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Assignment Title: Critically reflect on your pedagogical progress demonstrated through required elements of the Professional Learning Passport, identifying a specific area for professional development and justifying next steps for improvement

	Target	What I have done in this assignment...
Target 1	To be more critical in my writing.	I have focused on becoming more critical in the way I examine literature and theory.
Target 2	N/A	

Part 1: Professional Learning Passport

Bridging 2 Reflection

Meet

Tystiolaeth / Evidence	Adfyfyrrio / Reflect
The MEET day with UWTSD lecturing staff and our professional Network Lead was held at our Lead school. This Bridging 2 activity enabled me to develop an understanding of the four broad dimensions of 'Great Teaching', as outlined within the <i>Great Teaching Toolkit Evidence Review</i> (2020) document. These discussions were centred around the following four broad dimensions describing how: 1. effective teachers understand the content they are teaching and how it is learnt. 2. effective teachers create a supportive environment for learning. 3. effective teachers manage the classroom to maximise the opportunity to learn. 4. effective teachers present content, activities and interactions that activate their students' thinking.	The MEET day enabled me to critically reflect upon specific Assessment for Learning (AfL) strategies that I intend to embed within the TEST phase (11th – 24th November 2020). These AfL strategies included: • Sharing criteria with others • Quality of questioning / quality of talk • Quality and use of feedback • Peer and self-assessment

Test

Tystiolaeth / Evidence	Adfyfyrrio / Reflect
During the TEST phase I identified, trialled and developed my use of AfL strategies in a range of contexts. This involved 'testing' the following six AfL strategies:	During the TEST phase, I was able to experiment with a range of AfL strategies to improve my teaching practice. Through this activity it enabled me to focus on developing the five professional standards for teaching and leadership. These five standards refer

1. 'Think, pair, share' This strategy involved asking the learners a specific question that I wish for them to first 'think' about independently, and to then to discuss with their peer in a 'pair'. Once the learners had been given an appropriate amount of thinking time, I asked the pairs to 'share' their thoughts with the class. Each learner was paired with a peer of varying ability. 2. Questioning using lollipop learner-named sticks The objective of this strategy was to assess learners' ability at random. Each learner within the class had their name written on an individual lollipop stick to represent them. The strategy involved asking the class a question to assess their knowledge and understanding of the lesson topic. Then I selected a lollipop stick to choose a learner at random. Three lollipops were selected with the focus of targeting lower, middle and higher ability learner categories. 3. Anonymous self-assessment: traffic light buckets This strategy involved using three buckets in traffic-light colour: red, orange and green. The objective was for learners at the end of the lesson to place an unnamed gem that they were provided with into one of the traffic light buckets	to: pedagogy, leadership, collaboration, innovation and professional learning. Due to the nature of the TEST phase, experimentation or 'testing' of strategies was encouraged. I found this particularly beneficial as it was as opportunity for me to try out strategies that I might not have taken the time to explore without having an allocated period for such experimentation. In relation to the five standards mentioned above, I found that the TEST phase enabled me to focus particularly on the Innovation and Pedagogy standards, which resulted in enhancing my professional learning. Through 'testing' these strategies I was able to reflect on how the teacher demonstrated these techniques and how I intended to move the learning forward by building on these and developing them bespoke to my practice. The following points are my reflections of each AfL strategy identified and tested: 1. 'Think, pair, share' The benefit of this strategy was that lower ability learners could learn from the ideas and thinking patterns of their middle-higher ability peers that they were paired with. This enabled the lower ability learners engage in conversation and build confidence in their ideas and thinking by bouncing off the thoughts of their more advanced peers. Furthermore, when it came to sharing ideas
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that best reflected their confidence and understanding of the lesson they had just received. The red bucket represents low-level, the orange represents medium-level, and the green bucket signified a high-level of understanding. The learners were provided with unnamed gems, so their identity was anonymous, preventing any potential embarrassment. 4. ‘Squid’ (lunch order) money shop This strategy involved asking each learner to find the right money coins to pay for their lunch. Depending on the ability level of the learner, I would ask each learner to find a specific coin, or sum of coins for higher ability learners, for payment. For example, I asked a lower ability learner to find a 1p, 2p, 5p, 10p. For middle ability learners I asked them to find a 20p, 50p or £1 coin. For higher ability learners I asked them to add the coins together to make the sum e.g 11p, 14p, 18p etc. 5. Teacher assessment tracker sheets For this strategy, each member of teaching staff including myself as the teacher and the supporting TAs were provided with a class list of learners, with the traffic light colours red, orange, green next to their names which signified low, middle and high levels of understanding respectively. The objective was for the	with this class, the ideas came from a 'pair' rather than a single individual meaning that fear of embarrassment was reduced based on the ideas being a join-decision. Not only did this enable the lower ability learners to benefit, but also the middle-higher ability learners were able to see viewpoints from a different ability level and develop ways to explain their thinking, leading to a consolidation of their learning and understanding. 2. Questioning using lollipop learner-named sticks This strategy enabled learners to be selected at random for questioning. This meant that learners did not feel that any specific child was being favoured or chosen above another, leading to a fair contribution of class ideas. Choosing three learners based on their ability category meant that each question could be developed further depending on which learner was being asked. It also meant that support was always provided to each child. 3. Anonymous self-assessment: traffic light buckets This strategy was useful in indicating how well and confidently the class had understood the lesson tasks. However, the draw back for this strategy was that the use of unnamed gems meant that it could not be identified which learners placed themselves
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teacher and the TAs to record how well a learner is understanding the lesson by marking their names in a specific traffic light colour category. These are referred to as mini tracker sheets and the results were then recorded into a larger excel spreadsheet to map out each learners' progression. 6. Mid-lesson plenary: This strategy involved briefly halting the learning to conduct a mid-lesson plenary. For this I used a hand puppet ('Wiggy Wizard') saying the phrase, "un, dai tri – everybody looking at me" to capture the class' attention. I then asked the class to close their eyes and put their hands up to when they think I have called out the correct answer to a multiple question. My 2 chosen AfL strategies based on the list identified above were: 1. 'Squid' (lunch order) money shop for children to pay for their lunch meals in the mornings, utilising the assessment trackers sheets to note their ability levels and move their learning on. 2. 'Cookie Monster' puppet – pupil self-assessment using the traffic light systems of how well they understood the lesson objective.	in each specific category (red, orange, green). This meant that only an overall assessment for learning could be captured, meaning that it was impossible to know which learners required more help moving forward. 4. 'Squid' (lunch order) money shop This strategy was useful in that it enabled an assessment of learners ability to take place without them realising. This was because I was assessing them before the day's learning has officially began, meaning that they weren't aware of assessment taking place. It was also conducted in a role-play manner meaning that it did not appear to be a formal assessment but rather encouraged the learners to be open and experimental in their attempts to formulate the correct currency. This enabled me to record how well each learner grasps coin recognition so that I can push or readdress their learning the following day. 5. Teacher assessment tracker sheets Using assessment tracker sheets was a clear, simple and highly effective way of mapping out each learners' knowledge, understanding and ability level. It also encouraged conversation to take place between myself and the TAs about the learners' progress within focused tasked and enabled me to discuss and implement appropriate measure to improve this. These assessment tracker
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<u>Links to literature: research consulted –</u> Abdulkareem, Eman (2019) <i>The Effectiveness of an Assessment for Learning Training Program in Improving the Practice of Primary School Teachers of Assessment for Learning Strategies</i>. Elsevier. Clarke, Shirley (2001) <i>Unlocking formative assessment: practical strategies for enhancing pupils' learning in the primary classroom</i>. Hodder and Stoughton. Coe, Rob et al (2020) <i>Great Teaching Toolkit: Evidence Review</i>. Available at: https://www.greatteaching.com/ Serges, Mien et al (2006) <i>Redesigning a learning and assessment environment: The influence of students' perceptions of assessment demands and their learning strategies</i>. Elsevier. Rosenshein, B (2012) <i>Principles of Instruction</i> https://www.teachertoolkit.co.uk/wp-content/uploads/2018/10/Principles-of-Insruccion-Rosenshine.pdf Valverde Caravaca, Rebeca (2019) <i>Effective questioning in CLIL classrooms: empowering thinking</i>. Oxford University Press. Vygotsky, Lev (1962) <i>Thought and Language</i>. Cambridge M.I.T Press. Wales Government (2010) <i>How to develop thinking and assessment for learning</i>	sheets are then inserted into a larger Excel spreadsheet which enabled me to map out how each learner has been progression in different AoLEs, enabling me to set up the necessary provisions and support structures for individuals who require further assistance so that no learner is left behind. 6. Mid-lesson plenary The benefit of the mid-lesson plenary was that I was able to assess the learners understanding of the task before the lesson halfway through the learning. This meant that I could quickly identify which learners required additional support and then ask the TAs take those learners into focused groups so that their understanding could be improved before the end of the lesson. This prevented learners from getting to the end of the lesson with little confidence in their understanding of the subject topic. Furthermore, the anonymous aspect of this strategy meant that no learner felt singled out or judged by their peers which could impact on their confidence and social anxiety levels within the learning environment.
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https://hwb.gov.wales/curriculum-for-wales-2008/assessment/how-to-develop-thinking-and-assessment-for-learning-in-the-classroom	
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Share

Tystiolaeth / Evidence	Adfyfrio / Reflect
During the SHARE phase I chose two AfL strategies that I had identified from the TEST phase (as outlined above) and shared this with the Network Leads via an AfL presentation day using the PowerPoint presentation attached. My 2 chosen strategies were: 1. 'Squid' (lunch order) money shop for children to pay for their lunch meals in the mornings, utilising the assessment trackers sheets to note their ability levels and move their learning on. 2. 'Cookie Monster' puppet – pupil self-assessment using the traffic light systems of how well they understood the lesson objective. Collaborative Discussion: Following on from my presentation, I was able to watch the presentations of my student-teacher peers. This led to an engaged discussion that was both meaningful and purposeful to my teaching practice. It also enabled me to focus on the 'Collaboration' Professional Standard.	Through this experience, I have learnt the importance of developing a bank of AfL strategies and how this is the main way to effectively move a child's learning forward. Doing so additionally allowed for a critical reflection of my teaching practices, enabling lessons to be restructured or revised according to specific needs of certain ability groups. Furthermore, this experience has also taught me the benefits of conducting mini-plenaries mid-way through the lessons, so that I can gauge how well the learners are grasping the lesson objective and whether or not I need to allocate additional 1:1 support to certain learners with the assistance of a TA. The SHARE aspect of this phase was particularly beneficial in that it allowed for a collaborative discussion between myself, the Lead school's senior staff members, the Network Lead and my student-teacher peers. The discussion was a thoughtful and highly engaging practice that enabled me to critically reflect on my own experience during the Bridging 2 activity as well as considering the experiences of my peers. It was particularly beneficial to consider the strengths and

	weaknesses of each strategy and how efficiently and effectively each one will operate in a busy classroom environment where time-management is key. Overall, I am grateful for the experimental aspect that Bridging 2 provided and the opportunity to share our professional experiences in a collaborative and meaningful way. I am confident that this has helped broaden and consolidate my understanding of the importance of the five Professional Standards for Teaching and Leadership in my practice.
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DGB/SKD

Llythrennedd / Literacy

Evidenced by an asset? ✓

SENECA: Language Development for Teachers – Level 1:

During this CPD course, I completed the following modules which will aid my professional practice concerning literacy within the foundation phase. These modules are stages of development; a child's first year and consonant acquisition; beginning stages of language; lexical development; stages of development; theories of language development; behaviorism; interactionism; interactionism 2; nativism; cognitivism and social constructionism.

Rhifedd / Numeracy

Evidenced by an asset? ✓

SENECA – Numeracy: Year 3 & 4 National Curriculum CPD course

This CPD course for numeracy equipped me with skills and knowledge to teach the following areas of Year 3 and 4 maths: Year 3 number, Year 3 measurement, Year 3 statistics, Year 4 number, Year 4 measurement, Year 4 geometry. Within each module there were a series of sub-sectional modules which deepened my understanding of teaching numeracy in KS2 Year 3 and 4 classes.

Gwybodaeth bynciol / Subject knowledge

Evidenced by an asset? ✓

Reach Out CPD: KS2 Science – Electricity CPD Certificate

During this CPD course, I acquired the skills and knowledge to learn how to teach the subject topic of electricity in Science. It taught me how to use practical demonstrations in an effective and engaging manner as well as providing a detailed recap of the scientific terminology that I will need to familiarise myself with when teaching this topic to KS2 learners.

Professional Experience Template 1: Language, Literacy and Communication – Retelling of Diwali Rama and Sita Story using Pie Corbett strategy

Pedagogy Standard: Influencing: Reflection in Learning

What did you do and why?

This Language, Literacy and Communication (LLC) lesson focused upon the retelling of the Hindu story of *Rama and Sita*, using the strategy of Pie Corbett's *Talk for Writing*. The story of Rama and Sita was chosen in light of this week's topic of Diwali; the story of *Rama and Sita* is popular story for retelling during the festival of Diwali.

Working with my class mentor, we came up with this lesson idea to enable the learners to become 'ethical and informed citizens' not only within Wales, but of the world and the cultures that surround them. It is important for children to understand the significance of other cultures outside of their own backgrounds in order to develop an appreciation and respect for other ideas and beliefs that might challenge their own. Respect is something that is taught and by delivering this lesson topic, it will teach children to celebrate different cultures rather than fear them.

The objective of the lesson task was for the learners to be able to recite or retell the story orally through use of imagery. This strategy is named after the educational trainer Pie Corbett who is renowned for creating the *Talk for Writing* approach to learning. To implement this strategy, I first read the story of *Rama and Sita* the class. The next step was to work as a class to try and sequence the story in the correct order by using pictures, hand drawn by volunteered learners. This created a pictorial story board for the children to retell the story of *Rama and Sita*. After this demonstration the class were divided into their ability groups - red/coch, orange/oren, green/gwrydd, blue/glas, and purple/porffor – to complete this activity as a focused task. At the end of the lesson the learners took it turns acting out and retelling the story using the story boards they had created.

The creative process of acting out the story utilised the learner's drama skills. This incorporated curriculum links to the Expressive Arts AoLE. This links to the Welsh Government's 'Statements of What Matters' for Expressive Arts which outlines how this AoLE enabled learners to gain and understanding an appreciation of cultures and societies in Wales and in the world, which ties into the lesson's objective of drawing upon Donaldson's purpose to enable learners to become 'ethical and informed citizens'.

What have you learned?

Delivering this lesson has taught me how important is it to research, develop and implement a range of teaching strategies into my teaching practice. One aspect that I found particularly striking was how well the learners retained the story of *Rama and Sita* and how able they were to sequence the story in the correct order using pictorial representation e.g., hand drawings. This wasn't present in a select few learners, but the success of this task was prevalent amongst *all* learners within the class, including lower ability learners. I found this fascinating as I was initially hesitant about how easily this concept would be grasped by lower ability learners, however the result was the opposite – lower ability learners were engaged and captivated by this task and demonstrated particular enthusiasm when acting out the story through role play at the end of the lesson. This strategy has demonstrated how effectively children can learn and retain information when the lesson activity engages them in play and allows them to take part in the learning without even realising. This view corroborate research I have undertaken consulting the work of Hattie (2012) in the text *Visible learning for teachers: maximising impact on learning*, and also contextualises the educational theory I have acquired through Vygotsky's 1962 publication of *Thought and Language*.

What next?

Teaching an LLC lesson using Pie Corbett strategy has taught me effective this technique can be for getting the learners engaged in the lesson activity and achieving the desired outcomes, particularly for lower ability learners. As a result, it has led me to consider how other lessons, outside of LLC, could also benefit from using this Pie Corbett technique not for the retelling of a story, but for the retelling of knowledge and facts. In this respect I could use this strategy for Maths and Numeracy or even Science and Technology lessons, which is an aspect I intend to trail my future teaching practices. I am also eager to take on further training opportunities to expand my knowledge of Pie Corbett and the wealth of other techniques that can be incorporated into my teachings. I intend to achieve this by participating in CPD courses and also by engaging in conversation with my class mentors and teaching staff who have knowledge and experience of the effectiveness of this strategy. By doing this I can improve my professional practice through research and teaching practitioners alike.

Professional Experience Template 2: Numeracy – Measuring length (using non-standard units of measurement): Differentiation

Pedagogy Standard: Refining: Differentiation

What did you do and why?

This numeracy lesson was based upon this week's feature story *Room on the Broom* by Julia Donaldson and it ran throughout the week in focused ability groups. The lesson involved introducing the learners to the concept of measuring length using non-standard units of measurement such as gems, numicon blocks and counting sticks. I explained to the learners that any object could be used to measure length, however what is important is that the items used to measure the length of an object is the same. For instance, I explained that to measure the witch's broomstick, one could not use a mixture of numicon, gems or counting sticks to measure length. Here I informed the learners that "we must choose one measuring unit".

This aim of this lesson was to get learners to consider what it means to measure length and why we might need to do it in everyday life. I asked the class to think about, via the 'think, pair, share' AfL strategy, things that they might need to measure at home. This helped the learners grasp the relevance of learning to measure objects in an authentic, real-life context (professional standard) which enhanced their engagement and created a meaningful and purposeful class discussion on the carpet.

Since this lesson's focus was centred around this week's story of *Room on the Broom* by Julia Donaldson, I chose to use objects from the story for the learners to measure. This included illustrations of the witch, the wand, the frog, the cat, the dog and the broomstick. In order to differentiate the lesson to the range of learner abilities within the class, the illustrations were printed off in a variety of sizes. Higher ability groups received the largest images blown up to A2 and A3 sizes, and the lower ability groups had to measure objects printed out in A4 and A5 sizes. By doing this, learners all got equal opportunities to measure the same characters from the story which prevented any potential disagreements or feelings of favouritism over which characters each ability groups were allowed to measure.

As the class teacher, my task was to sit with each ability group and conduct this activity as a focused task. Learners had measured each object (character illustration) and discuss whether or not it was 'longer/shorter' than the others. At the start of the task, I clearly explained the rules or 'what I am looking for' (WILF) when we measure length e.g.

- Starting measurements at the beginning of the object/picture – not in the middle or the end
- No gaps between units
- Measuring in a straight line
- Rounding measurement to the closest number e.g. 3 $\frac{1}{4}$ gems would be 3 gems long
- Using the appropriate units e.g. 10 gems when using gems

What have you learned?

This lesson has taught me the importance of letting the learners lead the learning. At the start of the lesson a considerable amount of time was spent with the learners on the carpet as we collectively engaged in thoughtful and meaningful discussions about the importance of measuring things in everyday life. Whilst this time overran, which I did not intend to happen, I learnt the importance of letting the learners lead the learning in this respect – building upon another Professional Standard. I discovered that it was more purposeful and memorable for the learners to develop their own thought and thinking processing by learning how to engage in questioning and the importance of asking “why?”. This is personally very interesting and relevant to my practice as although differentiation was the main professional standard I intended to develop in this practice, it made me realise the importance to staying open minded and flexible towards a lesson's direction. I am pleased that I gave the learners the time and space to explore the concept of measuring in a way that was purposeful to them and, from questioning them throughout the week, they seemed to retain the knowledge they learnt from this lesson and most importantly, reflected upon it with excitement.

What next?

Moving forward, I intend to use class discussions as an integral part of introducing a lesson topic, particularly for factual-based subjects such as Mathematics and Numeracy where discussions might not normally be as prevalent when compared to say Language, Literacy and Communication and Expressive Arts.

Delivering this lesson has made me consider how I could take a more creative approach to deliver Mathematic and Numeracy lessons to make them more memorable and meaningful for the learners. I would like to look into further learning and development opportunities that perhaps utilise the creative arts to teach maths-based subjects. This can be in the form of online workshops or, within the context of my school, by engaging in conversations with teachers, asking them how they have incorporated these elements into their practice. I am eager to share what I have learned with my teaching colleagues to see how our experiences compare and to help identify further areas for improvement and development within my own teaching practice.

Professional Experience Template 3: Science and Technology – Virtual School Trip to the Moon: Authentic Contexts for Learning

Pedagogy Standard: Advancing: Real Life Authentic Contexts

What did you do and why?

This week's learning topic has been based upon Oliver Jeffers' children's book *The Way Back Home* with the focus upon out of space. To draw 'Space week' to a close, this lesson was focused on a virtual school trip to the moon. This week involved the learners engaging in a variety of space-related activities that I created as part of their 'Rainbow Challenges', one of which involved the making their own astronaut helmet from recycled materials to wear during the virtual school trip.

The aim of this lesson links to the Professional Standards of Creating Authentic Contexts for Learning and uses this to focus on the learners' overall wellbeing. The reason for this is due to the time in which this lesson is taking place – during the online/ home-learning period as a result of Covid-19. Learners have been without social contact with their peers since before Christmas 2020 and one aspect they have reported missing is the opportunity to 'have fun and learn together'. I decided to address this issue during this week's theme of Space by telling the children that we will all be going on a virtual school trip – launching a rocket from the school playground to the moon.

In order to achieve an authentic context for learning, aware that a physical school trip cannot take place – let alone to the moon – I decided to create a video using iMovie to document the class' journey from the school by getting into the rocket and travelling into space to land on the moon. The video, attached in my PLP entry, is rich with visual imagery such as planets, asteroids and stars, and the sound has been used to engage learners not in speaking but in thinking. The idea was for learners to immerse themselves in the journey from their own homes and to use their concentration and imagination skills to travel in the rocket through the space. Throughout this activity, I asked the learners to think about their five senses, such and how they were feeling

– light or heavy – what sounds they could hear, and what they could see. By asking them these questions I was able to get learners to activate their prior knowledge about the facts they had learned in the week and created an authentic experience during their virtual journey to the moon. At the end of the trip, each learner was presented with a personalised space certificate highlighting their participation in the virtual school trip to the moon – celebrating their collective achievement as a class.

In preparing for this lesson, I consulted literature surrounding the teaching of Science to primary school children. The research of Campbell and Chittleborough (2014) *The new science specialists: promoting and improving teaching of science in primary schools* influenced my preparation concerning how to create a visually and sensory-rich science-based lesson for learners.

What have you learned?

Conducting this activity has given me insight to two valuable lessons which I intend to implement in my teaching practice. The first concerns the importance of continually refining and expanding my own skills as a teacher through the use of powerful digital tools such as video making.

Developing this skill enabled me to create a lesson which I would normally have not attempted in light of online/ home learning and not being in the classroom environment. By stepping out of my comfort zone I was able to experiment with video editing and develop what will be a life-long skill that I can continue to incorporate into my practice, even when classroom teaching resumes.

The second lesson I have acquired follows on from the video editing and is based on how the use of video facilitated the creation of an authentic context for learning, thus allowing this professional standard to be met. I have learnt that physically taking learners on a school trip doesn't have to be the only way that this standard can be attained; video skills allowed this standard to be met virtually. This has enabled me to become adaptive as a teacher by thinking of innovative ways to fulfil Professional Standards despite any array of restrictions imposed by the global pandemic.

What next?

Moving forward, I intend to continue to develop innovative ways by using digital skills such as video making to engage learners and enhance my teaching practice. I am eager to recreate this lesson in the classroom environment whereby the children are all seated on the carpet, wearing their astronaut helmets preparing to journey in the class rocket to the moon. This would enable me to tailor my questioning more thoroughly since conducting the lesson online via Microsoft Teams involved technical issues concerning internet connectivity and sound quality.

I would also like to further this interest by taking part in additional training either via watching YouTube tutorials or by attending a course that will allow me to further my digital skill set as part of the Digital Competency Framework. This will not only be an excellent asset to have for main lesson activities, but also for creating engaging lesson hooks, introductions and plenaries. It is important for learners to be immersed in the learning and creating Authentic Contexts for Learning allows this to happen.

Part 2: Critical Reflection

Critically reflect on your pedagogical progress demonstrated through required elements of the Professional Learning Passport, identifying a specific area for professional development and justifying next steps for improvement

Introduction

Developing the Professional Learning Passport (PLP) has led me to critically reflect upon my pedagogical progress in light of meeting the Professional Standards for QTS. Through critical reflection of the work cited in Part 1 of this assignment, I have identified a specific area for professional development and improvement. This area concerns the ways in which I could utilise creative strategies as an analogue for teaching STEM subjects relating to Science, Technology, Engineering and Mathematics, at Foundation Phase and KS2 levels. There are three main reasons for this decision which will be outlined below.

The first reason stems from my personal educational background which the PLP has brought to light. As a graduate of English Literature and having worked in the Arts, Literacy is a subject that I am both passionate and confident about in my teaching practices. However, through my development of my pedagogical progress within the PLP, it has highlighted my lack of confidence in teaching science and mathematical-related subjects. To improve this, I want to explore using a variety of creative strategies when planning and teaching these subjects to learners.

The second reason is due to the successful learning outcomes experienced when delivering a literacy lesson using the Pie Corbett *Talk for Writing* strategy, as evidenced in Part 1. Observing how effective and engaging this lesson proved to be for the whole class, particularly for learners with Additional Learning Needs (ALN), was extraordinary; all learners were able to sequence the

story correctly. Therefore, I am eager to apply the Pie Corbett strategy to the teaching of Maths and Science-based AoLEs for both development and improvement of my pedagogical processes.

The final reason for justifying these next steps concerns the role of being a teaching practitioner in Wales and meeting the Professional Standards for Teaching and Leadership. Instead of focusing on professional development or improvement from an area that is negative or substantially lacking, I am viewing it as a way to facilitate enhancement. As a teaching practitioner, it is crucial to critically reflect and challenge one's practice to improve learning outcomes. Therefore, I intend to utilise this assignment to develop the Professional Standard for 'Innovation' by improving my teaching of STEM subjects at Primary level through the use of creative strategies such as Pie Corbett's *Talk for Writing* initiative. By applying a technique that proved successful for all learners in one AoLE (literacy), it will demonstrate to pupils how to become 'ambitious and capable learners' by being progressive in the way they can learn, enjoy and understand numerically based subjects (Donaldson, 2015, p.31).

Critical Discussion of Chosen Aspect

Teaching STEM subjects to children using creative approaches has been widely advocated by critics in recent years. There has been growing demand to improve the way in which STEM subjects are taught in schools, starting with how these disciplines are first introduced in Primary School. This view has been advocated by McWilliam and Taylor (2016) who highlight how primary teachers can improve engagement levels of learners by promoting creative thinking – an approach which has been as one of the defining goals of primary education (Leikin and Sriraman, 2017p. 245). This has created a concept that some critics have coined the pursuit of 'mathematical creativity,' defining it as 'the creation of breaking away from established mindsets' (Schoevers et al, 2019, p.398). It is this aspect of challenging an 'established mindset' that I intend to develop and improve in my professional practice by developing innovative ways in which I can teach STEM subjects through creative processes, such as via drawing and story board sequencing, as evidenced through the Pie Corbett literacy lesson in Part 1. Furthermore, this strategy of challenging 'established mindsets' or attitudes towards certain subject areas has led me to critically reflect upon Dweck and Yeager's

(2020) work concerning the relationship between a fixed or growth mindset, and how this can be used to develop and improve my professional practice of teaching STEM subjects.

Dweck and Yeager (2020) argue that a growth mindset ‘is the belief that intellectual ability can be developed’; in contrast, a fixed mindset concerns the belief that these characteristics are ‘unchangeable’ (Dweck and Yeager, 2020, p.1270.) This is relevant to my specific area for professional development as contextualises exactly what I am seeking to achieve; I am striving to enhance the ways in which I can deliver more engaging STEM lesson by adopting a growth mindset. This will enable me to build my confidence in planning and delivering lessons outside of my pedagogical comfort zone and areas of expertise.

Dweck and Yeager’s growth mindset approach is a strategy that I can use to build resilience in learners – a key component underpins the Four Purposes of Professor Donaldson’s Successful Futures report (2015) as part of the New Curriculum for Wales 2022. Cultivating a growth mindset in learners can be viewed as a creative strategy in that it requires the individual to rewire their existing modes of thinking through the power of their imagination – a concept advocated by critics such as Warne (2020, p.204). Yet, what is meaningful and purposeful to my own professional practice is how building resilience leads to enhanced levels of confidence in decision making (Allen et al, 2019, p.165). By working on building resilience in my own teaching practice, it will not only enable me to become a more confident and decisive leader, but it will enable me to embody to the Four Purposes to become both ‘healthy and confident’ and ‘ambitious and capable’ (Donaldson, 2015, p.31).

Critically reflecting upon the work of Dweck and Yeager’s ‘growth mindset’ strategy has led me to consider how exactly I would implement this technique into my practice when teaching STEM subjects. The first strategy I have identified concerns challenging negative thought patterns such as ‘I can’t do X’, ‘I am not good at X’ and ‘I’ll never be good at X’. Other renowned psychologists Andrew J. Elliot, advocate the view that an individual’s thought patterns can impact the outcome of a task, therefore reinforcing Dweck and Yeager’s stance about growth and fixed mindsets (Elliot, 2013 p.74). Whilst I am aware that I, as a teaching practitioner, do not have access to learner’s

individual patterns of thinking, I am however, responsible for the way in which they perceive and access information about a chosen subject. Therefore, it is my duty to teach a topic via approaches that prove accessible, comprehensive and engaging to all learning abilities within the class. I, as the leader of the learning, must adapt to the needs of individual based on the successful outcomes from previous teaching practices. This leads me to critically reflect on how I intend to use the Pie Corbett technique as a creative strategy to deliver the teaching of STEM subject lessons at both Foundation Phase and KS2 levels.

There is the debate around making the teaching of STEM subjects more creative in Primary Schools in order to stimulate interest from girls, challenging the gender-stereotypes surrounding science-based subjects. Critics such as Selimbegović et al (2019) have noted how endorsing STEM-related subjects through creative approaches can lead to girls engaging in STEM-related careers later on (Selimbegović et al, 2019, p.1614). However, critics such as Selimbegović et al (2019) point to how it is crucial that learners are engaged in creative STEM lessons before they reach secondary school given that by this stage, preconceived notions about STEM-related subjects would have already been established (Selimbegović et al, 2019, p.1619). This draws upon Dweck's findings about a 'fixed mindset' as it reinforces the role of a primary teaching practitioner to teach using a variety of approaches to foster a 'growth mindset' from an early age. This would enable any preconceived notions about STEM-related subjects to be quickly dispelled due to the learner having been taught to keep an open-mind when it comes to learning topics that they might not have previously taken an interest to exploring. In relation to my own professional practice, implementing this approach will also enable me to deliver Donaldson's purpose which strives to create 'ethical and informed individuals' by breaking down the cultural and societal barriers of gender stereotyping of STEM subject (Donaldson, 2015, p.31).

The above research leads me to critically consider the ways in which I can creatively teach STEM-related subjects in my practice moving forward. As outlined above and in Part 1 of this assignment, using the Pie Corbett *Talk for Writing* strategy for reciting a story sequence in a literacy lesson proved highly successful in terms of generating positive learning outcomes for all learners, despite varying ability levels within the class. It is for this reason that I wish to apply this technique as the

main creative approach for teaching STEM-subjects with the objective that it will engage all genders and ability levels in learning about the fascinating facts, knowledge and life-long that can be attained through these subject areas.

Critics such as Rodger Beard, a Professor of Primary Education at the Institute of Education at University College London, comments on Pie Corbett's *Talk for Writing* initiative which focuses on three main stages: 'imitation', 'innovation' and 'invention' and how this is used to create story (Beard, 2019, p.1). Whilst Pie Corbett's *Talk for Writing* initiative is aimed at helping children improve their writing ability, Beard points to how this approach can be applied to a range of contexts and subject disciplines outside of the literacy domain to promote positive learner engagement (Beard, 2019, p.24). This is what I intend to explore as a way to improve and develop my pedagogical practice, which will also enable me to evidence the Innovation standard within the Professional Standards for Teaching and Leadership.

In order to implement this, I would revisit the Space lesson, evidenced in Part 1, and critically evaluate the ways in which I could use Pie Corbett's *Talk for Writing* initiative as a creative approach to teach this topic. An area that I have identified for improvement is the way in which I explain the formation of the solar system by using Pie Corbett's story board to map out 'The Big Bang' to the learners. To do this, I would start by generating meaningful discussion with the learners that can lead to effective questioning whereby I can target specific learners and their individual learning needs. Critics such as Valverde Caravaca (2019) highlight how, used creatively, effective questioning can lead to 'empowered' thinking processes in learners of all attainment abilities (Valverde Caravaca, 2019, p.369.) This brings Donaldson's purpose of 'ambitious and capable' learners into focus as it suggests that effective questioning can be used to fulfill this purpose through its ability to empower learner thinking (Donaldson, 2015, p.31).

However, where my role as the teacher comes into play lies in the way in which I make effective questioning creative. This is where I propose to incorporate a cross-curricula approach whereby I integrate the AoLE of Expressive Arts into Science through the use of role play. The objective here will be to set the learners the task of acting out in groups the processes of the 'The Big Bang'; this

can be tailored according to the year group within its respective Foundation or KS2 phase. By using their creative skills through performance, it will allow the learners to understand that Science, as one of the STEM subjects, can also be a creative subject – a view advocated by McWilliam and Taylor (2016, p.31). This brings to light Vygotsky's (1962) educational theories about how language and play can be used together creatively to enable a child to take charge of their own learning and cognitive growth (Vygotsky, 1962, p. 182). This is particularly relevant to my professional practice as it will enable me to build upon the Professional Standard of 'learners leading the learning' through a cross-curricula approach (Hwb, Welsh Government, 2017).

Furthermore, an additional benefit of this approach as a form of development to my practice concerns how using Expressive Arts in a Science-based lesson can improve learning outcomes in respect to learner wellbeing, confidence and emotional literacy levels. There are numerous reports that highlight the benefit of implementing creative approaches via the Expressive Arts into scientific teachings with children which can be observed through the reports of Piek et al (2006). Such benefits relate to improved levels of self-esteem, belief in one's ability, development of resilience and a more positive outlook on their educational future (Piek et al, 2006, p.123). This approach would enable me to implement the additional two purposes of Donaldson Four Purposes which is to see the creation of 'healthy and confident individuals' and 'enterprising and creative contributors' (Donaldson, 2015, p.31). For my personal pedagogical progress, the fulfillment of the Four Purposes is paramount and critically reflecting upon my past professional learning experiences enabled me to re-examine the ways in which I can effectively redeliver, reimagine or repurpose prior lessons through more engaging creative approaches to increase positive learning outcomes for all learners.

Conclusion

The above critical reflection has allowed me to evaluate the ways in which I intend to develop and improve my pedagogical practice in relation to the evidence acquired through my Professional Learning Passport (PLP). For my chosen area for improvement, I selected the area of Science and have looked at how I could develop my practice by enhancing the way in which I teach it to

learners. Through my PLP I was able to identify prior successful learning outcomes within a Literacy lesson I delivered centered around the Pie Corbett's *Talk for Writing* strategy. Critically reflecting upon the positive experience of the Literacy lesson led me to consider how I could improve and develop my teaching practice by incorporating this technique into my teaching of STEM-related subjects such as a Science and the topic of Space. This resulted in the identification in what this discussion has termed 'creative approaches' and how it can be utilised to engage learners STEM subjects from an early age within a Primary School setting. The research examined has highlighted the need for creative approaches to be adopted in science-based teaching, particularly in relation to challenging gender-based stereotypes (Selimbegović et al, 2019, p.1619). This had led me to identify the next steps in my teaching practice which concern the cross-curricula (Expressive Arts) approaches by incorporating role play into Science task activities, generating meaningful and purposeful discussions through effective questioning and how this can foster a growth-mindset in learners. My goal as future teaching practitioner in Wales is to ensure that I continually challenge pre-existing modes of thinking and think about how I can be open and receptive to new and progressive educational approaches. If I am to become a leader or learning, I intend to demonstrate to learners how to be innovative so that they can embody Donaldson's purpose of becoming 'ambitious and capable learners ready to learn throughout their lives' (Donaldson, 2015, p.31).

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