

Student Self Evaluation Form

This section repeats in brief the common assessment criteria detailed on previous pages. The *extent* to which these are demonstrated by you determines your mark. Using these criteria, tick the box that best indicates the level of achievement you feel you have achieved with regard to each of them.

Common Assessment Criteria Applied	REFER		D	C	B	A
	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT
1. Subject Knowledge and Understanding (which includes using research-informed literature and knowledge and understanding of the subject)				X		
2. Intellectual Skills (Analysis)				X		
3. Pedagogic and Professional Applications (Practical Application and Deployment)				X		
4. Key Transferable Skills				X		

PLEASE COMMENT ON AREAS IN WHICH YOU FEEL THAT YOU HAVE PERFORMED WELL	PLEASE COMMENT ON AREAS YOU FEEL THAT YOU NEED TO DEVELOP
- Well referenced. - Successful completion given the demands of time on school placement. - Concise to 3 points of analysis. - Provided an understanding of the learner and her background, the type of child she is within class.	- Deeper analysis against research. - Less descriptive analysis – more data, i.e. photos. - More relevant next steps. - More coherent structure. - Better signposting & alignment of analysis to next steps. - Did not know how to fit in all of the information the child provided me with verbally/on tour.

M7X02153

**SCHOOL DEVELOPMENT
& PUPIL PROGRESS**

‘Supporting pupil progress: a detailed analysis of one child’s holistic development, with justification for the next steps in learning.’

Student no: 1702288

Group 4

Word count: 4935

Introduction

The pupil of which this assignment concerns – Abigail, who has been provided a pseudonym to comply towards ethical considerations – attends a small village school within the Powys local authority. The school is an English medium school with strong ties to the Welsh language with many staff members being Welsh speakers. This is advantageous in that the language is used and encouraged in the classroom with directions given in both English and Welsh. The school is not primarily a religious school but does have links to the Catholic church as there is daily worship in the form of an end of day prayer and a weekly assembly where members of the local parish provide a reading. Some children are also part of the local church whose families are religious. For example, Abigail's father plays various instruments at their local church.

The school is a 'Green' rated school (My Local School, 2017) and has between 130-150 pupils on roll. The percentage of children eligible for free school meals is above the national average. The school operates mainly on a single form entry although there are some classes of mixed age. Furthermore, the school registers high attendance (96.1% during 2017) and over 95% of pupils achieve the expected outcomes and levels in both the Foundation Phase and Key Stage 2. Estyn (2015) deemed the schools performance and prospects for improvement as both 'Good'.

Abigail is a Year 3 child, described as 'middle attainment'. Abigail consistently demonstrates desired classroom behaviour and engagement to the lesson, contributing answers to questions posed to the class. Following the observations, conversations, and interactions with Abigail, it is clear to see that she is an active participant in her learning and the environment wherein her learning takes place. She is cognizant of how things can aid her and why, and is aware how different resources can influence her learning journey.

Note: See *Appendix B* for copies of work.

Data Collection

The data collection process will adopt the 'Mosaic Approach' whereby young children and adults are involved in 'meaning making' together (Clark & Moss, 2011). It is a participatory process where the child is consulted through various means; observation, interviews, photographs, to make sense and contribute to the development of services responsive to the voice of the child. The method will contribute to an overall picture whereby Abigail's Language and Mathematics development, Wellbeing, and Topic and Creativity will all be measured to provide the appropriate next steps to move her learning forward.

Ingrained in the development of the Mosaic approach was the emphasis on the child being a participant in the process, utilising an approach that enhanced the traditional methods of observation and interviewing. It was developed to "represent the bringing together of different pieces of perspectives in order to create an image of the children's worlds, both individual and collective" (Clark, 2005, p. 13). Here, the child uses various tools such as photographs, tours, maps, and drawings (amongst others) to lead the research in constructing this image and creating the sense of what is important to them. Clark and Moss (2001) explained that there is an important distinction to be made between children as 'beings' as opposed to 'becomings'. By this, the belief aims to dispel the assumptions made by adults that the answers surrounding a child's perspective are already known. These assumptions can dismiss the notion that the child is an active participant in their world and, instead, their choices and outlook on life should not only be considered but used as the basis for understanding. Therefore, adults should view the world through the lens of the child (Johnson, Ivan-Smith, Gordon, Scott-Villiers & Pridmore, 1998). In being a polyvocal approach, however, the direction is not solely dictated by the child. By taking aboard the child's perspective, other adults such as teachers and parents (as well as the researcher) also combine to produce a shared narrative.

The Mosaic approach was originally developed with three and four year olds with a concentration upon the early childhood years combining the visual with the verbal (Clark & Moss, 2001). Despite the young age, the voice was considered to be something that is not always verbal, but transmitted through a variety of behaviours such as play, actions, and reactions (Goldschmied & Jackson, 1994). With this,

listening to the child is an active process of meaning making (Silverman, 2010) and interpreting what is said and inferred rather than just what is heard (Clark & Moss, 2001). Lewis and Porter (2007, p. 223) explained that “the viewpoint of the child is essential to investigating and therefore understanding a given context”, as the pupil voice is significant in the role of the research to go on to support development especially within teaching and learning (Flutter & Rudduck, 2004).

To outline the Mosaic approach that will be the overarching structure to this work, it is a multimethod approach consisting of two stages. The first stage regards the gathering of documentation along with the child. These pieces of information are what construct the mosaic, the first being observation with child conferencing the second. Abigail will be observed across a variety of scenarios; during various lessons, playtimes, and other areas whereby her personality may be displayed. This will provide the snapshot into Abigail's views and experiences of existing in the physical space that school provides (Clark, 2005), especially when followed up by interviews and probing. These observations will provide the opportunity to 'listen' to her body language where the pupil voice is present through non-verbal means. Abigail's work and her methods will also be observed, where copies will be made to analyse her learning process.

The next aspect, child conferencing, will be where I will talk to Abigail regarding her environment. It is an adaptation of the more formal interview with an active child-focused process (Clark & Moss, 2001) and will allow me to delve into the motivations and opinions of Abigail, who she shares close relationships with, and the activities and places that she holds closely. The conversations will also allow me to clarify what has been observed, and for Abigail to share her interpretations rather than leave it to my assumption which may not be entirely accurate. In addition to this, I will go on a tour of the school with Abigail for her to explain what is important to her and how she uses the environment to help her. Although I will be using the opportunity to gather data, the tour will be an exploration led by Abigail (Clark & Moss, 2011) as a knowledgeable guide (Clark & Moss, 2005) more familiar to her surroundings than myself as researcher.

The second stage involves using the Mosaic approach to analyse Abigail's development which will allow me to reflect and interpret, being informed to meet her

needs as exactly explained, with the margin for error due to individual inference decreased due to its polyvocal approach. This is due to the diverse range of the data collection technique (Cowie, Huser & Myers, 2014). Also, the numerous participatory tools available to the child provide a space for them to feel comfortable and use whatever tool that they wish. However, Clark and Moss (2001) concede that the process of using a multimethod approach and the data interpretation that follows is complex and time-consuming. On the other hand, the whole process lends itself to the strengths of the child (Clark, 2005) as a process of knowledge production rather than knowledge extraction (Clark & Moss, 2001).

Ethical Considerations

Due to the assignment involving the close monitoring of an individual pupil there are a number of ethical concerns that must be addressed and curtailed. Being informed by the BERA guidelines (2011) and the current university code of practice (UWTSD, 2017), I have taken the appropriate steps to ensure that the study is completed with sound ethical judgment to avoid any harm to the child and myself. Initially, the pupil has been provided a pseudonym to avoid identification. Also, the school has not been named with some pieces of information not entirely specified (i.e. number of pupils on roll). There will be no identifiable features of the child, for example, her name if it appears in the marking. Abigail will be informed of her involvement in the study and her right to withdraw at any point with zero repercussions. Permission will be sought from the class teacher who will be informed of the requirements of the study and what will be required (see *Appendix A*).

Learner Analysis

Going forward, the various Areas of Learning will be sectioned to provide clear signposting throughout the analysis and addressing the next steps. Abigail's learning will be outlined with regard to Language and Mathematics development, Wellbeing, and Topic and Creativity, before further analysis towards the next steps for development.

Language & Mathematics Development

Overall, Abigail is more comfortable in her Language work than Mathematics but both areas do contribute to the class teacher's judgement that she is of a middle attainment group. Overall, Abigail can be attested to be working at the following levels; Oracy – Level 3B, Reading – 3C, Writing – 3C, Mathematics – 2A. In all of the Language work that has been recorded, spelling seems to be the reoccurring theme which can be addressed as an area of inconsistency. On the whole, Abigail's spelling is fairly strong as she spells most words correctly, although there are instances that contrast this capability. For example, Abigail spelled words as 'bouncing' and 'whacht clostly'. Nevertheless, she attempts spelling with confidence in her writing and follows typical patterns to aid her spelling, especially phonetic, even if this results in inaccuracy.

This notion reflects the Piaget's (1953; 1970) learning theory where learning primarily occurred through discovery and action. Abigail, as a 'lone scientist' being an active participant in her learning, attempts the spelling of the words without much input from elsewhere – a teacher or dictionary. However, she is aware that a dictionary would help her although it seems her conditioning of the lesson processes which inhibit her from getting one, commenting that she tends not to use dictionaries for help, preferring to have a go herself and that 'I only really use the dictionary if it's put out by the teacher on the desk'. In one instance on 10/5/18, Abigail attempted 'gently' with 'jentyly' and, after the word being corrected in her marking, she wrote the word 'gentle' twice in separate work on 15/5/18. Both of these occurrences suggest the significance of a more knowledgeable other to further learning (Bruner, 1986; Vygotsky, 1978), as Piaget (1953; 1970) failed to account for the role of a teacher.

This is once more highlighted with Abigail's reading, where I have observed;
"Good reading. Eager. Needed some encouragement and support. Not quite fluent. Looking at word as a whole (word recognition) rather than progressing through word (phonic/graphic). Unsure of meaning of a couple of words, e.g. winding."

Here, she needed my scaffolding (Wood, Bruner & Ross, 1976) to aid the reading of the words as well as the earlier moment of spelling in her writing. Without the input, Abigail would have been left in the stage of what is known and so would not have

progressed to knowing the correct spelling or interpretation of the read words. Instead, I was able to aid her within the Zone of Proximal Development (ZPD) (Vygotsky, 1978) where potential development may be accessed via support from a more knowledgeable other. As Blake and Pope (2008) told, it is the space between what learners achieve independently and what they need help accomplishing – as the scaffolder, the aim was to bridge the gap.

Regarding her ability to write creatively, Abigail is very much capable and more autonomous. On 9/5/18, Abigail used ‘the Rusleing (rustling) of the Trees on the beach’ as a phrase to describe a beach scene through listening to music. She was the only child out of her attainment peer group to use onomatopoeia, with all the others using adjectives to describe visual features. Although I provided the space for Abigail to use her own knowledge to describe the setting, she demonstrated her equilibrium (Blake & Pope, 2008) which showed she has mastered the initial descriptive process and now showed confidence in her ability to perform and extend the task. Piaget’s (1953; 1970) constructivist approach would claim that the environment (the set task) posed the demands for her and she was able to construct new knowledge by using new descriptive techniques, choosing words for variety and interest (Welsh Government, 2016). Abigail was assimilating the knowledge “whereby new data is fitted into patterns already observed” (Meade & Cubey, 2008, p. 40).

Abigail informed that she doesn’t enjoy Mathematics that much yet is able to consistently meet learning objectives. Evident in her work calculating prices using notes and coins, she demonstrated shortcomings in understanding two-part questions. Through questioning, I know Abigail is capable of understanding the various combinations of coins and notes, but in her work she failed to list them after finding the prices and totalling them up. I would infer this to be a lack of concentration, or willingness to finish her work, rather than not understanding the question as there were no errors made in any of her work. She was also able to explain her workings. In her second lesson where she was required to calculate change using a bridging method Abigail requested help towards the end of the lesson. Analysing her work she was competent, again making no errors, but this suggested once more her lack of confidence. When scaffolding for Abigail, she was less confident and her body language seemed reluctant to answer my questions due

to uncertainty. Due to her aversion to Mathematics compared to other subjects, I would attribute this behaviour towards a lack of confidence stemming from an incomplete understanding of the method concept where the base of understanding had not been entirely formed where she could make connections between the procedures (Kilpatrick, Swafford & Findell, 2001).

All of Abigail's Mathematics work has been executed individually with little opportunity for peer collaboration, although she has requested my assistance on numerous occasions which again reinforces my role as the scaffolder to move her through the ZPD. On the other hand, one Mathematics lesson involved using the hall to perform physical tasks and measuring the distance. Abigail admitted that she enjoyed the lesson and felt it helped her to learn more effectively as "it didn't feel like work because we were in the hall". This type of learning opposed the traditional methods of being sat stationary at a desk answering calculations that Abigail was familiar with and instead offered the space to "transfer mathematical skills to a variety of contexts" (Welsh Government, 2015, p. 2). In doing a more physical and what was perceived as a fun task, the mathematic skills seemed a by-product rather than the sole focus. Here, by providing practical, experiential learning to protect and strengthen the child's positive dispositions to learning (Maynard & Waters, 2007), Abigail's work was enhanced.

Wellbeing

One of the common themes running through this analysis is Abigail's confidence when performing different tasks, whether it is when undertaking independent work, reading, or her general conduct throughout the school day. She is a reserved pupil when at her desk, but when provided the opportunity to express herself her body language and interactions become more extroverted. This will be explored further in the next Area of Learning. Following an observation at break time, Abigail explained that, "I like playing with my friends because it makes me happy and I'm in a good mood in class then". My observation of her during break can be found at *Appendix C*. Abigail is happiest when surrounded by her friends, especially if it regards dancing or collaborating towards something creative. Combining the outdoors and her passion

to dance, the space to move freely (Rivkin, 1995) allows a very powerful and natural mode of learning for children (Bilton, 2002).

Abigail informed me that she feels safe in school, expressing that “the teachers make me feel safe in school ... ‘cause they look after us”. This is an essential part to Abigail’s learning experience as feeling safe and accepted are key components for learning to take place (Greenhalgh, 1994). Additionally, feeling safe can foster the exploration to occur (Bowlby, 1988) as if the child does not feel secure then they will be reluctant to pursue the interactions within the environment necessary to learn (Paiget, 1953; 1970). Once this trust in the environment occurs, then the space for creativity can take place (Greenhalgh, 1994). Her trust in the teachers and environment was also displayed after an interview where, during the following days, she would ask if I needed her for anything else or if I wanted to ask her anything. Clark and Moss (2001) propose that this may give the child confidence as there is a belief that the adult can learn something from the child – the child is the expert.

When asked if she liked the size of the school compared to it being big with lots of children, she agreed as she knows the area and all of the people surrounding the school are familiar. The school also meets Abigail’s needs with regard to the resources and equipment available, and she regularly attends after school netball sessions in addition to choir on occasion. All of these contribute to her sense of belonging and maintaining her well-being, an important constituent of developing healthy, confident individuals (Donaldson, 2015). After all, “how well they are doing as individuals depends on the quality and strength of their immediate social relationships with their family and peer group” (Crivello, Camfield & Woodhead, 2008, p. 69).

Topic & Creativity

Within Topic work there is much more room for collaborative work as opposed to the earlier mentioned Mathematics and Language sessions. From her perspective where she enjoys playing with her friends at break, it seems as though she also works well when she is given the opportunity to work collaboratively. For example, during a recent Welsh lesson, she exceeded the learning objective of using opinion phrases

and reasons to writing about a peer's preference. Part of the lesson required oracy to be practiced and, as suggested in Meade and Cubey's (2008) study, it was likely that other children were instrumental in advancing the communication skills of the child (in this case, Abigail). Again, Abigail can be assessed to work well within groups in Topic due to her involvement in researching and presenting information about minibeasts with two of her peers. There are many benefits towards collaborative learning, yet it cannot be expected that co-operation and learning can occur every time (Gillies, 2003). Rather, it is only when the groups are structured and informed of how to work that the co-operation and learning is maximised (Johnson & Johnson, 1990). The groupings were assembled with this in mind and so that each member could feel part of the group and to contribute to create an interdependence to facilitate each other's learning (Johnson & Johnson, 1990; Deutsch, 1949).

Abigail's penchant for performance is evident through many activities, including during reading time where I observed her to be performing a play in the class reading area with her peers.

"Abigail was performing her lines very confidently, integrating stage directions, actions, and altering her tone of voice to suit what was said. She looked very comfortable acting out the play."

Also added to her break time dance routines (see *Appendix C*) that she has performed in front of the class at the end of the day, more dance was observed during a Mandarin lesson. Whilst the rest of the class looked lumbered and struggled to follow the on-screen routine, Abigail seemed co-ordinated and demonstrated complex movement patterns that looked close to choreographed despite encountering the routine for the first time in that session. Even though this session was inside, it allowed a contrast to the notion that children are expected to sit still quietly, instead allowing Abigail to "push the boundaries of who they are and what they can do without fear of being admonished" (Maynard & Waters, 2007) and strengthen her self-confidence.

Next Steps

From the conversations, observations, and analysis of Abigail's work, a clear impression of a creative learner is built. A learner who is content working individually but happy and capable working amongst her peers, after all, the social element of going to school is a significant aspect for children (Donaldson, 2015). Abigail likes to discover – evidenced through her creative writing work – suggesting a constructivist mode of learning, although displays fluctuating reliance upon a more capable other, often the teacher. Through her feelings of security and awareness of her own learning, she is able to use talk to express when she needs help, as in the Mathematics example. As Vygotsky (1978) explained, children acquire many of our attitudes and values through dialogue and could even be considered to be more influential than the knowledge we share with them.

Nottingham's (2015; 2013) ASK model will be touched upon to assess Abigail's next steps, considering the attitudes, skills, and knowledge that surround her learning. Her attitudes detail how she approaches learning, such as with curiosity and persistence, her skills entail the abilities to gain understanding, and her knowledge regards the knowledge of information and concepts.

Currently, Abigail receives daily independent reading time but she will require further intervention to assist her spelling. In addition to encouraging her to use a dictionary when she is unsure, going forward I could introduce a period of spelling time within this period so that spelling complements reading.

Following a successful guided reading approach that I have observed in my previous experience at another school, groups of children would assemble to play a variety of spelling board games. In the classroom we already have the space in the reading corner, whilst there are numerous spelling games in the main school library that do not seem to be used. I could implement these as add-ons, or utilise the iPads for Abigail to spend some time playing spelling games. One of these games, Squeebles Spelling Test, allows for the recording of voice so that I could record the words that Abigail finds difficulty in spelling. Additionally, I can consult with her parents (who are very supportive) to encourage her to practice at home via reading or on a home device. There are also online resources such as TopMarks.co.uk which hosts a variety of spelling practice tasks. Combined with personal experience

of its utilisation, ICT has positive impacts towards pupil engagement, motivation, and attainment (Hall & Higgins, 2005). As earlier mentioned, Abigail is a confident speller yet delivers some inaccuracies and, therefore, these additional short daily tasks could help bridge the gaps in her understandings. In another vein, I could provide Abigail with self or peer-assessment sheets that target her spelling to ensure she has checked over her work. This would provide the feedback in response to the learning context (Hattie & Timperley, 2007).

Within Mathematics, Abigail's self-control may be questioned as she did not follow the two-part questions entirely. This could suggest that she either was preoccupied by wanting to finish the task quickly, or was not able to interpret the word problems entirely. Stern (1993) acknowledged the difficulty of arithmetic word problems and discussed key word strategies. This would include the learner identifying words within the problem to aid with the method, for example, if the words 'more' or 'fewer' appear then the operations will be addition or subtraction. However, problems may arise when these words do not appear and so the learner cannot infer meaning again as "they employ linguistic forms that do not readily map onto children's existing conceptual knowledge structures" (Cummins, Kintsch, Reusser & Weimer, 1988, p. 407). This implies that the shortcoming lies in Abigail's skills of comprehension as she certainly demonstrated her knowledge of the concepts of money addition.

At Key Stage 2, learners are required to identify the steps and information needed to find a solution. Gooding (2009) recommends a variety of strategies that can help children to overcome word problem difficulties, of those I feel that are relevant to Abigail would be highlighting the key terminology and using manipulatives to provide a visual aid to the child. For example, a number of children asked what 'afford' and 'expensive' meant when conducting the task. In future lessons, prior to setting the children to the task, it would be useful to discuss a 'glossary' of topic specific words, especially surrounding money. Here, I would spend a few moments during the introduction for children to look through their questions and highlight any queries. I could then offer the opportunity for other children in the class to share their knowledge and write the meanings of terms on the board. This dialogue, which, according to Vygotsky (1978) is vital for learning, would help the children to develop

their understanding and construct new knowledge towards the problem they are trying to solve (Gillies, 2003).

The second method of providing tangible objects or visuals would also benefit Abigail (Major, 2016; Cunningham, no date). By providing her with coins, counters, or encouraging her to make drawings (Willis & Fuson, 1988) on scrap paper, she will be able to physically see the movement of amounts or what is missing from totals. This would align with the class teacher's assessment that Abigail needs to develop her independence in solving mathematical problems, as well as her enjoyment of combining physical tasks to make the activity more stimulating.

Regarding Abigail's wellbeing, I feel that utilising her personal interests and positive experiences would aid her understanding when applying it to understanding of the curriculum. According to Piaget, "in order for a child to understand something, s/he must construct it for himself, must reinvent it" (Greenhalgh, 1994, p. 23) but, Rogers (1951) claimed that learning will not occur if the child views the learning as requiring a reorganisation of self. So, providing opportunities for Abigail to use alternative spaces to work would strengthen the positive experiences she already feels at school. Also, these lessons could increase her confidence with work such as Mathematics, for example. As Gardner (1983) put forward with his theory of multiple intelligences, there are multiple avenues into pedagogy and so the intelligences can be used to complement each other. This is where her creativity could be utilised as dance has shown to enhance Mathematics scores (Werner, 2001). Although this may be incompatible for the whole class, using dance through P.E lessons could address other curricular areas. Given her affinity for dancing, I feel this would benefit Abigail.

Stemming from these physical learning opportunities would be the opportunity to take the learning outdoors. Not only will this enhance peer interactions by limiting lack of co-operation (Ouvry, 2003) and cultivate motivated behaviour (Chen, Chang, Lin & Yu, 2009), but it builds on Abigail's preference of space and her interactive learning methods. Through this, the stimulus for creativity would be developed as the outdoors – especially when being used for writing – can strengthen observation skills through the acknowledgement of the surroundings (Bennion & Olsen, 2002). Instead of showing Abigail and the rest of the class a piece of film for inspiration, I should

take the children outdoors to gather their inspiration. Here, my analytical and evaluative questioning could access higher order thinking (Bloom & Krathwohl, 1956) for Abigail to assess further ways that the outdoors could influence her work; enhancing her writing as she did by using onomatopoeia in addition to adjectives. This will be carried through to Topic work also, as I will lead a minibeast hunt and encourage Abigail to utilise Mathematical techniques such as tally charts and producing graphs from the data. Through this outdoor and physical approach, I aim to address Abigail's attitudes in order to develop her skills and therefore access new knowledge (Nottingham, 2015; 2013).

Conclusion

Given the requirements of this assignment to use the Mosaic approach, it has provided me the awareness of using a holistic approach to meet children's needs. With the pressures that come with modern schooling to meet targets and summatively assess and level children with regard to the individual subjects, we, as practitioners, tend not to account for the whole-child and the means to *how* they learn, or how the specifics of the environment or home life may impact their learning. In doing so, educational attainment and healthy development for pupils can be obtained (Lewallen, Hunt, Potts-Datema, Zaza & Giles, 2015). The Mosaic approach addresses the child being an expert at being a child (Clark & Moss, 2001) so we can use this to help see the world through the lens of a child as researchers.

Each piece of the Mosaic is interdependent upon the other pieces and so it is necessary to look at the 'bigger picture'. For instance, a child may not raise academic concerns but there may be wellbeing issues, or there may be areas within the school that can be utilised to maximise learning when discovered through listening to the child. Until conversations with Abigail, I was unaware as to how she interacted with displays and resources outside of the classroom. She informed me that she uses displays as a reference to what kind of work she will be doing next year in Year 4, therefore as a teacher, I will be cognizant as to how I display work knowing that other pupils use it as a reference. The Mosaic approach has helped me to listen to the child through various avenues, using their body language, words,

sights, emotions, amongst others, to hopefully provide the appropriate next steps to progress learning.

Reference List

Bennion, J., & Olsen, B. (2002). Wilderness writing: Using personal narrative to enhance outdoor experience. *Journal of Experiential Education*, 25(1), 239-246.

Bilton, H. (2002). *Outdoor play in the early years*, London: David Fulton.

Blake, B. & Pope, T. (2008). Developmental Psychology: Incorporating Piaget's and Vygotsky's Theories in Classrooms. *Journal of Cross-Disciplinary Perspectives in Education*. 1 (1), 59-67.

Bloom, B. S. & Krathwohl, D. R. (1956). *Taxonomy of educational objectives. The classification of educational goals, by a committee of college and university examiners*. Handbook 1: Cognitive domain. New York: Longmans.

Bowlby, J. (1988). *A Secure Base: Clinical Applications of Attachment Theory*. London: Routledge.

British Educational Research Association. (2011). *Ethical guidelines for educational research*. London: BERA

Bruner, J. S. (1986). *Achial Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.

Chen, T. S., Chang, C. S., Lin, J. S., & Yu, H. L. (2009). Context-aware writing in ubiquitous learning environments. *Research and Practice in Technology Enhanced Learning*, 4(01), 61-82.

Clark, A. & Moss, P. (2001). *Listening to Young Children: The Mosaic Approach*. London: National Children's Bureau.

Clark, A. (2005). Ways of seeing: Using the Mosaic approach to listen to young children's perspectives. *Beyond listening: Children's perspectives on early childhood services*, 29-49.

Clark, A., & Moss, P. (2011). *Listening to Young Children: The Mosaic Approach*. London: Jessica Kingsley Publishers.

Cowie, H., Huser, C., & Myers, C. A. (2014). The use of participatory methods in researching the experiences of children and young people. *Croatian Journal of Education*, 16(2), 51-66.

Crivello, G., Camfield, L., & Woodhead, M. (2009). How can children tell us about their wellbeing? Exploring the potential of participatory research approaches within young lives. *Social indicators research*, 90(1), 51-72.

Cummins, D. D., Kintsch, W., Reusser, K. & Weimer, R. (1988). The Role of Understanding in Solving Word Problems. *Cognitive Psychology*. 20 (1), 405-438.

Cunningham, B. (Unknown). *Good at Math, Bad at Word Problems: How to Help*. Available: <https://www.understood.org/en/learning-attention-issues/child-learning-disabilities/math-issues/good-at-math-bad-at-word-problems-how-to-help>. Last accessed 29/05/18.

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations*, 2, 129–12152.

Donaldson, G. (2015). *Successful futures: Independent review of curriculum and assessment arrangements in Wales*. Welsh Government.

Estyn. (2015). *Inspection Report ****. Available: <https://www.estyn.gov.wales/>. Last accessed 28/05/18. (Details removed to maintain anonymity).

Flutter, J. & Rudduck, J. (2004). *Consulting pupils: what's in it for schools?* London: Routledge-Falmer.

Gardner, H. (1983). *Frames of mind*. New York: Basic Books.

Gillies, R. M. (2003). Structuring cooperative group work in classrooms. *International Journal of Educational Research*. 39 (1), 35-49.

Goldschmied, E. & Jackson, S. (1994). *People Under Three: young children in daycare/* London: Routledge.

Gooding, S. (2009). Children's difficulties with mathematical word problems. *Proceedings of the British Society for Research into Learning Mathematics*, 29(3), 31-36.

Greenhalgh, P. (1994). *Emotional Growth and Learning*. London: RoutledgeFalmer.

Hall, I., & Higgins, S. (2005). Primary school students' perceptions of interactive whiteboards. *Journal of Computer assisted learning*, 21(2), 102-117.

Hattie, J. & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*. 77 (1), 81-112.

Johnson, D. W., & Johnson, R. T. (1990). Cooperative learning and achievement. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 173–202). New York: Praeger.

Johnson, V., Ivan-Smith, E., Gordon, G., Scott-Villiers, P., & Pridmore, P. (1998). *Stepping forward: children and young people's participation in the development process*. Intermediate Technology Publications.

Kilpatrick, J., Swafford, J., & Findell, B. (2001). Adding it up: Helping students learn mathematics.

Lewallen, T. C., Hunt, H., Potts-Datema, W., Zaza, S., & Giles, W. (2015). The Whole School, Whole Community, Whole Child model: a new approach for improving educational attainment and healthy development for students. *Journal of School Health*, 85(11), 729-739.

Lewis, A. & Porter, J. (2007). Research and Pupil Voice. In: Florian, L. *The Sage handbook of special education*. London: SAGE. 222-232.

Major, S. K. (2016). *Tips for Helping Children Visualize Math Word Problems*. Available: <https://child1st.com/blogs/resources/119689735-tips-for-helping-children-visualize-math-word-problems>. Last accessed 29/05/18.

Maynard, T. & Waters, J. (2007). Learning in the outdoor environment: a missed opportunity? *Early years*, 27(3), 255-265.

Meade, A. & Cubey, P. (2008). *Thinking Children: Learning About Schemas*. Berkshire, England: Open University Press.

Nottingham, J. (2013). *Encouraging Learning: How you can help children learn*. London: Routledge.

Nottingham, J. (2015). *Challenging Learning: Theory, Effective Practice and Lesson Ideas to Create Optimal Learning in the Classroom*. London: Routledge.

Ouvry, M. (2003). *Exercising muscles and minds: outdoor play and the early years curriculum*, London: National Early Years Network.

Piaget, J. P. (1953). *The Construction of Reality in the Child*. London: Routledge and Keegan Paul.

Piaget, J. P. (1970). *Science of Education and the Psychology of the Child*. New York: Orion.

Rivkin, M. (1995). *The great outdoors: restoring children's right to play outside*, Washington, DC: NAEYC.

Rogers, C. R. (1951). *Client-centred Therapy*. London: Constable.

Silverman, D. (2010). *Doing Qualitative Research*. 3rd ed. London: Sage Publications Ltd.

Stern, E. (1993). What Makes Certain Arithmetic Word Problems Involving the Comparison of Sets So Difficult for Children? *Journal of Educational Psychology*. 85 (1), 7-23.

Top Marks. Available: <https://www.topmarks.co.uk/search.aspx?q=spelling>. Last accessed: 29/05/18.

University of Wales Trinity Saint David. (2017). Research Ethics and Integrity Code of Practice.

Vygotsky, L. S. (1978). *Mind in society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.

Welsh Government. (2015). *Programme of Study for Mathematics: Key Stages 2-4. Curriculum for Wales*. Welsh Government.

Welsh Government. (2016). *Programme of Study for English: Key Stages 2-4. Curriculum for Wales*. Welsh Government.

Welsh Government. (2017). *My Local School*. Available: <http://mylocalschool.wales.gov.uk/>. Last accessed 28/05/18. (Link removed to maintain anonymity).

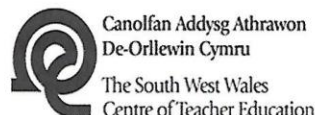
Werner, L. (2001). Changing student attitudes toward math: Using dance to teach math. *Arts for Academic Achievement*. 1, 1-9.

Willis, G. B. & Fuson, K. C. (1988). Teaching Children to Use Schematic Drawings to Solve Addition and Subtraction Word Problems. *Journal of Educational Psychology*. 80 (2), 192-201.

Wood, D., Bruner, J. S. & Ross, G. R. (1976). The role of tutoring in problem-solving. *Journal of Child Psychology and Psychiatry*. 17 (2), 89-100.

Appendices

Appendix A – Permission & confirmation letter;



RE: Primary PGCE student assignment: permission and confirmation that work has been undertaken in school for assignment 'School Development and Pupil Progress', Summer 2018.

Dear class/senior mentor,

For the university module named above, trainees are required to identify one learner within the class in which they are based and, over the course of the Professional Teaching Experience, explore their learning in detail. The evidence that they need to gather could include:

- observation;
- asking the learner to identify places/things that help him/her learning;
- discussing what helps the pupil learn and how they feel about learning with the pupil and/or teacher;
- collecting samples of work which might show something about the learner's progress and development.

They are asked to focus on knowledge, attitude and skills in language, mathematics, wellbeing and at least two other areas of the curriculum to gain an holistic picture of the child. They then suggest the next steps for the learner, and indicate how these will be achieved. Trainees are expected to undertake this work independently wherever possible, and have been given ethical guidelines to follow (although undertaking the work above would be in line with typical classroom practice). The trainees have been asked not to reveal the identify of the learner or the school within their assignment. Students have been asked to:

1. Seek permission for this work (by consulting with the class teacher and learner)
2. Provide verification that the work has taken place.

We would therefore be grateful if you could confirm that permission has been sought and that tasks have been undertaken by signing below:

STUDENT NAME (PLEASE PRINT): C. [REDACTED]

SCHOOL NAME (PLEASE PRINT): Ysg [REDACTED]

SENIOR MENTOR/CLASS MENTOR NAME (PLEASE PRINT):

M. Jones

SENIOR MENTOR/CLASS MENTOR NAME (PLEASE SIGN):

M. Jones

If you have any queries regarding this, please contact the Programme Lead Helen Lewis : h.e.lewis@uwtsd.ac.uk

Many thanks in advance,

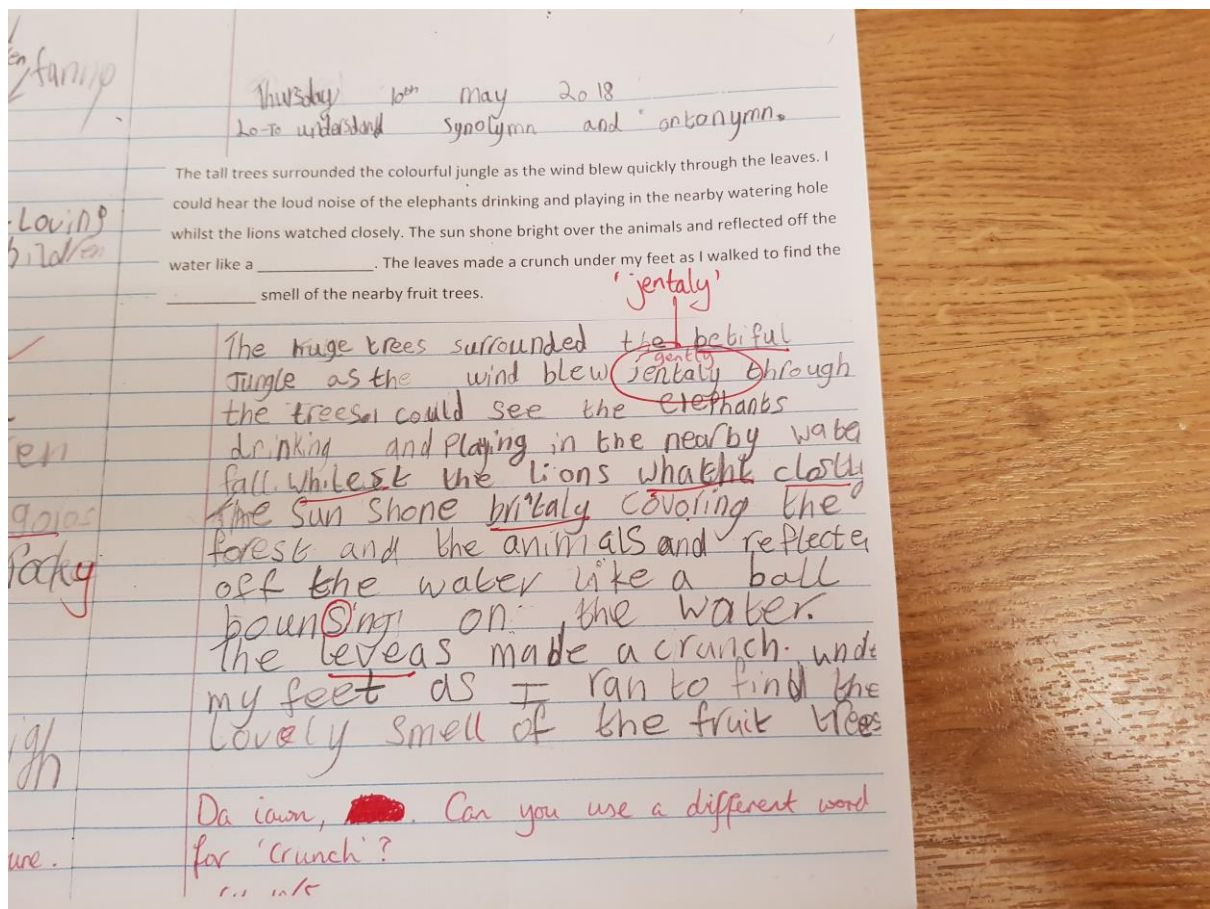
Helen Lewis

Helen Lewis, 5.3.18

SIGNED COPY TO BE INCLUDED IN APPENDIX OF ASSIGNMENT

Names blacked out to maintain anonymous marking process.

Appendix B – Examples of work;



Here we see the first instance where I correct Abigail's spelling of 'jently' to 'gently'.

at jungle as the wind blew gently,
 ants drinking and playing in the nearby watering hole
 sun shone bright over the animals and reflected off the
 leaves made a crunch under my feet as I walked to find the
 trees.

'jently'

surrounded the beautiful
 wind blew ^{gently} jently through
 see the elephants
 playing in the nearby watering
 lions whakht closely

Thursday 15th May 2018
 Lo-to understand Spelling and 'antonyms'.
 The tall trees surrounded the colourful jungle as the wind blew gently through the leaves. I
 could hear the loud noise of the elephants drinking and playing in the nearby watering hole
 whilst the lions watched closely. The sun shone bright over the animals and reflected off the
 water like a ball. The leaves made a crunch under my feet as I walked to find the
 smell of the nearby fruit trees.

The huge trees surrounded the beautiful
 jungle as the wind blew gently through
 the trees. I could see the elephants
 drinking and playing in the nearby watering
 hole whilst the lions whakht closely
 fall. The sun shone brightly covering the
 forest and the animals and reflected
 off the water like a ball
 bouncing on the water.
 The leaves made a crunch under
 my feet as I ran to find the
 lovely smell of the fruit trees.

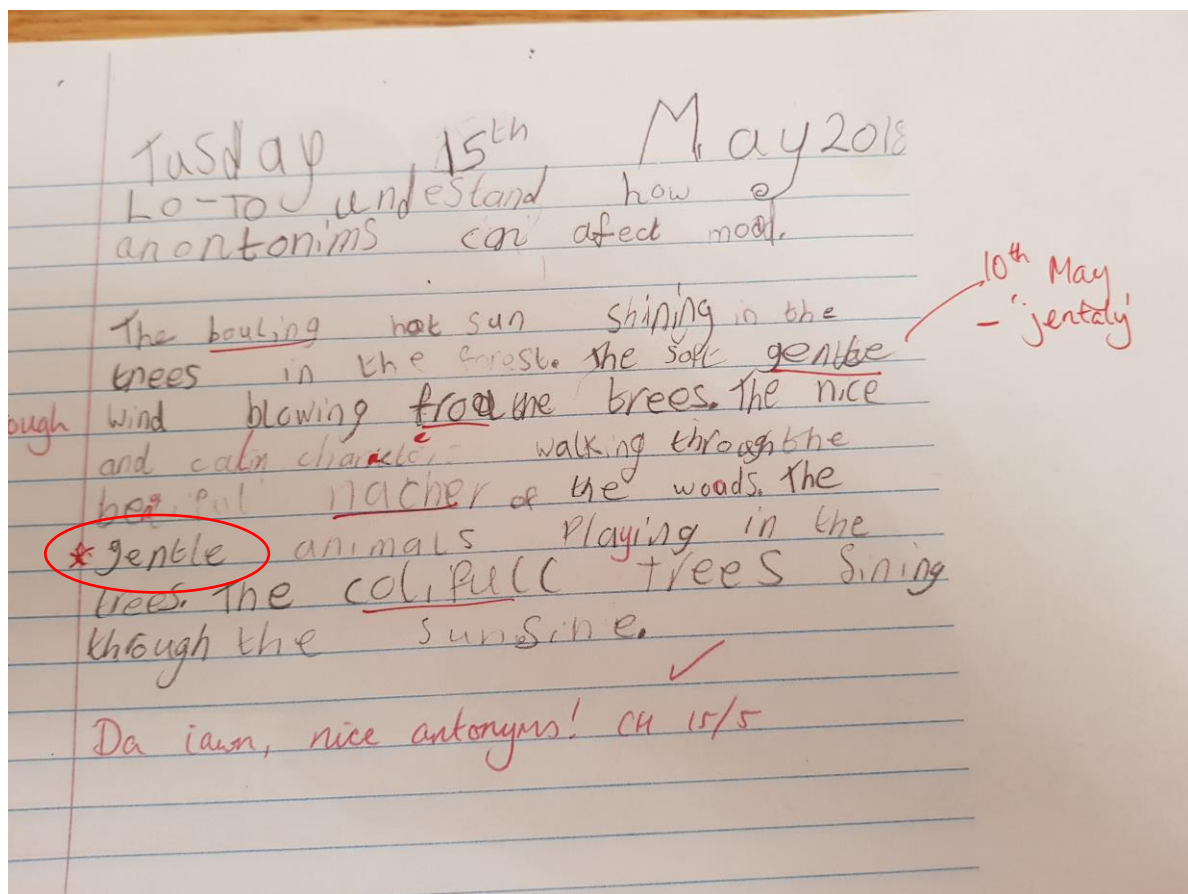
Da ian, Can you use a different word
 for 'crunch'?

Tuesday 15th May 2018
 Lo-to understand how
 antonyms can affect mood.

The hot sun shining in the
 trees in the forest. The soft gentle
 wind blowing through the trees. The nice
 and calm characters walking through the
 beautiful landscape of the woods. The
 gentle animals playing in the
 trees. The colourful trees singing
 through the sunshine.

Da ian, nice antonyms! on 11/5

10th May
 - 'jently'



Abigail uses the word gentle 5 days later, this time spelling the word correctly on two occasions.

10/18

10 - To find totals and combinations of notes and coins.

$\pounds 4.20 + \pounds 5.75 = 10.05$ ✓

$\pounds 4.30 + \pounds 5.75 = 10.05$ ✓

$\pounds 8.28 + \pounds 2.50 = 10.78$ ✓

$\pounds 9.90 + 90p = 10.80$ ✓

$\pounds 4.90 + 90p = 5.80$ *

Can you buy the ticket and a Fanta?

$\pounds 2.30 + 51p = 2.81$ ✓

What do you need to add to your $\pounds 2.00$ to get $\pounds 2.83$?

$\pounds 15.23 + \pounds 15.23 = 30.46$ ✓

$\pounds 5.75 + \pounds 1.40 = 7.15$ ✓

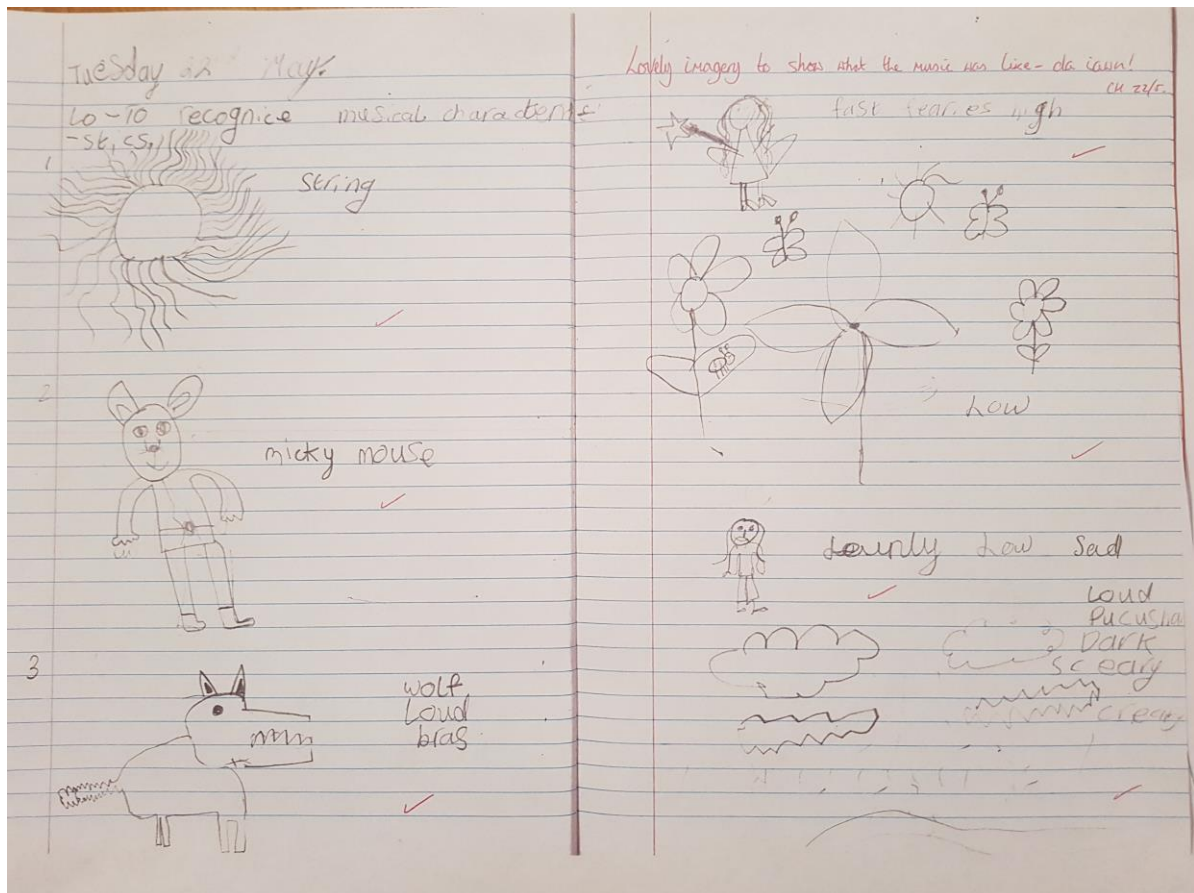
$\pounds 5.75 + \pounds 1.40 = 7.15$ ✓

$\pounds 1.30 + \pounds 22.10 = 23.40$

Good work, [redacted]

You needed to show what notes and coins you'd use

This is Abigail's Mathematics work where my marking indicates that she missed parts of the questions out.



Here is a piece of Topic work where Abigail listened to the various character themes from 'Peter and The Wolf'. At this point, the class were not told that the music represents the characters and had to independently infer the thoughts that the music would make the children think of. We then discussed the characteristics of the music and why the children drew the pictures or chose the words to represent it.

Appendix C – Break time observation 15/05/18;

“Abigail often spends her break times with 2 or 3 other girls who can usually be found to be singing or making up a dance routine. Here, the girls are stood near the yard bench and seem to be devising another dance. Abigail is involved in the collaboration and can be seen playing her part in the delegation of who does what. They usually stand near the bench or on the grass where there is space. Occasionally, Abigail will run around the yard playing other games like tag”.