closely follow instructions in order to be successful.	1. Bread Butter Butter knife Ham Jam Cheese Clingfilm iPad
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This is an extract from a Personal and Social Development, Well-being and Cultural Diversity where numeracy was explored as a cross-curricular responsibility. Although I recognise that numeracy is a fundamental responsibility of every teacher (Donaldson, 2015), I did struggle to find meaningful links and connections to other areas of learning and experience during those lessons. I think that this use of questioning did allow learners to become aware of how shape is present in all aspects of life and how we can create and manipulate shapes.

Throughout my placement I sought support and advice from my class mentor to ensure that I was planning for numeracy within my lessons. My class mentor has suggested that I work towards incorporating numeracy more authentically within my lessons.

Illustrative example 2: Digital competency



While preparing for a teddy bear's picnic, learners learnt how to represent data in a number of ways. One of which was using a digital programme to create a pictogram, as shown above. This developed learners' data and information literacy as they recorded data in the format of a pictogram. While on placement I sought opportunities to develop learners' digital competency as we learnt in university that '85 percent of jobs that will exist in 2030 haven't been invented yet' (Dell Technologies, 2018, p.3), and I felt inspired to ensure I was developing learners digital competency.

In this example I think that I could have extended the learning and given more autonomy to the learners by allowing them to choose how they wanted to represent this data using a digital programme, e.g. They might have wanted to create a block graph instead.

Illustrative example 3: Literacy

2. Show the learners the variety of musical instruments. Explain to them that they will be using the instruments to create the same sounds as our onomatopoeia words. Sounds to be recorded and uploaded to SeeSaw.	2. Learners to lead the learning and share their ideas. Learners to explore the different words and be creative to create the sounds.	2. Drums Tambourines Triangles Maracas iPad
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As shown above, during a music lesson that I planned, learners developed their literacy skills by exploring onomatopoeia words. Learners were given the freedom to choose from a variety of music instruments and explore how they could use them to create the same sounds as the words from the story ("whoosh" and "bump").

I did not find it particularly challenging to incorporate literacy within my lessons, unlike numeracy, perhaps because I have an English literature degree. I enjoyed trying to seek engaging ways of bringing literacy into lessons and sharing my enjoyment of literacy. I strongly agree with theorists such as Neaum (2012, p. 129) that literacy allows us and gives us the freedom to be active participants in society.

If I had more time with my class I might have developed this lesson further by exploring how they might use music to also create the tone of the story and re-tell it. As I continue with my next PTE I will continue to seek ways to build meaningful links to literacy within lessons to develop learners' skills while also, hopefully, instilling an enjoyment of literature.

Illustrative example 1



The images above were taken during a knowledge and understanding of the world lesson which developed learners understanding of hibernation. This lesson ranged within and across AoLE's as they also developed skills such as showing respect and care for other living things (personal and social development, well-being and cultural diversity) and literacy skills as they worked as a team to construct a hedgehog hibernation habitat. The main aim of this lesson was to develop learners understanding of how different seasons effect animals, however it opened the opportunity to build a range of skills across the curriculum.

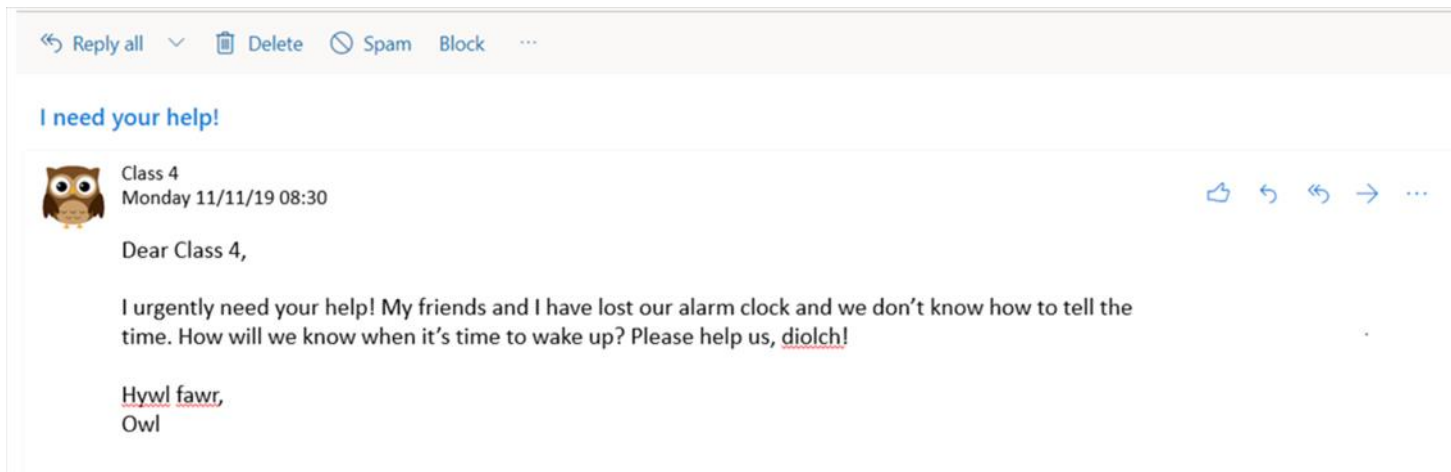
Illustrative example 2

Meaningful links to Curriculum	- observe the effects of exercise on the body (deeper breathing) - control body movements - link the basic actions in sequence and gradually improve their control and use of different shapes, levels and direction of travel Personal and Social Development, Well-being and Cultural Diversity: Understand and recognise the changes that happen to their bodies as they exercise and describe the changes to their breathing, heart rate, appearance and feelings.	Explain to learners that we will be exploring all of the different nocturnal animals that they have identified and using our bodies to explore what it feels like to be that animal in a particular moment. Play the music to set the tone for the lesson. Ensure all learners find a space where they can comfortably practise yoga. Learners will start with their eyes closed while sitting to focus on becoming calm and also to practise deep breathing. Explain to learners that it is important to practise this to make our bodies and minds calm and relaxed.	Learners to be aware of their body space. Learners to follow instructions and engage with the different movements as far as possible.	Take the learners through the sequence of the different movements, while explaining to them which animal they are portraying such as "open your arms and chest to soar like an owl through the sky". Repeat the sequence, ensuring learners understand how to move their body from one pose to another, while maintaining breathing. Ensure that the emphasis is on the learners being calm and doing their best, ensure learners are safe from hurting themselves at all times. Ask children to either think of what their favourite pose was, or can they create their own? Share with the class. Lesson to finish with practising deep breathing while sitting and saying "namaste".	Learners to be creative and use their prior knowledge to enable them to think of their own poses.
Meaningful links to: Cross Curricular Responsibilities	Oracy: express opinions, giving reasons, and provide appropriate answers to questions.				

Illustrative examples 2, 3 and 4 will demonstrate how I planned lessons that ranged within and across AoLE's using a theme of nocturnal animals. These extracts are taken from a physical development lesson where the learners explored this theme through yoga by exploring movements inspired by nocturnal animals.

This part of the lesson plan demonstrates how this lesson developed physical development skills, and also personal and social development, well-being and cultural diversity skills, and oracy skills. This lesson strengthened learners' knowledge of nocturnal animals and allowed them to explore this theme in a more holistic way, as they thought about the animals movements.

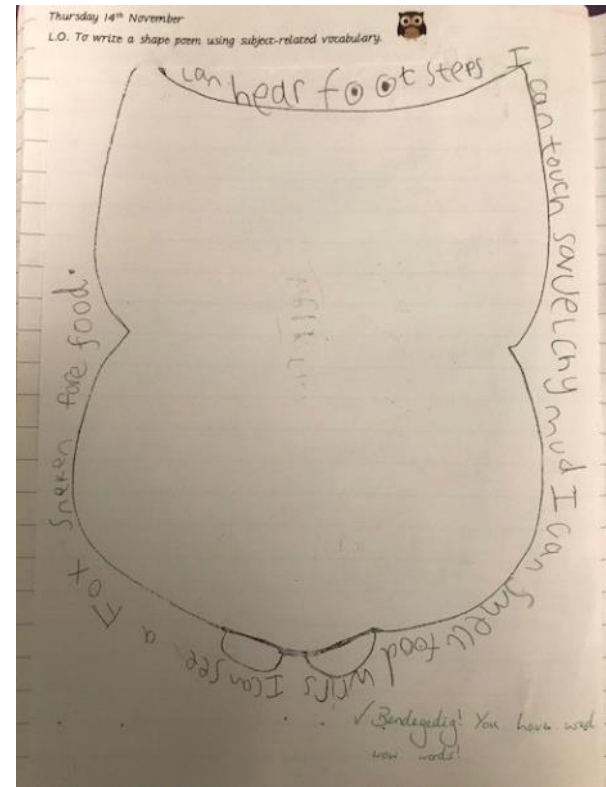
Illustrative example 3



This example has been taken from a PowerPoint I created for the opening phase of a lesson when teaching learners how to read the time on an analogue clock. This connected strongly to the theme of nocturnal animals as learners explored AM and PM. As this lesson took place in the Foundation Phase, the learners were excited to receive an email from the owl from the story, and it motivated them to engage in the lesson. As Haylock and Cockburn (2013, p. 262) state 'motivation for learning is directly proportional to the degree of purposefulness in the learning tasks', and that is what I aimed to do here in this example.

Illustrative example 4

2. Learners to explore what it might be like to be an owl hunting in the night. Learners to explore the different senses that an owl uses in the nighttime. Explain to the children that they need to keep their eyes closed during the activity to understand how nocturnal animals use their senses. Touch – learners to hold the box of forest objects and describe what they feel. Smell – learners to smell unlit candle and describe what images it invokes. Hear – learners to listen to the forest sounds and describe what they can hear. Sight – learners to keep their eyes closed and	2. Learners to participate in all of the activities, engaging in conversation with teacher and peers. Learners who find it difficult can use the word mat to help them.	2. Senses worksheet Box of forest objects Lantern Forest sounds Unlit candle Word mat iPad
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Within this knowledge and understanding of the world lesson with my year 2 class, learners were learning about how senses are used to make sense of the world around us. I have included these two examples here to demonstrate how skills taught in one lesson directly informed the next lesson. As illustrated by Hayes (2010) cross-curricular learning allows skills from one AoLE to be reinforced in another.

In this knowledge and understanding of the world lesson, learners developed their knowledge of the senses to understand both how they use them, and to explore how an owl might use them during the night. Learners recorded their ideas on a worksheet. In the following lesson, learners used this worksheet to create a shape poem exploring an owl's use of its' senses as it hunts in the forest, as demonstrated here.

Critical reflection

Word count: 3237

In *Successful Futures* (Donaldson, 2015) Donaldson states that there are twelve pedagogical principles for teaching that will lead to effective learning. This assignment will focus on three of these principles: 'Good teaching and learning means employing assessment for learning principles', 'Good teaching and learning regularly reinforces Cross-curriculum Responsibilities, including literacy, numeracy and digital competence, and provides opportunities to practise them', and 'Good teaching and learning ranges within and across Areas of Learning and Experience' (Donaldson, 2015, p. 67 and 68). These principles will be explored through a theoretical lens and in relation to my own implementation of them during Professional Teaching Experience (PTE) part 1 whilst teaching in a Year 2 class in an urban school. These three pedagogical principles are essential, and I have chosen to explore the latter as I believe thematic teaching and learning provides rich opportunities to deepen learners' knowledge and understanding.

Assessment for learning (AFL) is an integral part of good teaching and learning (Donaldson, 2015; Wiliam, 2018). This form of assessment puts the learner at the heart of the classroom (Black et. al, 2002) and gives learners the power to become lifelong learners (Clarke, 2008). In education there is an awareness of the importance of AFL in assessing teaching and learning as a reciprocal process, with the ability for teachers to continuously determine the progression of pupils' learning (Wiliam, 2018). The Welsh Assembly Government (2010) recognises that it is essential for learners to be taught how to achieve their targets through AFL techniques. However, there is debate over the fundamental principles that underpin AFL. For Clarke (2008) and the Welsh Assembly Government (2010) there are seven key strategies, although there is variation amongst them. Both agree that collaboration between learners, a growth mindset, learners as active participants and learners being taught how to learn are fundamental principles in AFL. Despite Wiliam (2018) stating that there are in fact only five key strategies, within these principles he encompasses the ideas and concepts which were essential to Clarke and the Welsh Assembly Government. Crucially it is the principles, according to Clarke (2008, p. 11), and not the techniques used that must remain consistent if AFL is going to be implemented successfully.

One key and established AFL technique is learners being aware of and understanding the success criteria of each lesson, which equips them with the necessary tools to complete a task to the best of their ability (Hattie, 2012). As demonstrated in illustrative example 1 for this principle, I instructed learners to work as a group to create their own success criteria during a language, literacy and communication lesson. I made this visible so that learners could continually refer to it throughout the lesson. The quality of the work produced illustrated to me the significance of learners producing the success criteria so that they can take ownership of their own learning and as a result be successful (Clarke, 2008; Wiliam, 2018). Nevertheless, I do not feel that I used this AFL strategy as effectively as I could have throughout my placement. At the beginning of PTE, I was nervous delivering lessons and became so focused on the content of the lesson that I did not plan effectively to improve the way the learners learn. When I return to PTE, I aim to enhance my use of this AFL strategy by consistently planning for learners to create the success criteria during the opening phase of lessons.

Throughout PTE I implemented the AFL strategy of think, pair, share regularly during the opening phase of my lessons, as demonstrated in illustrative example 2. Using questioning techniques allows teachers to discover learners' pre knowledge on a subject, and importantly any misunderstandings prior to the start of the core learning (Black et al, 2002). Furthermore, they can give learners a voice, strengthen their listening skills and give them time to express a coherent response (Black et al, 2007). I chose to use this technique after seeing it being used effectively in my previous employment. Using this technique engaged learners as active participants in the learning while also ensuring that the learners led the learning and engaged in the majority of the talking and thinking (Black et al, 2002). The significance of this is outlined by Clarke (2008, p. 35) who emphasises the importance of pupil dialogue in the classroom to create a collaborative environment in which learners are central. As I progress in my own practice, I will develop my use of questioning techniques such as think, pair, share or pose, pause, pounce, bounce to discuss more complex ideas that require higher order thinking.

Collaborative learning and peer-assessment are fundamental principles in AFL (Donaldson, 2015; Wiliam, 2018; Clarke 2008). Illustrative example 3 is an example of learners' peer-assessing each other's work at the end of a lesson. Learners found it difficult to give constructive feedback to peers as they were unfamiliar with this technique, and they needed continuous support in order to achieve this. However, I understand that to be successful using AFL techniques one must extensively practise them (Wiliam, 2018, p. 189). I aim to continue and extend my use of peer assessment during lessons so that learners will be more independent in their learning. Black et. al (2007, p. 50) identify peer -assessment as an effective tool to motivate children in their own learning while also improving the teacher's knowledge of their pupils' understanding and learning.

AFL can equip teachers with the ability to adjust the teaching and learning planned, to suit the needs of the class (Black et al. 2007; Donaldson, 2015) and illustrative example 4 exemplifies how I have done this during a mathematics and numeracy lesson. After discussion with my class mentor I had assumed that the learners were ready to progress in their learning. However, through questioning and working closely with learners, it became evident that most learners were not as advanced as I had thought and thus the differentiated task which I had planned did not match the current capability of the class. With this knowledge I altered the consecutive lesson to consolidate learners' confidence and understanding before progressing their skills onward. If I had not worked closely with and questioned the learners, I may not have been aware that they were not ready to progress (William, 2018, p. 56).

Teachers must embed AFL strategies and techniques to achieve good teaching and learning (Donaldson, 2015) and overall, as PTE progressed, I felt more confident facilitating pupil dialogue through think, pair, share and asking learners for more input into lessons. I recognise, however, that I have not effectively implemented self-assessment. I aim to do this as my placement progresses by asking learners to reflect on their learning using a traffic light system. On the other hand, it has been argued that developing peer-assessment effectively precedes self-assessment (Black et al, 2007), so once I have developed learners' confidence assessing their peers, they will be ready to assess themselves.

The implementation of the three cross-curriculum responsibilities (CCRs) must be central to planning and learning (Welsh Government, 2019a) and in the new curriculum for Wales, the Welsh Government have outlined literacy, numeracy and digital competency as pivotal responsibilities of every teacher (Donaldson, 2015; Welsh Government, 2019a). These skills have been chosen as CCRs as they are fundamental to 'thinking, learning and life' (Education through Regional Working, 2020) and therefore crucial to child development. However, there is an argument that these skills must still be taught in discrete lessons (Lee and Pound, 2011, p. 87). Moreover, Upitis et al. (1997, cited in Lee and Pound, 2011, p. 100) warn that there is a danger while teaching numeracy, and I argue all the CCRs, across the curriculum that teachers might not find meaningful links that enhance learners understanding of both the CCR and the lesson content. While planning, I was conscious that I needed to find strong, relevant links, yet at times I did struggle to achieve this.

I found it challenging to incorporate numeracy into my lessons, although I enjoyed planning and teaching discrete mathematics lessons. While on placement I identified that this was caused in part by my own lack of confidence with numeracy and sought advice from my class mentor. The implementation of the CCR's responsibilities must be an authentic one, rather than an extra activity for the learners to do (Donaldson, 2015, p. 69), and putting numeracy into real-life contexts motivates learners to learn these skills (Lee and Pound, 2011). In illustrative example 1 for this principle I have demonstrated how learners were questioned in a cooking lesson about shape to strengthen learners understanding of how we can manipulate shape. Following my discussion with my class mentor, I will develop my ability to plan for numeracy across the curriculum by improving my own confidence with numeracy so that I can effectively transfer these skills to the learners in my class (Barnes, 2018, xv). I recognise that I must develop my ability to find such links as allowing numeracy to be practised and understood within a range of contexts across the curriculum will equip learners with the necessary knowledge to navigate society (Donaldson, 2015; Haylock and Cockburn, 2013). Moreover, developing numeracy through a range of stimulating learning experiences can establish a positive and growth mindset towards numeracy (Fox and Surtees, 2010). Therefore, good teaching and learning incorporates numeracy across the curriculum, while planning enjoyable and engaging activities that have relevance and purpose.

While planning I incorporated digital competency into my lessons naturally, particularly by giving learners the opportunity to practise and experiment with recording and video editing. Illustrative example 2 demonstrates that during a maths lesson related to topic, learners created a pictogram using a digital programme. Bennett asserts that digital devices can be used as 'powerful tools' while planning for other subjects, and particularly mathematics (2006, cited in Fox and Surtees, 2010, p. 23). As my placement school had several iPads assigned to each class and a computer suite, I had the opportunity to develop learners' digital literacy and planned to do this in meaningful ways. The degree to which learners must be digitally competent in order to be successful in the modern world is ever growing (Walsh, 2015). If learners are going to need to be digitally literate in order to make themselves employable, teaching these skills in school from an early age is necessary (Walker-Gleaves and Gleaves, 2017, p. 166; Walsh, 2015). In 2013 the ICT Steering Group reviewed the teaching of ICT in Wales and concluded that digital competency needs to be embedded into the curriculum alongside literacy and numeracy (The ICT Steering Group, 2013). Similarly, in *Successful Futures*, Donaldson (2015) stresses the criticality of literacy and numeracy as cross-curriculum responsibilities of every teacher and also recommends that digital competency be given as much significance as a third cross-curriculum responsibility. Furthermore, the teaching and learning of digital competency must be taught across the curriculum in order to create authentic and meaningful contexts (Allen et al. 2011).

Throughout PTE I was confident planning and delivering activities and lessons that developed learners' literacy and finding meaningful ways to do this. I ensured that I facilitated pupil dialogue during carpet time to help them with their oracy skills. I aimed to provide rich opportunities for all learners to develop and practise their literacy skills as this also

develops social, life and emotional skills (Walker-Gleaves and Waugh, 2017) that prepare learners for their future in a world that assumes they will be literate (Neaum, 2012). Illustrative example 3 contains a segment of a music lesson plan, where learners explored onomatopoeia using a variety of musical instruments. As learners found the lesson engaging and fun, they enjoyed exploring literacy and had a positive, enthusiastic mindset towards extending their vocabulary. As I progress in my practice, I will continue finding ways of incorporating literacy across the curriculum by finding meaningful and engaging connections.

In order to move forward and strengthen my use of the CCR's while planning, I will search for creative and engaging ways to include numeracy in thematic learning (Lee and Pound, 2011), as I have been able to with literacy. As Estyn (2019) illustrates, planning lessons and tasks that build literacy and numeracy skills across the curriculum improves standards in these areas, and teachers must be creative in order to achieve this with impact. Also, I will ensure that I continue to seek opportunities to develop learners' digital competency to effectively prepare them with the skills they will need in their future careers.

Finally, Donaldson (2015, p.39) states that learning should range within and across Areas of Learning and Experience (AoLE's) and build connections between learning that investigate current affairs. The Welsh Government are transforming the curriculum for Wales in accordance with the criticism, as they believe the current curriculum limits creativity and changes need to be made in order to prepare learners for their life outside of and beyond school (Welsh Government, 2018a). The new curriculum will allow teachers and learners to find creative links between and within AoLE's (Welsh Government, 2018b). Critics of the existing curriculum stress that it is out-of-date for the modern world and does not adequately prepare learners for their futures in a global society (Moore, 2012, p. 157). Nevertheless, the Welsh Local Government Association and the Association of Directors of Education in Wales have testified that thematic teaching without a rigid curriculum to follow could leave learners development at risk as individual teachers take control of what pupils learn (Lewis, 2019). Moreover, it has been argued that allowing learners to lead the learning opens the opportunity for unpopular subject disciplines to be avoided (Hayes, 2010) Also, there is an argument that although good teaching and learning operates in a cross-curricular fashion, specific skills must be taught through specific subjects so that learners have the necessary tools to transfer that knowledge to other learning experiences (Barnes, 2018, p. xv). I agree with this argument to some extent as I saw first-hand the development of learners' literacy skills through the implementation of a literacy intervention programme. Without being taught these skills in separate lessons I would question whether learners would have the necessary knowledge to transfer this knowledge across other AoLE's.

Despite the scepticism, there is a wealth of theory that a cross-curricular approach demonstrates good practice and leads to effective teaching and learning (Barnes, 2018; Donaldson, 2015; Hayes, 2010). Furthermore, Kerry (2015) illustrates that the traditional subjects taught in school develop transferable skills and ultimately deepen our understanding of the world, and thus cross-curricular learning becomes fundamental to good teaching and learning. Therefore, it is crucial that practitioners build upon learners' interests to form meaningful and authentic links between areas of learning and experience (Wood, 2015).

Pupil voice is at the centre of my placement school's curriculum policy so implementing this pedagogical principle was a natural part of my professional teaching experience. I read a children's story to the class, questioned what the learners wanted to learn about and planned my lessons from their ideas. Learners expressed a desire to learn about nocturnal animals, and in my illustrative examples for this pedagogical principle I have demonstrated various ways in which I planned and delivered lessons within and across AoLE's to build and deepen their knowledge of nocturnal animals. As Gardner (1999) exemplifies with his Multiple Intelligences theory, in good teaching and learning concepts and topics can only be understood if they have been explored in a variety of ways, and that is what I set out to do while planning thematic learning. This allowed me to be creative within my planning and create engaging lessons to motivate learning. For example, at the beginning of PTE, the class were learning about Autumn so I used this opportunity to teach children about hibernation and build a meaningful link to nocturnal animals by investigating hedgehogs. As shown in illustrative example 1 for this principle, I planned a lesson incorporating knowledge and understanding of the world and personal and social development, well-being and cultural diversity. This lesson gave learners the opportunity to understand how animals hibernate and consider the seasons and times of day that hedgehogs hibernate. This lesson was part of a series of lessons building knowledge about hibernation that gave learners an insight into the life of a nocturnal animal.

While teaching the class about nocturnal animals I was aware that in order to achieve meaningful learning I had to explore this theme from as many viewpoints as possible within the curriculum (Wood, 2015). So, as demonstrated in illustrative example 2, I taught a physical development lesson using yoga to explore nocturnal animals. During this lesson learners also developed oracy skills by working with a partner to create another pose. Furthermore, practising yoga also links with personal and social development, well-being and cultural diversity as learners grew an awareness of the effects exercise has on their bodies. This lesson gave learners the opportunity to delve into the topic in a physical sense and build an awareness of the differences between animals, while also developing their skills within other AoLE's. This is

further demonstrated in illustrative example 3 which displays how I used the nocturnal animal theme as an opportunity to build a purposeful connection with mathematics and telling the time. Building such links is fundamental because if children see purpose in the lessons and activities planned, they will therefore be motivated by them and learning will be enhanced (Haylock and Cockburn, 2013, p. 262).

As I progressed through PTE and became more knowledgeable of the curriculum I aimed to plan and deliver series of lessons that demonstrated to learners how skills learnt in one lesson can be transferred to another. Cross-curricular learning allows barriers between AoLE's to be broken down as learners transfer knowledge and skills across the curriculum (Hayes, 2010). Illustrative example 4 demonstrates how a knowledge and understanding of the world lesson informed a lesson focusing on literacy. In the first example, learners developed their understanding of the senses and used this knowledge to write a shape poem. During the opening phase of the literacy lesson I stressed to learners that they can use their new understanding of nocturnal animals and the senses to be creative and thus reinforcing that all learning is cross-curricular.

As I move forward in my own practice, I will give learners the autonomy to choose their own learning, while being mindful that the lessons that result from this have strong, meaningful links within and around areas of learning and experience (AoLE) and the curriculum. However, I will also be conscious that at times it will be necessary to build learners skills in one AoLE, such as mathematics and numeracy, before it can be transferred to other areas across the curriculum (Barnes, 2018).

In conclusion, I believe that I have made good progress over PTE implementing Donaldson's pedagogical principles (Donaldson, 2015) in my planning and teaching. During PTE I have received invaluable experience to develop my understanding and use of these principles, and I will use this new knowledge as already outlined to improve. As I move forward in my practice and my career as a teacher in Wales, continuously reflecting upon my practice is vital to ensure that I remain focused on how I can deliver good teaching and learning to my learners (Welsh Government, 2019b). Throughout PTE and beyond I will continue to develop my application of the pedagogical principles to ensure that I strive to be the best teacher that I can be.

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