

How is engagement effected by the use of puppet pals in a Key Stage

Two classroom?

Module: The Enquiring Teacher

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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
I feel as though the research went well and that it has allowed me to improve my pedagogical knowledge. This assignment has also allowed me to enhance my critical analysis and writing skills.	I found the literature review difficult, as well as struggling to write the methodology section.

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Purpose of the research

The purpose of this research is to examine the engagement of Key Stage two (KS2) children when using Puppet Pals in an oracy lesson. This interests my partner and myself as we believe many children in our classes have difficulty engaging in lessons where performance or speaking aloud are required as they lack confidence. We believe that the children therefore disengage from the lesson, but that Puppet Pals will allow the children with less confidence to engage more readily. We believe that if Puppet Pals effectively engages the children, it can be used to allow the children to practise their oracy, gain confidence, and eventually speak aloud in class. My partner and I will therefore be observing the engagement of case children from two classes when using Puppet Pals in an oracy lesson. After the lesson target pupils will be interviewed on their honest opinions on the lesson.

Research context

During my time on placement in a year four KS2 classroom, I noticed that many of the children in my class, despite being outspoken and popular, had great difficulty engaging with any oracy tasks in front of the class or teacher. These children became withdrawn, embarrassed, and refused to participate. I discussed this with my research partner, and she had found a similar thing with children in her class (the other year 4 class in the same school). We decided to use an application called 'Puppet Pals' as we believed it would engage *all* children, allowing them to practise their oracy skills, resulting in increased ability and confidence, eventually enabling them to speak aloud. Without this the children risk missing out on essential life skills and experiences, such as public speaking or being in the school play. We eventually decided upon the research question 'how is engagement effected by the use of puppet pals in a KS2 classroom?'.

The proposed research will be conducted in in a medium, semi-rural, two form entry school in Mid Glamorgan in two year 4 classes. 3 target children will be picked from each class; one from each of the ability groups they have been placed in. The first lesson study was conducted in a class of 23 pupils, including four MAT, five ALN, and two SEN pupils. The second lesson study lesson was conducted in a class of 26 pupils, including three MAT, six ALN, and two SEN pupils.

Literature review

With the current changes occurring in education and with the Successful Futures report (Donaldson, 2015) and the Digital Competence Framework (DCF) beginning to take effect, when thinking about how to engage children in improving their oracy skills it seemed obvious that the use of ICT should be explored. Researcher Moira Monteith has said, when referring to literacy and ICT that “we can hardly overestimate their significance for us both as a society and within our individual lives” (Monteith, 2002). Therefore, the use of ICT to engage children in learning was explored.

Firstly, it is important to consider engagement. The concept of engagement is vital as only when a child is truly engaged does “learning and thinking happen in an intense, meaningful and real way” (Laevers, 2008). Research conducted by Underwood and Underwood (1990) found that activities that engage children lead to successful learning. This implies that the better engaged children are in an activity, the more beneficial and impactful the learning will be. Moreover, better engagement has been shown to result in higher academic performance (Chen, Lambert, and Guidry, 2010) and to produce better behaviour (Rappa, Yip and Baey, 2009). Some research has even suggested that better engagement results in children having better emotional regulation (Finn and Voelkl, 1993) which leads to better behaviour. Therefore, successful engagement is crucial for children.

Likewise, ICT is increasingly recognised as vital in children’s education (Cook and Finlayson, 1999; Lawler, 1997; Leask, 2001). The use of ICT is an easy way to use what children already know and permits children the opportunity to build on their prior knowledge, linking to Piaget’s Constructivist theory (McLeod, 2015). Research has found that children play with computers in an imaginative and explorative way, in the same way that they would play with a new toy as a toddler (Cook and Finlayson, 1999; McDougall et al., 2010). This allows children of all ages to engage in playful learning, affording them with the opportunity to experiment and make mistakes without fear, which is vital for their enjoyment of learning. This alone could be enough to make ICT an integral part of the curriculum as it could kindle children’s love of learning.

However, there has also been research which has found a positive link between the use of ICT and children’s engagement. West (2013) found 52% of teachers involved in the

Project Tomorrow survey reported that that their students were more motivated to learn and engaged in their own learning when technology was involved, suggesting that ICT has a significant effect. However, the use of self-report measures could potentially reduce the validity of these results (Hoskin, 2012).

ICT is also believed to intrinsically motivate students (Ryan and Deci, 2000), and intrinsic motivation is essential as it results in high-quality learning, engagement, and creativity (Zylka et al., 2015). This links back the notion that children enjoy the use of technology in their learning, and when children are enjoying they will undoubtedly be more engaged. Furthermore, in a series of case studies, ICT has been found to have a positive motivational impact on several learning processes, including engagement, oracy, and real-life application of learning (Allaway et al., 2004). Allaway et al.'s (2004) research did find, however, that the circumstances and ways in which ICT was used affected the outcomes, suggesting that not all use of ICT is equally beneficial to children's learning. The use of case studies in this research does also mean that these results could lack generalisation.

Despite this, Leask and Pachler (1999) similarly found that modelling activities using ICT enabled pupils to "compare their knowledge with the real world and to identify a relevance and importance to their school work", which is essential to allow children to understand why they are learning something. The modelling of ICT activities also fits into Vygotsky's theory of social development, which states that children learn from viewing others (David, 2014). ICT will be relevant in children's life outside school as they will undoubtedly watch parents, guardians, or siblings using computers (Cook and Finlayson, 1999), and computers allow children to share with adults in their lives what they are doing at school. ICT it is a part of education that most parents/guardians can engage in with, whereas they might be unable to do this with mathematics or literacy. This is vital for building good home-school relationships; allowing parents to be involved in their children's education.

However, the issues with the use of ICT in teaching have also been examined through research. Firstly, Davies shows that there are barriers to using technology in learning, including personal access, aspects of school organisation, and the media depiction of the relationship between educational ICT and teachers, and that these barriers need to be addressed and overcome to ensure 'sustainable change' (cited in Leask, 2001). Moreover, Selinger states that "trying to shoehorn the current policies into the new technology is a

common approach that does not work and discourages beneficial use of the technology” (cited in Leask, 2001). This does suggest however, that the curriculum changes occurring with the Successful Futures report, and the introduction of the DCF will make the integration of suitable and beneficial ICT tasks more achievable.

Additionally, Clark states that “it’s very easy to mistake sophisticated technology for sophisticated learning” (cited in Underwood and Underwood, 1990) again suggesting that the use of ICT can hinder the learning process and that it can be difficult to utilise effectively to ensure children are meeting the lesson objectives. Contrary to this, however, Jones (cited in Beetham and Sharpe, 2013, p.213) believes that “technology is not an independent factor and cannot in any simple sense cause educational effects or any particular learner response”. This suggests that the use of technology or any ICT cannot be directly responsible for any changes in children’s learning or outcomes achieved, implying that the increased engagement is responsible for any improvements observed.

Although there are undeniable issues with ICT being integrated into teaching, it is essential that children are provided with these opportunities as they may not have them at home (Leask, 2001). With ICT becoming an integral part of life and society, integration into education is imperative to ensure children are provided with the necessary skills to thrive in the 21st century. The reading into the use of ICT in education resulted in an ICT based focus being chosen, refining the final research question to read ‘how is engagement effected by the use of Puppet Pals in a KS2 classroom?’

Methodology

As previously stated the research question is ‘how is engagement effected by the use of puppet pals in a KS2 classroom?’ and was chosen in the hopes of finding a solution to children disengaging during oracy tasks. We hope, if the results show that children were engaged, that the app can be used to engage children resulting in better oracy skills and therefore confidence, eventually resulting in children feeling able to speak aloud in class.

The lesson study design

The methodology used in in this research is the lesson study (LS) design. LS is a very specific form of classroom action research which focuses on the advancement of teacher practice knowledge. LS is Japanese model, where a group (usually three) teachers work together to conduct teacher-led research in an area of development in which their students are lacking (Ricks, 2010). LS was introduced to the UK by Pete Dudley in 2001 when he conducted his first study lesson. LS is defined as “teachers systematically and collaboratively conducting research on their lessons and using their results to become more effective with their own instructional practices” (Caskey & Lenski, 2010). LS follows the cycle of plan, observe (or teach), reflect and plan (see figure 1; Teacher Development Trust, 2018).

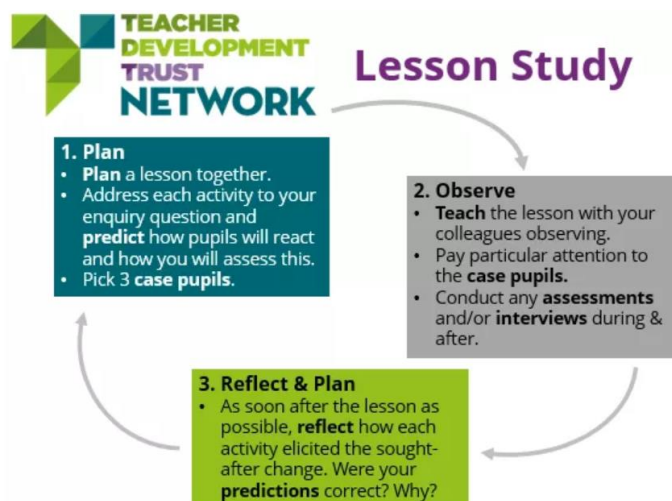


Fig. 1. The Lesson Study cycle

Lesson study has many benefits. Firstly, LS has been shown to help teachers to appreciate students’ potential, and better enables them to set high, but achievable expectations for their students (Horn et al., 2014). This is a vital role of all teachers, as high expectations result in better outcomes for children (McKown and Weinstein, 2008). LS has

been depicted as being a flexible process that requires modification (Hadfield and Jopling, 2016), but that it is the “single most impactful action” that can be taken (Robinson et al., 2009, cited in Dudley, 2014). Additional benefits of LS include the long-term effects on a teacher’s continued professional development (Department for Children, Schools and Families, 2008), long-lasting results due to the fact that it takes place over time and in real life situations (Cordingely et al., 2004), and a positive impact on school ethos and staff wellbeing as it promotes collaboration (Hargreaves, 2012). Finally, LS utilises pupil voice which has been shown to have many advantages (see interview section below). LS therefore seems like an appropriate choice for the research design, as it affords itself to many benefits, and is heavily evidence based. Research conducted by Leavy and Hourigan (2016) also found that the “robust pedagogical understanding” gained from lesson study can be transferred beyond the study context of trainee teachers, meaning the LS design will benefit me throughout my teaching career.

However, there has been some criticism of lesson study. For example, Lewis et al. (2006) found that if a teacher’s attitude to CPD is negative it can make the process of lesson study almost redundant. Moreover, research has found that time constraints, teacher workload, perception of teacher observation, and lack of teacher confidence (Mon, Dali and Sam, 2016; Fernandez, 2002) can all negatively impact on the potential positive outcomes of a lesson study. Research by Chokshi and Fernandez (2004) found that the transition of lesson study from a Japanese methodology to a Western one has potentially reduced the effectiveness of the process. However, as the process is flexible and open to adaptation it could be adapted to fit western needs, however the results will then need to be analysed with more caution (Perry and Lewis, 2008). Finally, as lesson study is designed for a triad of researchers (Dudley, 2014), the fact that the research is being conducted just by myself and my research partner may influence the outcome. For my research partner and myself the time constraints, lack of confidence, and that there are only two of us are likely to be the biggest influencing factors. We must complete the research under time constraints placed by the university at which we study and being student teachers and our first time participating in lesson study, we are unsure about the whole process. We are, however, looking at the research in a positive way and believe it will be beneficial for our careers and development as teachers.

Our lesson designs

During an initial planning session with my research partner, we followed the steps outlined by the Department for Education (DfE) on how to plan a study lesson; “agree a class, specify the focus, specify the learning outcomes, plan each stage of the lesson, identify resources and how they will be used, identify case pupils, and finally agree a feedback and discussion time as soon as possible after the lesson” (DfE, 2009). The Lesson Study: A Handbook states that the post research lesson discussion should certainly not occur more than 24 hours after the lesson (Dudley, 2014). Moreover, we intend that the class teacher (who will be present during the lesson) will join us for the post research lesson discussion as an impartial moderator as was suggested to be beneficial by Takahashi (2005, cited in Dudley, 2014).

As previously stated, my research partner and I had decided upon the research question ‘how is engagement effected by the use of puppet pals in a KS2 classroom?’ and will be conducted in two year 4 classrooms at the same school. The learning outcome for the lesson will be for children to enhance their oral persuasive techniques. A copy of the lesson plans created, one for the first lesson (appendix 1) and an adapted version for lesson two (appendix 2), can be found in the appendices. Three case pupils for each class will be chosen at random using the ‘name in the hat’ method to reduce bias. However, one child from each of the prescribed ‘ability’ groups will be chosen to ensure that we had identified “three pupils who reflect different groups of learners in the class” (Department for Children, Schools and Families, 2008). We will therefore place the signed consent forms of the children who agree to participate into 3 ability groups, and one from each group will be chosen at random. We believe that choosing one child from each ability group using random sample selection will enable the results to have greater generalisability. All pupils will be fully briefed and debriefed, as well as being reminded of their right to withdraw.

My research partner and I have decided that the data on the engagement of the case children throughout the lessons will be collected using observation and interviews. The non-participant observation will be structured using key questions (appendix 3) and via time sampling using an adapted form of the Leuven scale, with observations taken every 5 minutes from the beginning each lesson (appendix 4). The use of mainly qualitative data has been chosen to allow deeper insights and understanding (Wallen and Fraenkel, 2011). The

qualitative data from the interview and key questions observations will be analysed by selecting and interpreting key information.

The observation will be a non-participant, overt, semi-structured observation. The overt nature of the research reduces the ethical considerations considerably but result in a decrease in the validity of the results as the participants may display demand characteristics. However, Feito (1997) found that children do not display demand characteristics in the same way as adults do, as they do not feel the same 'need to conform'. Moreover, observer bias can skew results; this is where the observer will interpret things differently based on their own beliefs, knowledge, and opinions (Riddall-Leech, 2008). However, the use of structured observation aims to reduce this. Despite these possible downfalls, observation is a well-used method of obtaining data, with many documented benefits including that it enables more reliable measurement of behaviour, offers real-world validity, and permits research to be conducted on children (Wragg, 2012; O'Leary, 2013; Barber and Paul-Smith, 2012). However, as Sharman, Cross, and Vennis warn us, "observation is a camera shot, and although it is said that the camera does not lie, it may distort" (2007:3), and as such it is important to consider other day-to-day external factors, such as the child's mood, when drawing conclusions.

The Leuven scale of involvement was also chosen to reduce observer bias. The Leuven scale was created by Professor Leavers as a simple and uniform way of measuring children's engagement (Laevens, 2008), but has been criticised for being too simplistic (Cohen, Manion and Morrison, 2016). A time sample has been decided upon as it allows the children's engagement to be recorded over time, however, this method does not capture what is happening between the 5-minute observations, meaning that it is not representative and is lacking generalisability and validity (Cohen, Manion and Morrison, 2016). A simple observation schedule (appendix 5) outlining the timings of the lesson will also be used for analysis purposes. The data from the Leuven Scale time sample will be compared with the observation schedule to look for trends in the children's engagement.

After each lesson has been completed the three case children will be interviewed. The interview will ask the children for feedback about the lesson (see questions in appendix 6) as a way of including pupil voice. Pupil voice has been shown to be a great benefit for research as it makes the research more meaningful and increases the validity (Florian, 2007). Moreover, research suggests that "pupil voice strategies can be transformational experiences

for teachers and for pupils” (Flutter, 2007). However, as we are recording the case children’s answers using pen and paper rather than an audio recording to reduce ethical issues, there is a risk that some information may be misinterpreted or missed.

Finally, the researcher’s observation reflections will be captured using the Assisted Reflective Conclusion (ARC) form which was created by UWTSD to aid teachers in training to honestly and effectively reflect upon their practice (appendix 7). These reflections will be used to help us in the post lesson discussion. Reflection is a major part of the lesson study design (Dudley, 2014), as well as being important for a teacher’s CPD, as in essence it is all about improving practice (Flutter, 2007; Department for Children, Schools and Families, 2008; (Reflective practice, undated).

Ethical considerations

Before conducting this research, I had to complete and submit an ethical form (appendix 8) to the UWTSD Ethics Committee for ethical approval. The form outlined all the potential ethical considerations of conducting research in a classroom, and the ways in which I would try to reduce and overcome them. Firstly, I ensured that throughout the research process I adhered to the ethical guidelines depicted by BERA (2011), including ensuring that I treated all children with respect (point 9), that no child felt intruded upon or distressed due to my observation (point 20), and that all information remained private and confidential. Confidentiality will be maintained by only sharing the data collected with my research partner (other adults where necessary) and using letters (A-F) to always refer to children (point 25) (BERA, 2011; 5, 7).

Moreover, before I began conducting my research I obtained conformation from the class teachers and deputy head teacher that they were happy with the outline of the research and gave their consent. I also sent a letter out to parents/guardians asking for written consent for their child to partake in the research and only these children were entered into the draw for case pupils. On the day, my partner and I explained to all children what would be happening and asked them to use thumbs up/down to either give or withdraw their consent. Once again, only children who put their thumbs up were put into the participant draw, as the UNCRC states that every child has the right to have their views respected (article 12; UNICEF, no date; 2). Children who did not participate in the research were still able to participate in the lesson.

Furthermore, all children were fully briefed and debriefed, and were reminded regularly of their right to withdraw without penalty. Children were told that they have the right to privacy (article 16 of the UNCRC) (UNICEF, no date; 2), and as such were informed that no personal information was collected, and all data collected would be anonymised and transferred to a password protected computer (physical copies destroyed), that day. Finally, to ensure the safety of all involved in the research, the schools safeguarding policy, BERA, and the UWTSD (2017) Research Ethics & Integrity Code of Practice was adhered to strictly for the duration of the research.

Findings and analysis

For the lesson children were expected to work in small groups to create a video using Puppet Pals outlining their views on tourism in the Barrier Reef. Children were asked to build upon the persuasive techniques they had been working on in their literacy lessons the week before, using their tone of voice to help persuade their audience.

The results from lesson study one and two, and both post research lesson discussions will be reviewed below.

Lesson study one and analysis

For the first lesson study lesson, the children achieved the success criteria and fulfilled the lesson objective. The children effectively transferred the persuasive writing techniques into a persuasive video, explaining the reasons for their argument and successfully using their tone of voice to convey emotion effectively (video evidence). The case children also worked well as a group, with everyone taking part and sharing ideas (observation and video evidence).

To begin the analysis of the data collected, the Leuven Scale (appendix 9) time sample was compared with the observation schedule (appendix 10) to look for any correlations. When analysing the Leuven Scale, it was found that children were most engaged when actively using Puppet Pals, with Child B and C reaching a 5 on the Leuven scale, and Child A reaching a 3 and 4. The children were least engaged during the introduction and plenary, with Child A being a 1 or 2 and Children B and C observed at a 3 on the Leuven Scale.

We then considered the observation notes obtained using the Key Questions (appendix 11). They revealed that the case children worked well as a group, that Child C assumed a leadership role, that Child A was slightly less involved than B and C, that they were able to reach agreements on what to include in their video as a group, and that they were able to use Puppet Pals effectively.

Next, we looked at the notes taken from the general class feedback (appendix 12). As a class the children were asked what they thought of the lesson. The children reported enjoying using the iPad, using Puppet Pals, working with friends, and picking characters. From the 23 children present in the class 21.7% claimed that they would prefer acting to using

Puppet Pals as it would allow them to be themselves and use their facial expressions and body language to help convey their point. 78.3% of the children, therefore said they would prefer Puppet Pals, stating reasons such as enjoying using ICT, that they think it would be easier than acting, and that they can hide behind a character, suggesting a lack of confidence. However, 13.0% of children reported finding Puppet Pals difficult to use implying that the app may not be ideal for everyone.

Finally, the information given during a group interview with the three case children was reviewed (appendix 13). Child A informed the interviewer that they liked Puppet Pals and would prefer it to acting because they could pause it to allow them to think, but that it would be good to have a rewind button to redo a mistake rather than having to start the whole video again. Moreover, Child A and Child B both said that they found the Puppet Pals more relaxing and that it put less pressure on them to get things correct first time like acting would. However, all 3 case Children said they didn't like it when their video got showed to the whole class, especially as nobody else's did (due to time constraints). They reported feeling embarrassed and as though everyone was looking at them. Finally, the case Children reported that using the iPads made the lesson feel more like playing than a lesson, so it was more fun, and as such believe they stayed focused better.

Post lesson discussion

After study lesson one, my research partner and I engaged in post research lesson discussion along with the class teacher. Before coming together for the discussion, we each completed an ARC form, reflecting upon the lesson. I reflected upon the lesson as an observer (appendix 14), and my research partner reflected upon it as the teacher. We then used the ARC and notes from the observations and interview to guide the discussion.

Initially we discussed what went well and agreed that the children appeared engaged and seemed to enjoy using the Puppet Pals app. However, we decided that a few alterations needed to be made before the second lesson. Firstly, we decided that the children needed to plan what they wanted to say in their video and who would say what before giving them an iPad. This is because several children initially spent too much time playing on Puppet Pals rather than working out what to say, and because they didn't have a plan the children had to keep pausing their video to decide what to say next. This meant that their videos were

disjointed. We also decided that as several children had commented that the background noise was a problem when recording, that we would allow the children in lesson two to go into a quieter space to record their video. It was also decided to make it explicitly clear that children were to put the iPads down with the screen off whenever a teacher was talking, as we discovered from the observation notes that the children continued to play on the iPad during mini-plenaries. Furthermore, we decided that we would not show the case groups video during the plenary to try and determine whether this had an impact on the disengagement during the plenary in lesson one. Finally, as one child reported that the teacher counting down to get the children's attention for a mini-plenary interrupted their recording which resulted in them deleting their video and starting again, we decided that during lesson two a silent signal would be established.

We then used the discussion to alter the lesson plan (appendix 2) ready for the second study lesson.

Lesson study two and analysis

Children achieved the lesson goals, for the most part, in the same way as in the first lesson. However, they did finish with a better end product (video), managed to give points on both sides of the argument on tourism due to better planning, stayed on task slightly better (as a whole), planned as a group before using the iPad, and made sure that everyone knew what they were saying and when. The case children's group decided to create a script before starting to use Puppet Pals, outlining their arguments and who would say what. This proved very effective, as the video was detailed and accurate. Moreover, as they had a script they were able to practice before recording, meaning that their video wasn't filled with long pauses as others were.

Again, the data analysis began with comparing the Leuven Scale time sample (appendix 15) with the observation schedule (appendix 16). Similar results as for lesson one were found. Firstly, the children were most engaged when using Puppet Pals, with Child D reaching a level 4 on the Leuven Scale, and Child E and F reaching a level 5. However, the children in lesson study two were also well engaged during the script writing process they decided to undertake for their planning, and for the plenary, with Child D reaching a level 3, and Children E and F reaching a level 4. The case children were shown to be least engaged

during the introduction, with Child D reaching a level 2, and Child E and F reaching a level 3 on the Leuven Scale.

The Key Questions were evaluated next. The Key Questions (appendix 17) for the second lesson depicted that Child E took a leadership role, providing many ideas for the video, with Child F engaging well in discussion. Child D was not as engaged and contributed less, in a similar way to Child A in lesson one. Child E and F were noted to have good expression with clear pronunciation, whereas Child D just read from the script. The Key Questions showed that the children were able to effectively use the iPad and the Puppet Pals app, and that they remained on task throughout the lesson. The notes also clarified that none of the children in the group were friends, but that they worked in a structured and organised way as a team.

Subsequently, the notes taken during the general class feedback were inspected (appendix 18). When asked for lesson feedback the children reported enjoying recording a video, working as a team, and using the Puppet Pals characters. One child, with others agreeing, also reported enjoying having something to show for their work, as sometimes with more practical activities (dancing, singing, acting, Lego, etc.) their hard work disappears at the end of the lesson. Of the 26 children partaking in the lesson, 73.1% communicated that they would prefer using Puppet Pals to acting for reasons such as being able to erase mistakes, that it is easier to be confident, that not everyone will see it, and that there is less pressure. Consequently, 26.9% voiced they would prefer acting as it would allow for greater expression using their facial and body language, and because they feel they spend too much time on technological devices “just tapping away all day” (direct quote).

Finally, the interview notes (appendix 19) from Children D, E, and F were reviewed. The case children from class 2 stated that they enjoyed working as a group and getting a chance to work with children from different (ability) groups. Of the 3 case pupils, Child E stated they think they would prefer acting as they could be more dramatic, however they would like to try both before deciding. Moreover, all three children reported enjoying Puppet Pals as they got to choose and move their characters, and that they liked the fact they made sure that everyone had an equal part during the video. They also said that using the iPads made the lesson feel more fun. However, they don't think this is specific to Puppet Pals as they often feel like this when using the iPads or computers.

Post lesson discussion two

Following the second study lesson, myself, my research partner and the class teacher engaged in a post lesson discussion using the same materials (see lesson two's ARC in appendix 20) to aid us as in the first discussion. We identified that Child D didn't participate particularly well, except when it was his turn to speak or use the iPad, and he relied heavily on other children in his group to help him. Moreover, the case group, who happened to write a script were the group who produced the best video. Finally, due to the nature of the class, there were more arguments about character choice than in the first lesson study. Furthermore, two boys were being so disruptive to other children, they were eventually asked to sit out of the lesson to allow other children to complete their videos.

Discussion

To summarise the findings outlined in the results section, the children were shown to be more engaged when using Puppet Pals than any other point in both study lessons. This suggests that ICT (Puppet Pals) does engage pupils as was found in previous research such as West (2013) and Allaway et al. (2004). Moreover, the analysis of the lesson studies allege that better engagement produces better learning, as the case children in lesson two produced better end products and were better engaged over longer times than the case children in lesson one. This theory is supported by the findings of many researchers including Underwood and Underwood (1990) and Chen, Lambert, and Guidry (2010).

Additionally, the idea that ICT results in intrinsic motivation of children (Ryan and Deci, 2000; Zylka et al., 2015) is alluded to as the children were most engaged when using Puppet Pals and reported enjoying the app. This also fits in with the research conducted by Cook and Finlayson (1999) who found that the use of ICT is like play for children. This is further implied by the interview responses from some children who stated that Puppet Pals was fun and didn't feel like work. Finally, the pupil voice feedback and observations depicted that most children knew how to use Puppet Pals effectively and confidently, with only 6.1% of all children who partook in the research reporting finding the app difficult to use. This is supported by research conducted by Cook and Finlayson (1999) who found that children are confident and comfortable using technology. It could be suggested that as the children were confident and comfortable using Puppet Pals, they were able to get more engaged and focus more on their oracy skills.

These findings indicate that the use of Puppet Pals was effective and could be used with the aim of allowing children to practise their oracy skills in a nonconfrontational way, and in a way they find fun and engaging. This would allow the children to improve their oracy skills in conjunction with their confidence. The Puppet Pals app could therefore potentially be used as a stepping stone to eventually allow less confident children to speak aloud, both in the year 4 classes and across the school. If the use of Puppet Pals was integrated earlier in a child's school life, then there is potential for children's oracy skills and confidence to be at an expected level by the time they reach year 4.

However, before any firm recommendations or conclusions can be drawn, it is crucial to critically examine the research. Firstly, as stated earlier within the methodology, the use of observation can be unreliable due to observer effects (Fawcett and Watson, 2016), social desirability bias, and the potential dissonance of the observers (Festinger, 1957 cited in Harmon-Jones, Harmon-Jones and Levy, 2015). Moreover, the fact that the observation was conducted overtly reduced the ethical considerations, it may have reduced the validity of the results, as the Hawthorne effect (Landsberger, 1950) may have occurred. This is where a participant may alter their behaviour due to their awareness of being observed, and as such it is possible that the children behaved or engaged better because they were informed they were being observed. This could explain why the children in lesson two created a better video than others in the class as my research partner was sitting close by in an obvious manner. However, as the lesson was conducted in the children's usual classroom with a teacher they are familiar with, the use of observation will increase the validity of the results.

Moreover, the use of interview enabled a deeper understanding, with verbal and non-verbal cues being captured, resulting in focused feedback being obtained. The pupil voice input was very beneficial allowing my research partner and myself to make improvements to the lesson based on ideas we may never thought of as teacher. However, one issue with the use of interviews is that they can be inconsistent, and the children may have felt unable to be completely honest (Watson, 2006). For any future lesson studies, it may be beneficial to use a questionnaire to allow students a more honest and open voice when reflecting on a lesson.

The random sampling method was a good choice as it reduces potential bias and as one child from each ability group was chosen the case children should have been representative. However, all three children from class one were female and in lesson two only one was male, potentially making the results more difficult to generalise to the whole class. However, the use of general class feedback (which was gathered on the spur of the moment) aimed to reduce this gender bias.

It is also important to consider that there was no baseline to work from, and as such it is possible that the children would have been equally engaged doing a non-ICT task. A baseline could have been taken from observing the same three children in another non-ICT based oracy lesson and would have allowed for more concrete results to be drawn, with greater generalisability, reliability and validity. Finally, it is necessary to consider the

extraneous variables, such as situational variables (weather, noise, temperature) and participant variables (mood, amount of sleep a child had last night, an argument they may have had with a friend or family member), all of which can have a drastic impact on the outcome of a study (Wallen and Fraenkel, 2011).

It is also important to consider other possible explanations for the research results, as cause and effect cannot be drawn. Firstly, the research found that the children were most engaged when using Puppet Pals, which suggests that the app engaged the children well; however, there could be other reasons for this result that need to be considered. For example, it could just be the use of ICT, the iPad, or that this is the time when children were most actively participating in something that resulted in the children being more engaged. Moreover, the results showed that the children were less engaged during the introduction (lesson one and two) and the plenary (lesson two), but there could be alternative reasons for this. For the decreased engagement during the plenary for lesson one, as the case children were the only group to show their video to the class during the plenary, and they were deliberately looking elsewhere (presumed embarrassment), this result may not be a representative result of the whole class and therefore lacks generalisation. The initial lack of engagement for lesson two could be due to the class being frequently disrupted by the class phone ringing, the usual class teacher needing to go in and out, and one child being poorly behaved. All of this interrupted the flow of the introduction, affording the children the opportunity to disengage from the teacher and talk to a friend or daydream.

Although there are many potential reasons that the results may be unreliable, it cannot be denied that the children reported enjoying the lesson and that they had fun. This alone is reason enough to use the Puppet Pals app again, as children enjoying their learning and time in school is crucial.

Conclusion and Recommendations

Taking everything into consideration, it is vital to draw a conclusion and recommendations to take forward in my teaching career. Firstly, I must begin by stating that I am happy with the overall results of the lesson study research, and that it was a positive experience. The ability to pick a small area of practice to observe and reflect upon (Dudley, 2012) has honed many skills that I believe will be valuable to me in my career, including the ability to reflect in and on action (Schon, 1983), the ability to recognise whether a child is properly engaged or not (Leuven scale), and the ability to understand how making a lesson more fun (e.g. by using ICT) makes a difference to the children's view on the lesson.

However, the fact that the study was conducted in one day, rather than over time as it is supposed to be carried out (Hargreaves, 2012), the results may be less reliable. Therefore, to feel as though I can draw more useful and reliable conclusions I would repeat lesson study, making small changes each time. For example, I would like to repeat the study having a oracy lesson engagement Leuven Scale as a baseline to enable me to draw comparisons or looking at the influence of ICT in general (not Puppet Pals) or a lesson where children complete an acting and Puppet Pals activity before giving feedback. I believe that any of these studies would allow me a better understanding of the results I obtained during this research. I did however, like the lesson study design as it was an authentic experience (Cordingley et al., 2004).

Considering my research, I will incorporate ICT where appropriate in lessons to make the learning more fun and engaging for my students. Moreover, I would like the opportunity to observe how the Puppet Pals app would work for different lessons, for example in a Welsh lesson where children are practising their pronunciation, as I believe it would allow them the freedom to practise without feeling embarrassed. I would certainly recommend the Puppet Pals app to any colleagues who are looking for a way to enhance their oracy lessons or improve their children's oracy skills. I look forward to my career as a teacher and the ability to enhance my professional development through lesson study again.

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Appendices

Appendix 1

The lesson plan created for the first lesson study lesson.

Session Plan – Key Stage 2 – Lesson Study Lesson 1				
Name of trainee:		Session ref: Tuesday 27 th March 2018		
Year group: 4	No. of learners: 25	ALN: n/a.		
Additional Adults: 0				
Learning objective(s): To enhance persuasive techniques verbally in a group		Success criteria: - I can use persuasive techniques verbally - I can explain my reasons - I can explain information and ideas using supportive resources - I can contribute to group discussion and help everyone take part - I can help a group to reach agreement - I can use Puppet Pals to create a video explaining my groups views on tourism		
Links to previous learning: links to persuasive writing letters they wrote in Literacy last week				
Curriculum coverage (range, skills) - explain information and ideas using supportive resources - organise talk so that different audiences can follow what is being said - after listening, respond, giving views on what the speaker has said - contribute to group discussion and help everyone take part and help a group to reach agreement				
Literacy(LNF)		Numeracy (LNF) - transfer mathematical skills to a variety of contexts and everyday situations - draw conclusions from data		
DCF - create and modify multimedia components using a range of software - give an opinion about their own and others' work and suggest improvements independently and collaboratively	Thinking	ESDGC	YCC	
Key vocabulary(English/Welsh): - Purpose - Argument - Audience - Persuade				
Time	Session activities, organisation and management		Key questions & AfL	
15 mins	<u>Introduction</u> - Teacher will explain to the children about the research, what we will be doing, and their right to withdraw (see additional sheet). - Teacher will then ask the children about the key features needed for a persuasive writing/letter as a recap. - Teacher will explain Present Turnbull wants the children to make a video explaining their points for/against tourism for him to show to people before they vote. - Teacher to explain that the children will be working in groups to discuss and plan before making Puppet Pals video.		<u>Key questions</u> - What is persuasive writing? - How do we persuade people? - What did you enjoy about the lesson? What would you change? - Did you work well as a team? - What went well for your video? - What would you do differently? - What skills did you use?	
35 mins	<u>Main activities-</u> this will run as a whole class lesson. - Children will work in groups of 3 (groups will be predetermined by the teacher). - Children will work in groups to create a plan outlining what they will include in their video. They need to plan who will say what, and what their main points are. - Children will then create their video using Puppet Pals. *give children are given regular time updates.		<u>AfL opportunities</u> - Questioning throughout lesson - Thumbs up/down for understanding - Final product (video) <u>Resources</u> - iPads with puppet pals - Persuasive letters	
	Plenary			

10 mins	- Ask children for their feedback on the lesson. What did they enjoy? What would they change? - Did they work well in their groups? What was good about their video? What would they do to improve on it next time? - If given a choice, would they prefer to use Puppet Pals, or act something out? - What skills did they use?
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Appendix 2

An adapted version of the lesson plan used in the first lesson study lesson. It was adapted after the reflection process was carried out for lesson one.

Session Plan – Key Stage 2 – Lesson Study Lesson 2					
Name of trainee:		Session ref: Tuesday 27 th March 2018			
Year group:	4	No. of learners:	26	ALN:	n/a.
Additional Adults: 0					
Learning objective(s): To enhance persuasive techniques verbally in a group		Success criteria: - I can use persuasive techniques verbally - I can explain my reasons - I can explain information and ideas using supportive resources - I can contribute to group discussion and help everyone take part - I can help a group to reach agreement - I can use Puppet Pals to create a video explaining my views on tourism			
Links to previous learning: links to persuasive writing letters they wrote in Literacy last week					
Curriculum coverage (range, skills) - explain information and ideas using supportive resources - organise talk so that different audiences can follow what is being said - after listening, respond, giving views on what the speaker has said - contribute to group discussion and help everyone take part and help a group to reach agreement					
Literacy(LNF)		Numeracy (LNF) - transfer mathematical skills to a variety of contexts and everyday situations - draw conclusions from data			
DCF - create and modify multimedia components using a range of software - give an opinion about their own and others' work and suggest improvements independently and collaboratively	Thinking	ESDGC	YCC		
Key vocabulary(English/Welsh): - Purpose - Argument - Audience - Persuade					
Time	Session activities, organisation and management			Key questions & AfL	
15 mins	<u>Introduction</u> - Teacher will explain to the children about the research, what we will be doing, and their right to withdraw (see additional sheet). - Teacher will then ask the children about the key features needed for a persuasive writing/letter as a recap. - Teacher will explain Present Turnbull wants the children to make a video explaining their points for/against tourism for him to show to people before they vote. - Teacher to explain that the children will be working in groups to discuss and plan before making Puppet Pals video.			<u>Key questions</u> - What is persuasive writing? - How do we persuade people? - What did you enjoy about the lesson? What would you change? - Did you work well as a team? - What went well for your video? - What would you do differently? - What skills did you use?	
35 mins	<u>Main activities-</u> this will run as a whole class lesson. - Children will work in groups of 3 (groups will be predetermined by the teacher). - Children will work in groups to create a plan outlining what they will include in their video. They need to plan who will say what, and what their main points are. - Children will then create their video using Puppet Pals.			<u>AfL opportunities</u> - Questioning throughout lesson - Thumbs up/down for understanding - Final product (video) Resources	

	*give children are given regular time updates. * make sure children have a plan of the points they want to make, and who will say what before they are given an iPad. * once children show they have their plan ready, they are allowed to go into a quieter space to record their video if they wish – either the studio, hall, or corridor.
10 mins	Plenary - Ask children for their feedback on the lesson. What did they enjoy? What would they change? - Did they work well in their groups? What was good about their video? What would they do to improve on it next time? - If given a choice, would they prefer to use Puppet Pals, or act something out? - What skills did they use?

- iPads with puppet pals
- Persuasive letters
- Whiteboards/pens (to plan)
- Plain paper/pencils (to plan)

Appendix 3

A list of the key questions that were used to guide the structured observation.

1. What type of role are they taking in the group?
2. Is the group working well together?
3. Are they participating in discussion?
4. What part in the script did they choose?
5. Are they performing the script well?
6. Are they using the ICT appropriately?
7. Can the children use the Puppet Pals app effectively?
8. How long did they spend picking a character?
9. Are they working with their friends?
10. Any additional comments.

Appendix 4

A blank copy of the adapted Leuven scale that was used for the time sample observations. Below is a more detailed copy of the Leuven scale that was used to help the observer complete the time scale.

The Leuven Scale of involvement

Class:

		Child A												Child B												Child C											
Level	Involvement	5	10	15	20	25	30	35	40	45	50	55	60	5	10	15	20	25	30	35	40	45	50	55	60	5	10	15	20	25	30	35	40	45	50	55	60
1	Extremely low																																				
2	Low																																				
3	Moderate																																				
4	High																																				
5	Extremely high																																				

Additional Notes

<u>Child A</u>	<u>Child B</u>	<u>Child C</u>
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Level	Involvement	Signals
1	Extremely low	Activity is simple, repetitive and passive. The child seems absent and displays no energy. They may stare into space or look around to see what others are doing.
2	Low	Frequently interrupted activity. The child will be engaged in the activity for some of the time they are observed, but there will be moments of non-activity when they will stare into space or be distracted by what is going on around.
3	Moderate	Mainly continuous activity. The child is busy with the activity but at a fairly routine level and there are few signs of real involvement. They make some progress with what they are doing but don't show much energy and concentration and can be easily distracted.
4	High	Continuous activity with intense moments. The child's activity has intense moments and at all times they seem involved. They are not easily distracted.
5	Extremely high	The child shows continuous and intense activity revealing the greatest involvement. They are concentrated, creative, energetic and persistent throughout nearly all the observed period.

Appendix 5

A blank copy of the basic Observation schedule used by the observer to note timings of the lesson to allow conclusions from the Leuven scale observations to be drawn more easily.

Observation schedule

Name: _____

Class: _____

Date of observation:	
Lesson/Subject:	
Number of children present:	
Teacher input start time:	Plenary start time:
Teacher input finish time:	Plenary finish time:
Puppet Pals start time:	Performance start time:
Puppet Pals finish time:	Performance finish time:
Teacher input:	
Support given:	
Learners interactions with the TA/Teacher/adults:	
Learners interactions with other pupils:	
Learners response to task:	
Summary of strengths:	
Summary of weaknesses:	
Additional notes:	

Appendix 6

These are the questions that were used during the post lesson interview.

- What did you enjoy about the lesson and why?
- What didn't you enjoy about the lesson and why?
- Do you think you were engaged during the activities?
- Would you prefer using Puppet Pals or acting?
- Additional information.

Appendix 7

This is a blank copy of the ARC (Assisted Reflective Conclusion) form used to reflect during the lesson study process.

Model Beirniad Wedi Adfyfyrio (BWA) *Assisted Reflective Conclusions (ARC) Model*

Dyddiad/Date:

Digwyddiad critigol (Ffocws)/Critical incident (focus):

Profiad/ Experience	
Teimladau/ Feelings	
Cofio a Deall/ Remember and Understand	
Gwerthuso a dadansoddi/ Evaluate and analyse	
Casgliadau a chymau gweithredu/ Conclusions and actions	
Y profiad newydd / Transformed experience	

Appendix 8

This is the ethics form that was sent to the UWTSD ethical committee for approval (minus the signatures).

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge,

including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity.

Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

Full Name:	Eden Davies		
Tick all boxes which apply:			
Member of staff:	☐	Student:	☒
Honorary research fellow:	☐		
Faculty/School/Centre:	Yr Athrofa		
Campus:	Townhill		
E-mail address:	1700353@student.uwtsd.ac.uk		
Contact Telephone Number:	07492049750		
For students:			
Student Number:	1700353	Undergraduate	☐
Programme of Study:	Primary PGCE	Taught Postgraduate	☒
Director of Studies/Supervisor:	Jayne Morgan	Research	☐

SECTION B: Approval for Research Activity

Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
				Date
If Yes, please indicate source of approval (and date where known):	Research Degrees Committee	☐		
	Faculty Research Committee	☐		
	Other (write in) – Jayne Morgan	☒	28/02/18	

Approval in principle **must** be obtained from the relevant source prior to seeking ethical approval.

SECTION C: External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and
--

also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.	
BERA (2011) Ethical Guidelines for Education Research	✓
University of Wales Trinity Saint David (2017) Research Ethics & Integrity Code of Practice	✓
Code of professional conduct and practice for Registrants with the Education Workforce Council (2017)	✓

SECTION D: External Collaborative Research Activity

Does the research activity involve collaborators outside of the University?	YES	☐	NO	✓
If Yes, please provide the name of the external organisation and name and contact details for the main contact person:				
Institution				
Contact person name				
Contact person e-mail address				

Where research activity is carried out in collaboration with an external organisation

Does this organisation have its own ethics approval system?	YES	☐	NO	✓
If Yes, please attach a copy of any final approval (or interim approval) from the organisation				

SECTION E: Details of Research Activity

Indicative title:	<i>How is engagement affected by the use of Puppet Pals in a Key Stage Two (KS2) classroom?</i>		
Proposed start date:	March 2018	Proposed end date:	April 2018
Purpose of research activity (including aims and objectives) Outline the purpose, aims and objectives of the research activity, including key research questions. Show briefly how existing research has informed the proposed activity and explain what the research activity will add and how it addresses an area of importance. (Maximum 300 words) The purpose of this research is to determine how the engagement of KS2 school children is affected by the use of Puppet Pals in a Literacy lesson. The research aims to determine the difference in children's engagement when they are engaged in an oracy lesson using Puppet Pals. The research also aims to collect the views and opinions of KS2 students on the use of Puppet Pals and other DCF/ICT programmes for literacy lessons. The objective is to determine whether using Puppet Pals will engage the children in an oracy activity. After the plenary, children will be interviewed to be asked what they enjoyed about the activity, what they would change about the lesson, and why. Children will be observed during the practise stage using the Leuven involvement scale and questions which will be designed to determine which version of the activity children are engaging with more. There is currently no existing research that has looked at how children's engagement is affected by the use of Puppet Pals.			

(this box should expand as you type)

Proposed methods

Provide a brief summary of all the methods that **may** be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. (Maximum 600 words)

During this research, data will be collected in a number of ways. However, throughout the entirety of this research, all participants will be kept anonymous, as will the location of the research. The participants will be briefed before and fully debriefed after the research has been conducted and will be told of their right to withdraw at any time.

3 target children will be chosen from two classes to be observed. The children will be picked to ensure one child from each ability group (low, middle, high) is picked. The child will be picked at random from these groups.

After the observation has taken place, the teacher of the class will be fully debriefed and shown all observational notes taken to ensure they are happy with the information the researchers collected before continuing with the research.

The following methods will be used to collect data:

1) Observations/ key questions

Prior to the research being carried out, a list of key questions along with an appropriate recording method will be created. This will enable both the researched involved to focus on the same specific things while observing the lesson. After the first lesson has been conducted and observed, the questions and recording methods will be reviewed and adapted as necessary to ensure the best results (Lesson study research).

2) Leuven scale

During the lesson the researchers will observe target children using the Leuven Involvement Scale to measure their engagement. The 3 target children will be observed using the scale for their levels of engagement/involvement when they are practising a script using drama performance and again when practising a script using the Puppet Pals app.

3) Interviews

At the end of the lesson after the plenary, the three target children from each class will be interviewed. The interview will ask the children questions about the task, focusing on the following:

- What parts of the lesson did you enjoy?
- What parts didn't you enjoy?
- How engaged do you think you were during the Puppet Pals practise?
- Would you have preferred a different way, such as acting?
- If you had to do this lesson again, what would you like to be done differently?

These questions are subject to change. They are, however, an example of the types of questions that will be asked.

The participants answers to these questions will be recorded (pen and paper).

(this box should expand as you type)

Location of research activity

Identify all locations where research activity will take place.

The proposed research will be conducted in a medium, semi-rural, two form entry school in Mid Glamorgan in two year 4 classes. (this box should expand as you type)
Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural sensitivities or vulnerabilities of participants.
n/a (this box should expand as you type)

SECTION F: Scope of Research Activity

Will the research activity include:	YES	NO
Use of a questionnaire or similar research instrument?	☐	☒
Use of interviews?	☒	☐
Use of diaries?	☒	☐
Participant observation with their knowledge?	☐	☒
Participant observation without their knowledge?	☐	☒
Use of video or audio recording?	☐	☒
Access to personal or confidential information without the participants' specific consent?	☐	☒
Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
Investigation of participants involved in illegal activities?	☐	☒
Use of procedures that involve deception?	☐	☒
Administration of any substance, agent or placebo?	☐	☒
Working with live vertebrate animals?	☐	☒
Other primary data collection methods, please explain in this box <i>Case children will be interviewed and observed.</i>	☒	☐

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

Who are the intended participants:	YES	NO
Students or staff at the University?	☐	☒
Adults (over the age of 18 and competent to give consent)?	☐	☒
Vulnerable adults?	☐	☒
Children under 18?	☒	☐
Prisoners?	☐	☒
Young offenders?	☐	☒
Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
People engaged in illegal activities?	☐	☒
Others (please identify):	☐	☒

Participant numbers and source

Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?

3 target children will be picked from each of the two year four classes. The target children will be picked to ensure that one child is picked from each of the 3 ability groups (low, middle, high) to ensure that the results are more accurate. However, the child from each group will be chosen at random using the 'name from a hat' method, provided that they have consent from their parents or guardians first.

this box should expand as you type)

Information for participants:	YES	NO	N/A
Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
Will you tell participants that their participation is voluntary?	☒	☐	☐
Will you obtain written consent for participation?	☒	☐	☐
Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
If NO to any of above questions, please give an explanation			

(this box should expand as you type)

Information for participants:	YES	NO	N/A
Will participants be paid?	☐	☒	☐
Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
If YES to any question, please provide full details			
(this box should expand as you type)			

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.
Full risk assessment completed and appended? Yes ☐ No ☒
Risks to participants For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information
Before the research begins I will ensure that all pupils have consent. If they are not given permission to partake in the research, they are welcome to take part in the lesson if they wish but will not be included in the random draw for target pupil, and therefore will not be included in any of the data collected. To ensure the children are fully informed and protected, firstly the children's parents/guardians will be given a consent form to sign. The consent form will outline the purpose of the study, what the research will involve, what participating children will be expected to do, and state they can withdraw at any point. The parents/guardians will also be informed that not all children will be used as target children to be observed. The child's parents/guardians will also be given the choice (if they choose not to allow their child to participate in the research) as to whether their child is allowed to participate in the lesson. Secondly, their class teachers will read and agree to the research being carried out on random pupils from their class. The class teachers will also be allowed to withdraw on a pupil's behalf at any point within the research and will be given complete access to all data collected from the observation on their class pupils. Thirdly, the deputy head will be informed, allowed full access to all data, and will given their consent for the research to be carried out. The deputy head will also be made aware of their right to withdraw on behalf of a pupil at any point. Finally, the children themselves will also, of course, be fully briefed, debriefed, and made aware of their right to withdraw at any point with no penalty. No child will be treated differently based on their wish to withdraw from the study. If a child is withdrawn from the study at any point by any of the

above (child, teacher, deputy head teacher, researcher, or parent) they will not be treated any differently and their data (if any collected) will be immediately withdrawn and removed from the data being used in the study and will be destroyed in an appropriate manner.

Additionally, if at any time a child feels emotionally distressed by the research, they will be reminded of their right to withdraw. Any child who becomes distressed will be comforted until their emotional equilibrium returns. Moreover, they will be reminded of this after the research has been conducted, during the debriefing. Finally, before and after the target children take part in the interview stage of the study, they will be informed that their answers will be recorded (pen and paper) and that their answers will be used as part of the research. During the debriefing of the interview stage, the target children will be shown the notes made during the interview stage and will be given the chance to amend any of their answers (if they want to). They will also be reminded of their right to withdraw without penalty during this stage of the research.

To ensure the safety of the participants, the safeguarding procedure of the school will be adhered to strictly. All participants will remain anonymous and the identity of the school will be withheld also. Moreover, the research and researchers will follow the BERA guidelines and the university regulations regarding safeguarding and ethics. All participants will be given a letter of referral to ensure and maintain anonymity and confidentiality. Finally, all research data which is collected will be stored safely and will be password protected to ensure confidentiality.

(this box should expand as you type)

If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities

Nothing of this nature should occur during this research study. However, if it did the school's safeguarding policy would be followed and the class teacher and/or designated safe guarding person would be informed of anything disclosed to the researchers during the study.

(this box should expand as you type)

Risks to investigator

For example: personal safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest

The research will be conducted by two PCGE Primary student teachers (myself, and one other). I am aware that the conducting of this research carries potential risks to myself. Firstly, one risk is that the researchers may be accused of treating pupils differently and conducting unprofessional practice. In order to reduce this risk the BERA guidelines and university ethical guidelines will be adhered to, as well as the university's and the schools safeguarding policy. Moreover, the target children will be picked randomly using the 'name in the hat' method to reduce the accusation of favouritism or unprofessionalism. I will not put my safety, nor the safety and wellbeing (physical, emotional, mental) of anyone else in danger during this research. All children will be treated equally and fairly. No child will be treated differently if they are not participating or if they choose to withdraw at any time (unless parents/guardians have stated they aren't allowed to partake in the lesson, in which case they will not be permitted to do so). Finally, to ensure no accusations of wrongdoing occur, all interviews with the 3 target children from each class will be conducted in a open area (no closed doors) and in an area the pupils feel safe and comfortable.

(this box should expand as you type)

University/institutional risks			
For example: adverse publicity, financial loss, data protection			
Throughout the research process the university's reputation will be upheld. The university should be risk free during the research process. I am aware of the good partnership between local schools and the university, and to ensure no risk to the university I will adhere to the ethical, legal, professional, and safeguarding procedures of both the school and university. I will also adhere to BERA.			
(this box should expand as you type)			
Adverse outcomes			
List measures put in place to limit any adverse effects or outcomes of research activity where appropriate. Include any emergency protocols.			
To prevent any adverse effects, researchers will follow the safeguarding and health and safety policies of the school and the university. I will comply to the university guidelines on the ethics code of practice and BERA. I will adhere to the ethical, legal and professional procedures listed in these documents. As there are only 3 target case children being chosen for the research, it is unlikely that there will not be enough participants and as all children in the class have been given a consent form, the potential pool is large.			
(this box should expand as you type)			
Disclosure and Barring Service			
If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.			
	YES	NO	N/A
Has a DBS certificate been obtained?	☒	☐	☐

SECTION I: Feedback, Consent and Confidentiality

Feedback
What feedback will be provided to participants, how will this be done and when?
The class teacher, deputy head teacher, and all children (all who participated in the lesson, not just those who were target children) will be fully debriefed after the lesson and observation stage. The class teacher, deputy head teacher, and the target children will be fully debriefed after the interview stage. The class teachers can request to view the data for their class at any time, and the deputy head teacher and head teacher can view all data at any time, upon request. I will also ensure that all children and teachers are thanked for their participation.
(this box should expand as you type)
Informed consent
Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before

data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded.

The schools head teacher, deputy head teacher, and both class teachers will be made fully aware of the research before it is carried out. They will then give us their permission to take the research further. If the school are happy for the research to go ahead, the participants parents/guardians will be provided with a letter outlining the research and will be asked to sign the consent and if no consent is given, they will be asked if they will for their child to take part in the lesson or not. Once parental/guardian consent has been gained, the children with consent will be told what the research is, what will happen, and what they will have to do. They will then be asked if they want to participate or not and that if they do not want to participate there will be no penalty. At this point it will be made very clear that they can change their mind and withdraw at any point and that if they do withdraw their data will not be used at all. Children will be reminded at several intervals throughout the research of their right to withdraw. Finally, at the end they will be fully debriefed and will be, once again, told they can withdraw if they wish.

Children will verbally give consent and show thumbs up/down and the class teacher will acknowledge that the case children chosen have given consent before the study begins.

(this box should expand as you type)

Confidentiality / Anonymity

Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.

All data that will be used in the study will be anonymous to maintain confidentiality. All participants will be given a letter to represent them (e.g. child A, Child B, etc.). The consent form and letter outlining the research will also make it clear to parents that their child's identity will be totally hidden, and no personal information will be taken or used at any point in the study. Every practical precaution will be taken to ensure confidentiality and anonymity – children will be referred to as letters, the school will *only* be referred to as the school, and no personal data or information will be collected. All raw data will be held and viewed only by the researches, the child's class teacher, the deputy head teacher, and the head teacher. The data used in the write up will be anonymised and will not be able to be traced back to a child or the school. All physical copies of all data will be destroyed once it has been transformed to a digital copy, and all digital copies will be password protected.

(this box should expand as you type)

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (<http://uwtisd.ac.uk/library/research-data-management/>).

	YES	NO
Does the research activity involve personal data (as defined by the Data Protection Act)? "personal data" means data which relate to a living individual who can be identified— (a) from those data, or (b) from those data and other information which is in the possession of, or is likely to come into the possession of, the data controller, and includes any expression of	☐	☒

opinion about the individual and any indication of the intentions of the data controller or any other person in respect of the individual.		
If YES, provide a description of the data and explain why this data needs to be collected:		
(this box should expand as you type)		
Does it involve sensitive personal data (as defined by the Data Protection Act)? “Sensitive personal data” means personal data consisting of information as to – (a) the racial or ethnic origin of the data subject, (b) his political opinions, (c) his religious beliefs or other beliefs of a similar nature, (d) whether he is a member of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) his physical or mental health or condition, (f) his sexual life, (g) the commission or alleged commission by him of any offence, or (h) any proceedings for any offence committed or alleged to have been committed by him, the disposal of such proceedings or the sentence of any court in such proceedings.	☐	☒
If YES, provide a description of the data and explain why this data needs to be collected:		
(this box should expand as you type)		

Will the research activity involve storing personal data on one of the following:	YES	NO
Manual files (i.e. in paper form)?	☐	☒
University computers?	☐	☒
Private company computers?	☐	☒
Home or other personal computers?	☐	☒
Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☐	☒
“Cloud” storage or websites?	☐	☒
Other – specify:	☐	☒
For all stored data, explain the measures in place to ensure data confidentiality, including details of password protection, encryption and anonymisation:		
Data of a personal manner will not be collected. However, anonymous data regarding children’s participation and interview feedback will be transferred and stored anonymously on a password protected and encrypted computer. Once transferred to a digital copy, all hardcopies will be shredded. All data will also be anonymised using letters rather than names (e.g. Child A). (this box should expand as you type)		
Will the research activity involve any of the following activities:	YES	NO
Electronic transfer of data in any form?	☒	☐
Sharing of data with others at the University?	☒	☐

Sharing of data with other organisations?	☐	☒
Export of data outside the European Union or importing of data from outside the UK?	☐	☒
Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
Publication of data that might allow identification of individuals?	☐	☒
Use of data management system?	☐	☒
Data archiving?	☒	☐
If YES to any question, please provide full details, explaining how this will be conducted in accordance with the Data Protection Act (and/or any international equivalent):		
The research is looking at the effect of Puppet Pals. Puppet Pals is a child friendly app that the children are familiar with and has already been deemed appropriate by the school (it is on the school iPads). To manage the risk of children using ICT, the data protection and safeguarding policies of the school will be upheld, and the children will be using the school's iPads which are protected and censored. The data will be shared in its raw form with my research partner (another PGCE Primary student at the university). It may also need to be shared with lecturers for analysis purposes. It will also be included in the write up in the final format, however the data will be anonymous at all times. The data will be archived as the data will make up the part of the final written project and the final project will be stored on the Turn It In submission database for plagiarism checks. The data might also be archived in the final project at the university/on the university database. However, as stated previously, all data will be anonymous and can't be traced back to the participants. (this box should expand as you type)		

List all who will have access to the data generated by the research activity:
• The researchers – Eden Davies (myself) and Carys Phillips • The children's class teachers (upon request; anonymised format) • The school's deputy head and head teacher (upon request; anonymised format) • Tutors at the university (anonymous format) (this box should expand as you type)
List who will have control of, and act as custodian(s) for, data generated by the research activity:
• The researchers – Eden Davies (myself) and Carys Phillips (this box should expand as you type)
Give details of data storage arrangements, including where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.
Once the physical copies of data have been transferred to digital copies, the physical copies will be destroyed (shredded). Data in the digital format will be held on computers which will be password protected. My computer is also encrypted. Data will be archived until the end of the academic year only by the researchers and then will be deleted. The data however, may remain archived as part of the final project write up on the

university's database or Turn It In submission. Data will be archived following the UWTSD guidelines.

However, all of this data will be anonymised and cannot be traced back to the participants or location as letters will be used.

(this box should expand as you type)

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants.

In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's [Research Ethics and Integrity Code of Practice](#)

Signature of applicant:

Date:

For students:

Teacher / Senior Mentor:	Mrs Harriet Maidment
Signature:	
Date:	

Supervisor:	Jayne Morgan
Signature:	
Date:	

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (and have NOT completed Section H of this form) (where appropriate)
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.



I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Head of School.

RESEARCH STUDENTS AND STAFF ONLY

All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.

You will be informed of the outcome of your claim by email; therefore it is important that you check your University and personal email accounts regularly.

STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

This form is available electronically from the Academic Office web pages:
<http://www.uwtsd.ac.uk/academic-office/>

Application Process

All staff research projects and all research students must submit the Ethical Approval Form to the **University Ethics Committee** via the Academic Office (pgresearch@uwtsd.ac.uk). Staff research directly in relation to personal study for taught undergraduate or Masters programmes should be submitted via the Faculty procedures explained below.

Taught masters and taught undergraduate research Ethical Approval Forms are considered **within Faculties**. Faculties will provide details of the specific processes for this. Where the Ethical issues within any single ethical application are of particular concern the Faculty will refer these to the University Ethics Committee. Any student activity that involves the collection of primary data needs to undergo Ethical approval, this includes assignment work as well as dissertations.

Notes for guidance in completion of this form

Section A: About You

Please complete all relevant sections

Section B: Approval for research activity

Research proposals must be approved in principle before applying for Ethical Approval. The proposal approval only becomes final when the ethical approval is received.

The process for proposal approval varies according the individual and programme of study:

- Research students, by application on form PG1 to the Research Degrees Committee
- Taught students by review of research proposal within Faculties (Faculties provide specific details of these processes)
- Staff, by agreement by the Head of School/Assistant Dean

Section C: External Ethical Guidance materials

Many discipline areas are required to operate with the discipline specific codes of research ethics (for example health, psychology, education etc.), any such codes must be listed and you must tick to confirm that you have consulted with these.

Section D: External Collaborative Research Activity

Provide details of the external collaborative partners, where appropriate you might want to submit a copy of the external collaboration agreement with the Ethical Approval Form. If the partner requires the research to be subject to its own internal Ethical approval process then please provide details of that process and a copy of any final (or interim) approvals received from the organisation.

Section E: Details of Research Activity

Remember that the individuals reviewing this Ethical Approval Form may not have seen your research proposal, and also may not be experts in the specific area of your research. The information provided should therefore be jargon free and clearly stated.

Indicative Title: please use the same title as used on the research proposal.

Purpose: the Ethical approval process will want to ensure that the methods you propose are adequate and appropriate to address the research aims and objectives. Excessive additional data collection can be seen as unethical.

Proposed Methods: the Ethical approval process seeks to ensure that you understand the methods that are intended, and that the implementation of those methods will be appropriate and without unnecessary impact on respondents. Please be specific.

Location: this needs to mention geographical location and also local situation (for example, within Local Authority Offices in Cardiff, using a private room but close to other individuals). If you are collecting data within an organisational setting then you need to explain the permissions that you have obtained to do this.

Research Activity outside of the UK: please complete this section in detail, and note any guidance you have received. Also describe your own familiarity (or not) with the location that you will be utilising.

Section F: Scope of Research Activity

Please tick ALL of the research activities that might be undertaken. If any additional types of activity are intended then please add an extra box and describe these.

If you have answered no to all questions in F then sections G and J do not need to be completed. Section H should be considered, and may be completed. Signatures are still required in section K.

Section G: Intended Participants

Please tick all categories that might apply.

Numbers & Source: if you are using a series of different methods or research activities please list numbers for each stage/phase. Be clear about how you will find respondents. Will you use intermediaries, and if so how? How will you ensure compliance with your sampling strategy?

Information for participants: all participants should be appropriately informed about the research, what is expected of them and what will happen to the information that they provide. The Ethical review process does not ask to see this documentation, but requires this to be reviewed and approved by the Director of Studies in the case of research students, the supervisor/module tutor in relation to students on taught programmes and the Head of School/Assistant Dean in relation to staff research.

Section H: Anticipate Risks

All research carries some level of risk. The answers you provide to questions in this section will be reviewed to ensure that you have an appropriate understanding of the type of risks involved and how you can mitigate against these risks. If you have completed a full risk assessment, as required for example for laboratory work, field work, clinical tests, diving operations, or by a collaborative partner, you may append that to this form. In that case, please tick the box indicating this has been provided. You will not then be required to complete Section H.

Risk to participants Think very carefully about how your actions/questions/discussions might affect the people you are involving as participants. You might identify the risk as small but it would still be a risk. Many types of question have the potential to make respondents less content with their life / job; you need to recognise and try to ameliorate any such effects. If these are business owners, time with you may reduce profit.

In some locations physical risk is very real to both participants and yourself, please consider this.

Risk to you, the researcher Think about where you will meet people, if there are any dangers involved in the location. If you are meeting people as individuals think about using a public place. In general do not visit people in their own homes or remote locations. If you are talking to individuals about certain issues think about how their responses might affect you emotionally. What about the risk of collecting insufficient data?

Risk to the University When undertaking your research, you are acting as a member of the University (student or staff). Professionalism is important, so it is important to be well organised and well prepared. Punctuality, clarity etc. are all part of this. What will you do to ensure this? You must ensure you do not harm the good name of the University in any way and do nothing to undermine the reputation of the research it conducts and sponsors. Upholding high standards of conduct and integrity are vital in this regard. You must also conduct the research in such a way to minimise the potential for claims of negligence made against the University, its researchers and any collaborating individual or organisation. In this respect you should always comply with ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, as well as the university's Research Integrity and Ethics Code of Practice. Research misconduct in this respect can take many forms, including:

- fabrication: making up results or other outputs (eg, artefacts) and presenting them as if they were real
- falsification: manipulating research processes or changing or omitting data without good cause
- plagiarism: using other people's material without giving proper credit
- failure to meet ethical, legal and professional obligations: for example failure to declare competing interests; misrepresentation of involvement or authorship; misrepresentation of interests; breach of confidentiality; lack of informed consent; misuse of personal data; and abuse of research subjects or material
- improper dealing with allegations of misconduct: failing to address possible infringements such as attempts to cover up misconduct and reprisals against whistle-blowers

Adverse Outcomes. Think carefully about the possibilities, and cover here

Section I: Feedback, Consent and Confidentiality

Feedback to participants: outline your approach. Will interview transcripts be shared with respondents to check accuracy? Will summaries of questionnaire analysis be made available to respondents in some way? Will an overview report be provided? How and when?

Informed consent: Draft letter / e-mail / or heading (or footer) section of questionnaire must be approved by DoS/supervisor (if research student), supervisor/module tutor if taught student, or Head of School / Assistant Dean if a member of staff.

Confidentiality/Anonymity. Explain clearly how you will ensure confidentiality and anonymity.

Section J: Data Protection and Storage

Before completing this section it is necessary to read the University's Research Data Management information. The questions that follow are designed to ensure compliance with the Data Protection Act as well as established research protocols.

Many research activities will involve electronic transfer of data and use of data management systems in the summarisation and analysis of data. You will need to explain these in relation to compliance with the Data Protection Act.

Think carefully about who will have access to your data, this will include supervisors and examiners. Also that a thesis will be made available via the University library and the British Library system. If you are seeking an access bar for a period of time after completion then mention it here. If you will provide a copy of your findings, or intend to give a presentation, to a facilitating/ supporting/accessing organisation then explain that in this section. But also think about the general principle of data sharing, as explained in the Research Data Management information.

In terms of storage of data please ensure security, and also mitigate against loss of data.

Section K: Declaration

Ensure the appropriate countersignatures have been provided

Look carefully at the checklist and ensure that you comply with and tick all that are relevant to your research.

Appendix 9

This is a copy of the completed Leuven Scale time sample taken in the first study lesson.

The Leuven Scale of involvement

Class: Pentro

[illegible]

Additional Notes

Child A

- input - playing with folded paper.
- keeps looking around.
- asked to go to toilet 25 mins.
- continued playing with paper -
- vantage / blank expression.

Child B

- engaged
- not leader.
- on task
- not confident

Child C

- Talking leader roles.
- confident
- Engaged.
- on task.

Appendix 10

This is a copy of the observation schedule taken from the first study lesson.

Observation schedule

Name: Eden (observing)

Class: penfro

Date of observation: <u>27/03/18</u>	
Lesson/Subject: <u>persuasive video</u>	
Number of children present: <u>23</u>	
Teacher input start time: <u>9:25am</u>	Plenary start time: <u>10:00am</u>
Teacher input finish time: <u>9:35am</u>	Plenary finish time: <u>10:15am</u>
Puppet Pals start time: <u>9:35am</u>	Performance start time:
Puppet Pals finish time: <u>10:10am</u>	Performance finish time:
Teacher input: - Talk about consent - explained lesson. - outlined task.	
Support given: child A given more support → didn't find point on own. Cashed for help to remember their point.	
Learners interactions with the TA/Teacher/adults: Teacher came to speak with them & talk through the task. Cashed for help.	
Learners interactions with other pupils: worked in a group of 3. - tried to help each other.	
Learners response to task: • generally good.	
Summary of strengths: • mini-plenaries → not planned • Plan followed.	
Summary of weaknesses: • spent too long not actually recording. • children started over too many times.	
Additional notes: • Background noise major problem for recording.	

• introduction effective = all children clear about what to do.

• not telling children to put pads away for mini plenary @ 35 mins.

Appendix 11

This is a copy of the notes taken from the key question observation in lesson one.

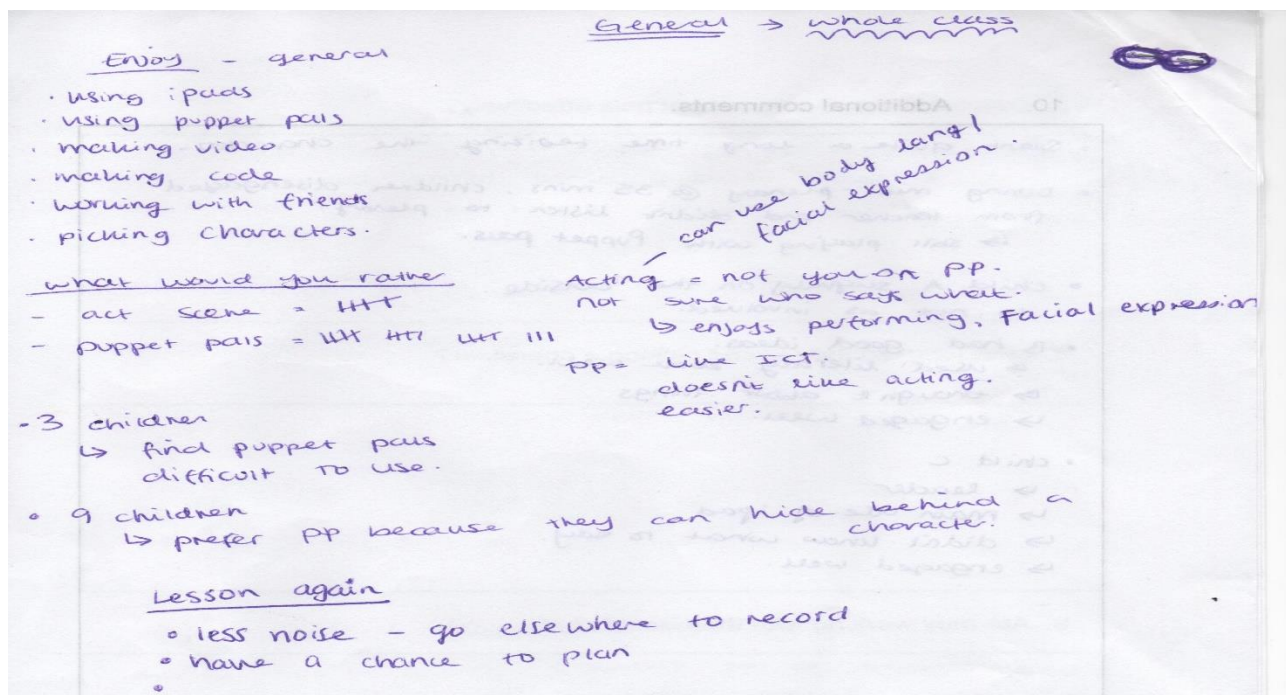
Key Questions	
1. What type of role are they taking in the group? (leader)	child C - leader child B - support child A - seems not very involved unless it's her turn with the ipad.
2. Is there group working well together?	n/a working well. ↳ main input from B + C. child A on outside. - joins in on discussion with teacher.
3. Are they participating in discussion?	A - not participating much. B + C - doing most of the talking. A - sporadically involving themselves.
4. What part of the script did they choose?	n/a.
5. Are they performing the script well?	n/a.
6. Are they using the ICT appropriately?	yes - chose a character. - chose background. - discussed what they wanted to do before starting.

10. Additional comments.	Spent quite a long time realizing the characters - During mini-lesson @ 35 mins, children disengaged from teacher and didn't listen to poetry. → still playing with Puppet pals. child A slightly on the outside. → not as involved. B had good ideas. → used literacy book well. → thought about things → engaged well. child C → leader → main use of iPad → didn't know what to say. → engaged well.
--------------------------	---

7. Can the children use puppet pals effectively?	had good use of tech. B had good ideas → wanted to try them out. A good grasp of how to use it.
8. How long did they spend picking a character?	n/a.
9. Are they working with their friends?	B+C seemed to be friends. A seemed slightly outside of it.

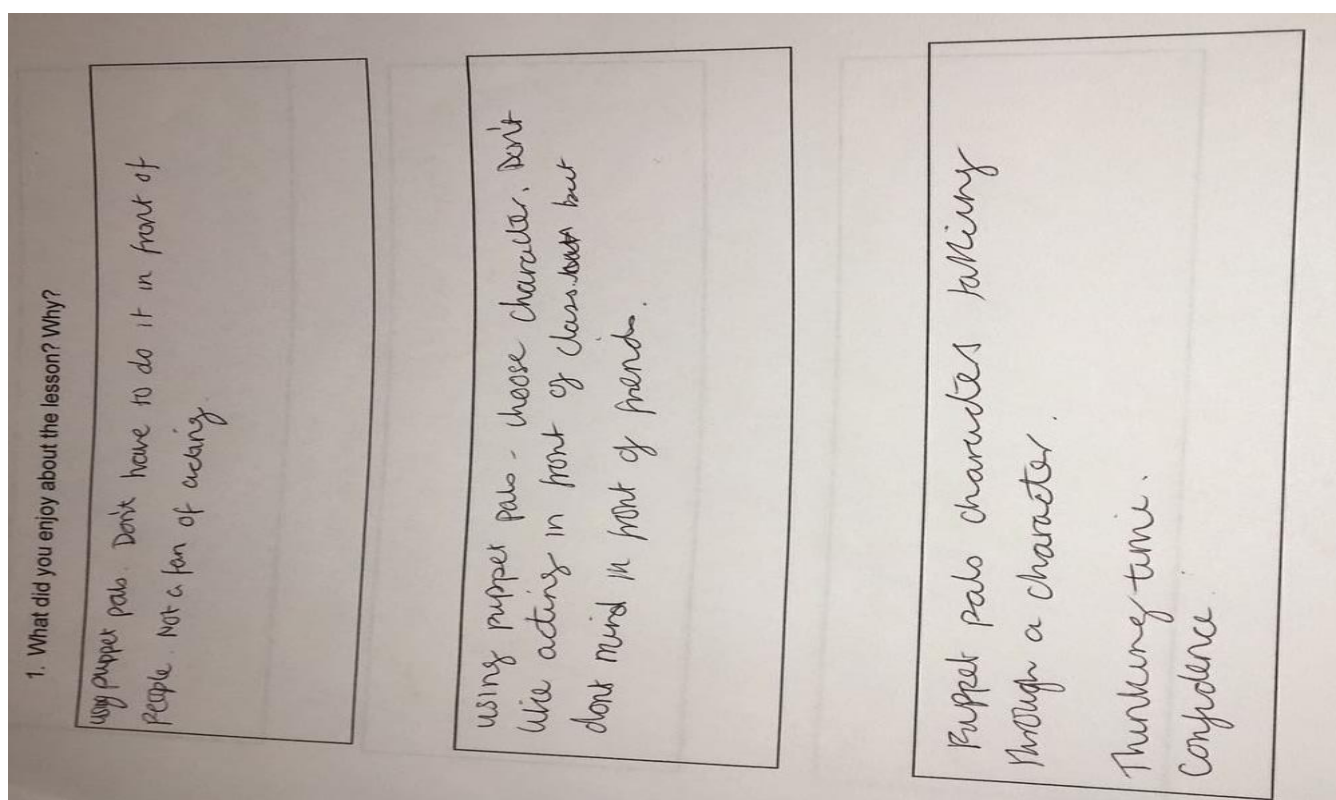
Appendix 12

These are notes taken from the general feedback given by the children in lesson one.



Appendix 13

These are the notes taken during the interview with the case children (A, B, and C) after lesson one had been completed.



3. Do you think you were engaged during the activities?

difficult to concentrate with others in class.

Had to start over if something went wrong.

very engaged.
feel nice to work with people from different groups.

2. What didn't you enjoy about the lesson? Why?

distraction from others.
Need more time to think about what to say

Need quiet to record.
difficult to work with friends.

very engaged.
feel nice to work with people from different groups.

Additional information

Really fun.
Learning through play - enjoying.
Fun learning.
Feel more engaged - be more shy

Worried + uncomfortable in acting
out - less engaged.
Fun way to learn.
Don't like writing.

knows the importance of writing -
wouldn't just use ICT.

4. Did you prefer using puppet pals or acting with your group?

Puppet pals - don't have to show
yourself.

Puppet pals - Do something
wrong can start again. Less pressure.

puppet pals - More relaxing can
pause it.

Be good to have record button.

Appendix 14

This is the ARC form I completed from the observer perspective after lesson one was complete.

Model Beirniad Wedi Adfyfyrio (BWA) Assisted Reflective Conclusions (ARC) Model

Dyddiad/Date: 27/03/18

Digwyddiad critigol (Ffocws)/Critical incident (focus): Lesson Study 1 - Observer

Profiad/ Experience	
Teimladau/ Feelings	Feel it went well. children (overall) engaged well.
Cofio a Deall/ Remember and Understand	• Introduction was good. • Good use of mini-plenaries. • children didn't like showing their video (only group). • children restarted video several times ↳ background noise, mistake, teacher talking
Gwerthuso a dadansoddi/ Evaluate and analyse	• noise levels too high to record properly • children spent a long time deciding upon characters • children didn't know where to start so spent too much time playing on PP. • Teacher interrupted video recording once.
Casgliadau a chymau gweithredu/ Conclusions and actions	• offer a quieter space to record ↳ hall, lab, studio, corridor • make them decide before giving them iPads • make children plan what to say & who will say it → on paper before given iPad • Establish signal (silent one) to get attention • Don't show case groups video
Y profiad newydd / Transformed experience	

Adaptations for
Lesson Study 2

Appendix 15

This is a copy of the completed Leuven Scale time sample taken in the second study lesson.

The Leuven Scale of Involvement

Class: Cloddau

Level	Child D												Child E												Child F												NT																								
	Involvement						C						M						F																																										
1	Extremely low																																																												
2	Low																																																												
3	Moderate																																																												
4	High																																																												
5	Extremely high																																																												

Additional Notes

Child D

Not interacting or communicating with the group.
Not engaged at all.

Child E

Communicating.
Talking lead.
Talking part.

Child F

Enthusiastic.
Working with team.

* Most engaged when recording on puppet pairs.
* Quite engaged when writing script and practising.

Appendix 16

This is a copy of the completed observation schedule from lesson two.

Observation schedule	
Name: <u>Carys</u>	Class: <u>cheddar</u>
Date of observation: <u>27/3</u> Lesson/Subject: <u>Lesson study - Persuasive video</u> Number of children present: <u>26</u>	
Teacher input start time: <u>11:05am</u> Teacher input finish time: <u>11:15am</u>	Plenary start time: <u>~~12:00pm~~ 11:55am</u> Plenary finish time: <u>12:10pm</u>
Puppet Pals start time: <u>11:40am</u> Puppet Pals finish time: <u>11:55am</u>	Performance start time: <u>~~12:00pm~~</u> Performance finish time: <u>~~12:10pm~~</u>
Teacher input: - Talk about consent - Explain lesson + research - Outlined task.	
Support given: <u>child D gives most support by teacher & others in group.</u>	
Learners interactions with the TA/Teacher/adults: <u>teacher checked regularly to ensure they were on task.</u>	
Learners interactions with other pupils: <u>Only within group.</u>	
Learners response to task: <u>Good. mainly engaged.</u>	
Summary of strengths: • mini plenaries. • refocusing attention.	
Summary of weaknesses: • Behaviour of 1 child • disruptive group at back.	
Additional notes: <u>Ma.</u>	

Appendix 17

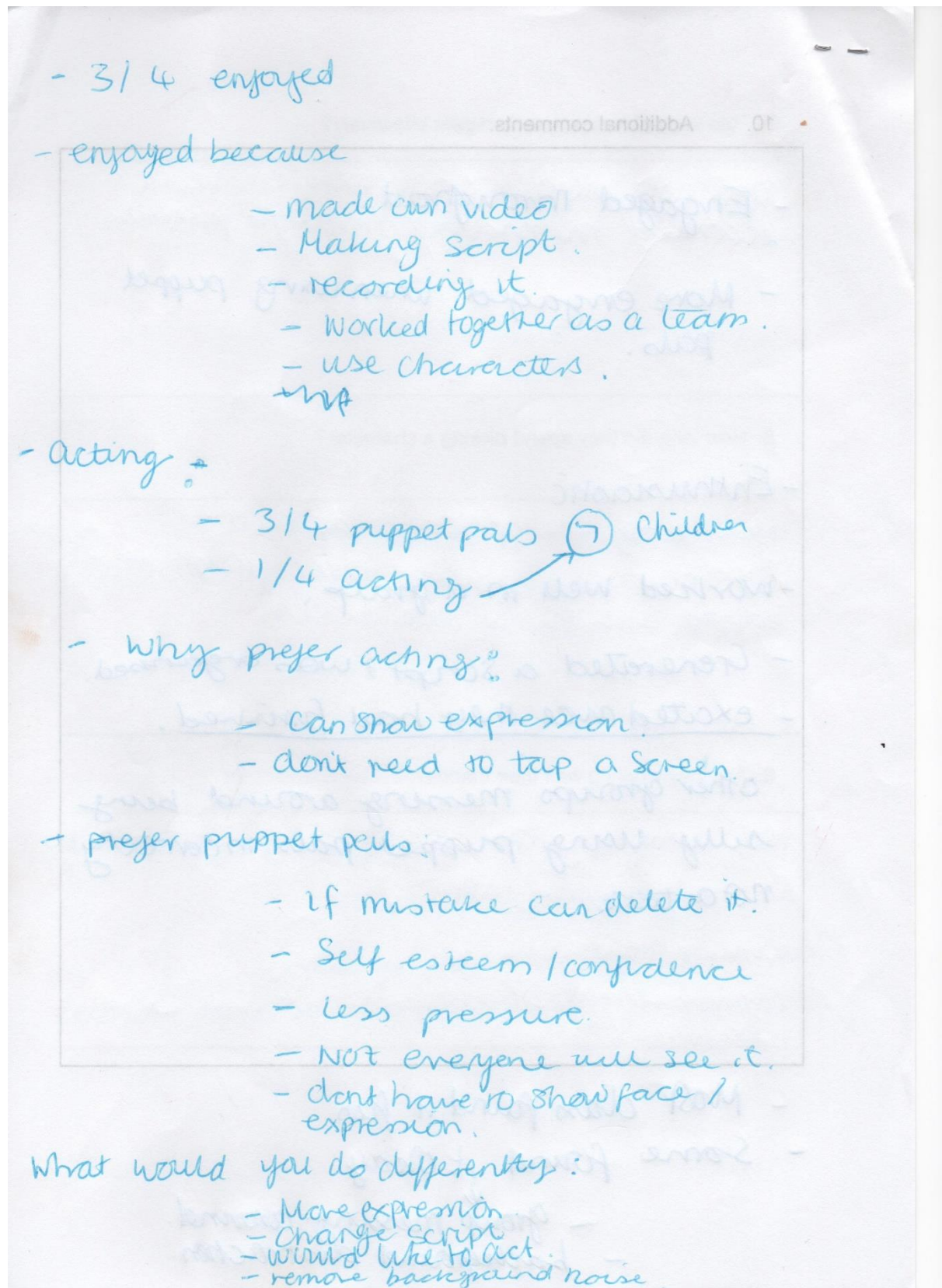
This is a copy of the notes taken from the key questions observations from the second study lesson.

Key Questions	
1. What type of role are they taking in the group? (leader)	Child E was leading the group. she gave many ideas. Child F contributed to discussion and was engaged. Child D was not engaged or contributing.
2. Is there group working well together?	Group was communicating well. They shared ideas. child G not communicating.
3. Are they participating in discussion?	Child E and F are participating in discussion, writing down ideas. Choose to discuss 2 sides of argument. Practicing what they are saying.
4. What part of the script did they choose?	Child F went first then child E then child D. Each had a point and a reason.
5. Are they performing the script well?	Child F - Clear, great expression. Child D - Read from script. Child E - Clear, few expression.
6. Are they using the ICT appropriately?	Was able to use Ipad, open puppet Pals app. Placed themselves in position they were talking in.

10. Additional comments. - Engaged throughout. - More engaged when using puppet pals. - Enthusiastic - Worked well in a group. - Generated a script & was organised. - <u>excited once they had finished.</u> Other groups messing around being silly. Using puppet pals incorrectly not on task.	7. Can the children use puppet pals effectively? Did not mess around. was on task. recorded themselves through puppets.
- Most class found it fun - Some found it okay - group messing around. - background distraction.	8. How long did they spend picking a character? Not long. One person choose the characters and ensured their group were happy with their characters.
	9. Are they working with their friends? No, working with people they don't usually work with or play with. Working together extremely well. organised and structured - who says what & when.

Appendix 18

This is a copy of the notes taken when receiving general feedback from the children during the plenary of the second study lesson.



Appendix 19

These are copies of the notes taken during the interview with the case children (D, E, and F) after lesson two.

1. What did you enjoy about the lesson? Why?	2. What didn't you enjoy about the lesson? Why?
- using iPad - working with friends	distracting moving around the noise level.
- Work together as group - fun writing Script. - recording.	Child ~~D~~^E acting preferred.
- choosing characters	Get more exciting + fun songs more engaged.

4. Did you prefer using puppet pals or acting with your group?

acting

More expression + effort = too much effort to act

puppet pals

= overall - Puppet pals - less scary.

acting

More action / drama can make
like performing -
- would like to try both then decide.

~~acting~~

Puppet pals

- More fun / exciting
- things acting would cause more arguments.

3. Do you think you were engaged during the activities?

yes

all working together
helping each other

everyone had something to do.

distraction made them less engaged.

Got more exciting + fun so got
more engaged.

Additional information

very good

Feels like playing.

Doesn't feel like work.

NOT specific to iPad puppet parts.

↳ feel like this when using iPads / computers.

Appendix 20

This is a copy of the ARC form I completed from the perspective of the teacher after I had taught the second study lesson.

Model Beirniad Wedi Adfyfyrio (BWA) Assisted Reflective Conclusions (ARC) Model

Dyddiad/Date: 27/03/18

Digwyddiad critigol (Ffocws)/Critical incident (focus): Lesson Study 2. - Teacher

Profiad/ Experience	
Teimladau/ Feelings	- Generally felt as though it went well. - Some behaviour disruptions - some general disruptions = annoying.
Cofio a Deall/ Remember and Understand	- class teacher was in & out. - class phone rang several times. - child with ALN having a bad day - 2 children messing around = spoilt it for 3rd person in their group → think about groupings
Gwerthuso a dadansoddi/ Evaluate and analyse	- plenary good → could ask more about skills - Intro → not engaging enough due to needing to explain research - 2 groups decided to write a script ↳ was really effective
Casgliadau a chamau gweithredu/ Conclusions and actions	- groupings needed deeper consideration. - Although mixed ability groups was nice, it did mean the LA ~~group~~ children could rely (heavily) on HA children. - Get children to design own script first (before recording) next time.
Y profiad newydd / Transformed experience	

Appendix 21

Copies of the signed consent forms from parents with the children's names blacked out.

 **Prifysgol Cymru**
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Institute of Education
Addysg i Gymru Education for Wales

Dear Parent/Guardian,

As Parent/Guardian of..... (pupil name)
consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....

Consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....

As Parent/Guardian of..... (pupil name)
consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....

As Parent/Guardian of..... (pupil name), I do / ~~do not~~ give
consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date..... 7/3/18

As Parent/Guardian of..... (pupil name), I do / do not give
consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date..... 27/2/18

As Parent/Guardian of..... (pupil name), I do / ~~do not~~ give
consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date..... 6/3/18

As Parent/Guardian of..... (pupil name), I do / do not give consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....

As Parent/Guardian of..... (pupil name), I do / ~~do not~~ give consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....

As Parent/Guardian of..... (pupil name), I do / ~~do not~~ give consent (please delete) for my child to take part in this project.

Signed..... (Parent/Guardian).

Date.....