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Professional and Pedagogic Studies:
Researching the Learning: what, how
and why am I teaching?

Research Question: What Effect do
differentiated tasks have on the pupil's
engagement?

Introduction

The aim and purpose of this research activity was to see if differentiated tasks have an effect on pupil's engagement. The issue that interested me was how different pupils work at different levels, in my placement school there are different classes with pupils who have different abilities when it comes to completing work. In my class some students may complete work much quicker than others therefore work needs to be differentiated. The objective of this research was to use Blooms Taxonomy to compose differentiated tasks to the pupils to see the effect on the pupils' engagement.

Research context

The research activity took place in a college and secondary school in South Wales. In my A Level class there are around 18 students between the ages of 16-17. A discussion with my partner lead to us choosing an appropriate question that would be suitable when observing pupils from key stage 4 and key stage 5. Our research question is "what effect do differentiated tasks have on the pupil's engagement?" for my class this means an observation will take place whilst the pupils are completing three different tasks that include numeracy and literacy and that have been differentiated. The research will be conducted by an observation sheet being completed during the lesson. This will show how engaged the selected pupils were during the lesson and how the differentiated tasks made a difference on their engagement.

Literature review

A literature review is a select analysis of existing research which is relevant to my research question 'What Effect do differentiated tasks have on the pupil's engagement?'. I will be focusing on research that links with my topic therefore research conducted on engagement and differentiation. According to (Dickinson, 1993) differentiation is a planned process of intervention in the classroom to maximise potential based on individual needs. There are a few different models of differentiation there is task differentiation, model differentiation and differentiation by outcome.

Task differentiation is when students work in a variety of ways and bring different abilities and aptitudes to that work. One form of differentiation is to provide a variety of tasks that cover the main content area in order to cater for the variety of individuals in the class (Dickinson, 1993). The reason task differentiation was used in the observed lesson is because it provides an appropriate variety of tasks matching those tasks to student abilities, aptitudes and interests. It also supports with finding mechanisms to ensure that students stay on task during the lesson.

The model for differentiation is based on a collaboration between children with different styles and strengths and not on hierarchy of abilities (McNamara, 1997). This was used during observation lessons as it allows us as a teacher to see that a variety of abilities is seen as an asset not a problem. Having different structures for learning and assessment so that children can learn through talk as well as reading and writing during the tasks given. This teaches children to help each other to set and reach targets and to teach each other to improve their work through carefully structured peer tutoring. For example, during one task given to

pupils they worked in a pair or as a group to complete a budget, this allowed the students to work together and discuss their answers showed to be effective and kept the students engaged.

Differentiation by outcome is when an open-ended task is given to all children. Children attempt it at their own pace this allows for varieties in learning styles and abilities. Common example – work sheet given to the whole class and the teacher will expect some to complete it well, some to manage to complete and other to just complete part of the work. The result of this is that they will all complete different learning outcomes (McNamara, 1997). During the observation three tasks were given to all pupils to complete these were all different levels of question given to pupils of high attainment, medium attainment and lower attainment pupils to complete. This allows the teacher to see which pupils need attentional help or support and to see if any further teaching is needed on that particular topic. The disadvantage of giving the same tasks to all pupils is that it could cause tension between the pupils and this could also begin classroom management difficulties as pupils will be at different stages on the tasks and starting the following lesson leading on from this topic may be difficult as all pupils could be at different points which can make cause difficulties for assessment and recording.

(Griffith, 2012) believes that when challenge is low learning states from apathy to boredom can occur. When skill use is low learning can range from apathy to anxiety for the pupil. This can be caused by irrelevant worksheets given, too much direct teaching and traditional dictation. For the pupil to reach a state of flow the learning attitudes and skills need to be high and along with a high challenge of work given. To ensure that engagement levels stay high and that students understand the tasks scaffolding is used in the lessons. Scaffolding can also help to clarify one's ideas and improve one's understanding through talking with others who have a clear picture (McNamara, 1997).

Blooms taxonomy includes remembering, understanding, applying, analysing, evaluating and creating. (Griffith, 2012) believes that creating is the most challenging task remembering is the least. Remembering is recognising, retrieving and recalling relevant knowledge from long term memory. Understanding includes comparison, interpretation information and summarising. Applying is being able to carry out or using a produce through executing or implementing. Analysing involves comparing, contrasting, organising and attributing. Evaluating is being able to make a judgment based on criteria and standards through checking and critiquing. The final part of Blooms Taxonomy is creating, this is when the pupil will put elements together to form a coherent or functional whole (Griffith, 2012).

Lesson Study Design

A lesson study is when a lesson is observed by individuals, lesson studies blend all the features of professional learning that improve learning and teaching. This professional learning takes place over time and happens in a classroom with pupils. According to (Dudley, 2014) it involves an element of collaborative experiment between teachers who are problem solving or trying to improve an approach. A lesson study will help teachers to understand and see any gaps between what they had assumed what was happening when pupils learned and what is happening. This will help teachers find out how to plan learning that is better matched to pupils needs so they are able to adapt and change their teaching methods to better support learning.

There are many different steps to completing a lesson study to collect the data needed by conducting an observation, focus group interview questions and reflection. The first step is to

plan a lesson, the lesson will then be observed by my research partner. The lesson was observed by following an observation schedule which was adapted from the Leuven scale. Three participants were chosen from each class were chosen based on previous attainment. These pupils were high attaining, medium attaining and low attaining pupils. The selected three students were focused on and observed during the observation. Consent forms were dispatched to each student to get consent from their parent/guardian before the observation could take place. The observation sheet was adapted from the Leuven scale as this was designed to measure engagement of primary students (Lavers, 2008) me and my partner decided to use this scale and adapted this to our needs for our observation lessons. This scale give us quantitative data as it showed which tasks pupils were most engaged in out of the three tasks they completed. This allowed us to measure pupil's engagement and the interview allowed us to speak to the pupils and get their views on each tasks this would then help my research partner and I understand why they may have been more engaged in some tasks than others. When the lesson and observation came to an end an interview focus group was then conducted with the chosen three pupils. The interview focus group was a selected sample on previous attainment, focus group are generally used to gather people's opinions, ideas, and beliefs on a certain topic or product. While surveys or questionnaires can be useful, they cannot capture what a person is thinking or feeling (Copley Focus , 2012).

When coruscating the interview questions, it was extremely important that non-bias and non-leading questions were asked to the pupils and answers were recorded using audio recording device, notes were also taken during the interview as this gave a collection of qualitative data which will later be analysed. Qualitative data is a research that seeks to gather opinions and views, it gives insight and more of a realistic feel of the pupil's answer that is difficult to interpret from numerical/statistical data. Qualitative data also gives the researcher the opportunity to interact with respondents which is why this method of data collection was chosen. The answers from the pupils were noted on the observation sheet and the audio recording data will be destroyed after the information has been used and is no longer needed.

The lesson was reflected using the reflection model which was adapted from the Kolbe learning cycle we ten crated a reflection sheet from this. We adapted this and created a reflection template which included a table of four sections. In section one was asking about experience therefore what happened during the lesson. The second section was the reflective observation, this is where we would reflect/review on the experience. The third section was the reflective conceptualization therefore what did we learn from the experience. The final section was the active experimentation this is where we had to put into practice what we have learned.

Ethical Considerations

Before conducting this research, it was important to have ethical considerations. We planned to follow all GDPR regulations when collecting data. We decided we would have all data in password protected documents and that all audio data that was collected would be will be destroyed when no longer needed. Consent forms were distributed to the students for their parents to give consent for them to be observed and interviewed during a lesson. BERA guidelines were chosen to be followed as they are a membership association and learned society committed to advancing research quality, building research capacity and fostering research engagement. BERA aims to inform the development of policy and practice by promoting the best quality evidence produced by educational research (BERA, 2020). When conducting the interviews the college and schools safeguarding policy was followed to

prevent any safeguarding issues. When questioning to mitigate risk my research partner and I had to ensure that the questions asked to pupils in the interviews were open, not leading questions and non-bias.

Lesson study 1 results and analysis

The three chosen pupils in a secondary school in South Wales were given three tasks to complete in a ICT lesson. The pupils achieved the lessons goals of student learning, thinking and engagement. They pupils had to complete three tasks by the end of the lesson and three pupils were observed by myself while my research partner taught the lesson. The first task was a fill out the blanks exercise. For the second task the pupils needed to analyse the final product and work out how to complete this using a scaffolding help sheet. In task three the students needed to add a picture linking to the work from task two. The observation sheet (appendix 1) showed that pupil A the higher attaining pupil was highly engaged during all three tasks where pupil B the medium attaining and pupil C the lower attaining pupil ranged from fully engaged to good engagement. This was a new topic introduced to the class therefore endearment was good as this lesson was something new and interesting.

The blooms taxonomy was used during this lesson the section of Blooms Taxonomy that as used were understanding, analysing and creating. Understanding was used as the pupils had to interpret information given during the lesson by filling in the blanks on an exercise sheet they needed to understand what the question was asking to give the correct answer. Analysing was used as the students needed to complete an analysis to be able to choose the correct HTMLS out of a list and to place in the correct order to then be able to convert into a word document. Creating was used as pupils needed to create an image for task three drawing back on what they learnt in task two. As these tasks were all different and a new topic was taught engagement levels were high.

For future teaching the lesson could be improved through revising the lesson for the next class. There was a scaffolding sheet given out for task two to help the pupils with the work and then the help sheet was collected back in before the students moved on to complete task three. Leaving the help sheets out for task three could have improved the lesson and kept a higher level of engagement. Also as the observer I was positioned at the right side of the class where all students were facing away from me, this made it difficult to observe the three chosen students as they were sitting in different places in the classroom therefore observing their engagement was difficult on times. For the next lesson, I would change the position and sit in at the front of the class in the centre so I am able to see all the students and have a better view to be able to observe so my results are accurate. My partner and I agreed that when we completed the next lesson study observation that we would have more time with the selected three pupils so they are able to answer the interview questions without feeling rushed to go to their next lesson.

From this experience, I learned that all pupils work at different levels and that scaffolding in lessons helps pupil's complete the task given this also boosts their confidence slightly as they feel that they have support so they can compete the work as there is help available. Having this in place will prevent students giving up and not even attempting to do the work. I believe that having different range of tasks and differentiating the work in lessons is easing students into the work and allowing the challenge themselves at their own pace.

Lesson Study 2 results and analysis

The pupils in the college in South Wales had to complete three tasks during a business studies A level finance lesson. The pupils achieved the lessons goals of student learning, thinking and engagement. This was achieved in all three tasks. In task one literacy and numeracy was used, the students had to read and understand the case study provided on a Welsh company. After they had read the case study made notes and highlighted key points they went forward to construct a budget using and applying their knowledge of the business to be able to construct a realistic budget for the next month in pairs or groups. After the budget was completed I give them the actual amount the company made in that month, with that information they then had to figure out the variance of the budget if this was favourable or adverse. Following that question and after a class discussion the pupils had to answer a past paper exam question explaining the importance of creating a budget. All students completed this task on time and were highly engaged and working together during this task.

The students then went on to complete task 2 which was a literacy task to complete an exam past paper question on internal and external sources of finance linking back to prior knowledge of last few lessons and focusing on the benefits and drawbacks of each source of finance chosen for the Welsh company. All pupils completed this question some pupils needed some reassurance regarding a drawback for an internal source of finance they had chosen, we discussed this as a class to ensure understanding.

The final numeracy task was completed to construct a cash flow forecast for the company. For this task pupils had to use prior knowledge to remember the formulas of each section of the cash flow forecast to be able to complete the months March to August. All students should have calculated the same number for the closing balance in March. Pupils were engaged during this task using calculator to help them complete the cash flow forecast. We went over the answers in class through using the basketball effect for questioning and asking everyone for the number they calculated and how they calculated the answer. This questioning technique was to ensure that assessment for learning (AFL) was used in the lesson. (Donaldson, 2015) states that good teaching and learning must include assessment for learning principle this is a key pedagogical principle that is linked to the four purposes. This also give the students a chance to self-mark and make any changes they needed to calculate the correct answer. (Black, 2003) believes that peer and self-assessment should be used in lessons so that students understand the learning goal for it to be achieved.

For the business finance lesson the key things that were used from blooms taxonomy were remembering, evaluating, understanding, analysing and creating. The students had to remember knowledge from previous lessons to be able to answer the tasks. They had to read the case study to have a good understanding of the company to be able to answer the questions. Analysing and evaluating followed into the exam questions given in the tasks where the pupils needed to reach all four AO's to conclude with the creation of completing a cash flow forecast. The pupils were engaged at different levels in this lesson and completed all three tasks by the end of the lesson. From looking at the observation sheet (Appendix 1) Pupil A higher attained pupil showed to be the most engaged leaving pupil B the medium attained and pupil C the lower attained pupil to be at different levels of engagement depending on which task they were completing.

The lesson could be improved for the next class by changing the mathematics in the third task, I would include negative numbers in the cash flow forecast to make this more

challenging for the pupils to calculate. I would also change the position of where the observer was sitting, the observer was located at the back of the classroom therefore the observation may have been difficult to complete at times as no students were facing the observer directly.

From this experience, I learnt that some students have a preference of numeracy questions or literacy questions and prefer to answer only the ones they are most comfortable with. Having a range of both in these three tasks has given the students the opportunity to practise and get comfortable answering both literacy and numeracy questions ready for their A level examinations. By students having a preference of questions they feel more comfortable in answering has an influence on their engagement in lesson. The modifications I would make to our research tools are to include more questions in the interview and for the observation to take place more than once to achieve more accurate findings.

Discussion of research findings

From completing this observation my research findings have shown me that every child is different and that all pupils in each class work in different ways and at different levels. Using scaffolding methods such as going through things step by step and giving out help sheets boosts pupil's confidence and keeps them engaged on task. Differentiation in lessons and having a range of different tasks also keeps pupils on task as there are different things to complete at different levels it keeps the pupils interested, if every question was aimed at a high attaining pupils then not all pupils in the class would be able and willing to attempt the questions. Having differentiated tasks helps me as a teacher with AFL to see which pupils need more support and if my teaching methods need to change to explain things in a different way to help the pupils understand. Creating tasks that are differentiated and marking the work along with questioning in class will help with these conclusions.

For my class and future lessons, I will continue to include a different range of tasks that are designed at different levels so each pupil is challenged and able to complete the work. The research also revealed that pupils have a preference of questions they would like to answer. Therefore, identifying the questions that pupils struggle with for example writing essay questions will give me the opportunity to target this issue in lesson and arrange exam essay writing workshops showing the pupils a step by step guide on how to answer an exam essay question correctly ensuring that AO1, AO2, AO3 and AO4 is understood and met to get the highest possible marks. Or for example, if pupils didn't understand the numeracy side of finance and were unable to complete the tasks I will then know and be able to create different exercises that are easier to understand, create scaffolding sheets to give out to the pupils and explain the topic in a different way.

The limitation of completing the observation is that both classes observed were trying to identify findings of the same question however the classes were different subjects and different key stages therefore difficult on time to create tasks, questions and reflections that would meet both subjects and key stages to complete findings on this research. Another limitation is that as the observer is in the class who students have never seen before the pupil's behaviour may change and they will not act as they usually would as they know they are being observed which is giving inaccurate findings or the research. As this each lesson was only observed once it does not give enough information to answer the question. The research should be completed more than once with the same class to collect accurate findings.

Conclusion

Our chosen method of a lesson study followed by a data collection of an observation and interviews was the most appropriate method to use when looking at what effect do differentiated tasks have on the pupil's engagement. The lesson study method was chosen as it allows teachers work together to target an identified area for development in their students' learning. Using existing evidence, participants collaboratively research, plan, teach and observe a series of lessons, using ongoing discussion, reflection and expert input to track and refine their interventions. (Teacher Development Trust , 2015)

A lesson study has many advantages, a lesson study is very detailed and precise and allows the researcher to focus on the research question as they know what to look out for whilst observing. My research partner and I chose a non-participant observation as it allows us to be in the classroom setting seeing how the pupils work and their levels of engagement when completing differentiated tasks. Being observers in the classroom allows us to focus on what is happening in the class without being distracted and missing any key information.

The disadvantage of using a non-participant observation is that the pupils may act differently in the lesson as a new person is in the class and they are aware that they are being observed therefore their behaviour may change which will give inaccurate results. The sample size of 3 pupils is not enough to represent a class of around 20 pupils therefore increasing the sample size and number of observers may produce more accurate data. The data is down to the interpretation of the observer on if that individual was engaged during the lesson for example my view of engagement and my partners view of engagement may be different in both lessons observed. As for data collection of interviews the pupils may have given the answer they thought me and my partner wanted to hear rather than the true answer this would also cause issues with collecting accurate data.

From the information gathered through completing the research I will ensure to use in my next placement. I will make sure to use scaffolding in my lessons as the results from this research show that this does help the students when it comes to completing tasks. Having that little bit of support through scaffolding gives the pupils more confidence in them being able to compete the task as they have support and help to do so. Also for my next placement, when differentiating task's in class I will ensure that there are variety of tasks available for the pupils. For example, numeracy, literacy, paired work, researching and creating. Through conducting this research, it has come to my attention that many students have a preference of types of tasks they like to do and questions they like to answer, these students have a comfort zone. Differentiating is trying to bring these pupils out of that comfort zone and trying to get them to challenge themselves in completing tasks they didn't think they could do. Having a different range of tasks for example in my lesson (appendix 2) numeracy and literacy was used for a Welsh company called the Dognasium. Using an interesting company that caught the pupils' attention did help keep engagement levels at a high as it was something they were interested in and wanted to discuss with their partners. Having the different range of tasks in the lesson also helped with the engagement levels as the students were not asked to do the same thing over and over for example answer three essay questions, there was a mixture of things for them to do based on previous knowledge. This research has helped have an insight into the lesson from the outside and has shown how quickly engagement can change during the lesson depending on the differentiated tasks given.

Recommendations

My recommendations for future observations is to work with a partner who is teaching at the same level and the same subject. My research partner was teaching KS4 ICT and I was teaching KS5 Business Studies. As these subjects are completely different and at different levels it was difficult to come up with a research question that worked for us both. I don't believe that one observation is enough to collect accurate results therefore my recommendations for future observations is for this to be done a few times and then analyse the results.

If I did the lesson study again I would have a larger sample size group and change the way we collected data. I would give out a questionnaire containing open and closed questions to the pupils before conducting an interview with them. I feel that if students answer a questionnaire that they know is anonymous the pupils may give more of a truthful answer rather than saying in an interview what they think we want to hear. Undertaking a questionnaire and interview will give both qualitative and quantitative data to analyse along with more accurate research.

Bibliography

BERA, 2020. *About*. [Online]

Available at: <https://www.bera.ac.uk/about>

[Accessed 19 February 2020].

Black, P., 2003. *Assessment for Learning*. Berkshire : two penn plaza .

Copley Focus , 2012. *Why are focus groups used?*. [Online]

Available at: https://copleyfocus.com/focus_info/why-are-focus-groups-used/

[Accessed February 2020].

Dickinson, C., 1993. *Differentiation: a practical handbook of classroom strategies*. first ed. Coventry: NCET.

Donaldson, G., 2015. *Successful Futures*. [Online]

Available at: <https://gov.wales/sites/default/files/publications/2018-03/successful-futures-a-summary-of-professor-graham-donaldsons-report.pdf>

[Accessed 1 January 2020].

Dudley, P., 2014. *Lesson Study*. [Online]

Available at: <http://lessonstudy.co.uk/wp-content/uploads/2012/03/new-handbook-revisedMay14.pdf>

[Accessed 17 December 2019].

Griffith, A., 2012. *Engaging Learners*. first ed. Bethel: Crown House .

Lavers, F., 2008. *Leuven University*. [Online]

Available at: https://www.teachertoolkit.co.uk/wp-content/uploads/2016/03/LeuvenScale_tcm4-735285.pdf

[Accessed 17 December 2019].

McNamara, S., 1997. *Understanding Differentiation*. London : David Fultons.

Teacher Development Trust , 2015. *What Is Lesson Study?*. [Online]

Available at: <https://tdtrust.org/what-is-lesson-study>

[Accessed 23 February 2020].

