

What impact does differentiation by task have on pupil engagement?

Word Count: 5162

Targets from previous assignment:

	Target	What I have done in this assignment
Target 1	Think about how you can draw together key themes & ideas when reflecting on your own teaching generating some specific targets (you did this but could have extended this)	I have some specific ideas to incorporate into my future practice based on the learning derived from this assignment and these are linked to the key theme.
Target 2	Be slightly more selective in providing key evidence and avoid repetition of points already made.	I tried to avoid repeating the same point and only referred back in conclusion as a summary.

What impact does differentiation by task have on pupil engagement?

“...a way of thinking about teaching and learning that advocates beginning where individuals are rather than with a prescribed plan of action” (Tomlinson, 1999, p. 108).

This is one of the ways that differentiation proponent Carol Tomlinson characterises the concept. These words have particular resonance for me as a student-teacher as I have been developing and refining my own pedagogical repertoire rather than working with one pre-determined method of teaching. In addition, I have started each of my teaching placements by trying to understand where each child in my class is on their learning journey in order to ensure that the teaching is appropriate and accessible. With these foci in mind I have become increasingly interested in differentiation and its influence in the classroom. I noticed when I first visited the classroom where I would undertake my initial Key Stage 2 placement that the children did not sit in groups where they worked with children of similar prior attainment, which I knew to be the case in some other schools from discussions with colleagues. I discussed this with the class teacher who informed me that this was a new arrangement and the children had previously been seated next to peers who were at a similar point in their learning. I began to consider how this worked in practice if a child was working on a different task to their neighbour.

The formulation of a research question occurred through discussion with a fellow student-teacher who had recently moved into Key Stage 2 at the same time as I had. We had both moved considerably along the learning continuum, in her case from Reception to Year 4/5 and in mine from Year 1 to Year 6 and had seen the impact of differentiating learning for children in the early part of their primary education. We discovered we had a shared interest in examining the effects of and need for differentiation at the later end of the primary phase. We both felt that there could be a greater challenge in engaging older children in learning and considered whether differentiation had a role to play in this. Consideration was also given to which type of differentiation might provide us with a clearer picture relating to engagement and we decided to look at differentiation by task rather than by outcome or support. The main reason for this choice was looking at outcome would be more of a post-learning appraisal and evaluating the effect of support would be more of an assessment of

the impact of adult input. We wanted to look at learning throughout the course of a lesson. Our research question was therefore “What impact does differentiation by task have on pupil engagement?” The aim was to investigate if there is a difference between levels of engagement during initial teaching, a differentiated task and a plenary. We would measure this through observation against the “Leuven Involvement Scale for Young Children” (Laevers, 1994, p.164) during all parts of the lesson and then compare.

Ethical considerations have been paramount at all times in the design, undertaking and evaluation of this study and as such the schools and pupils involved will be anonymised to respect their confidentiality and right to privacy in accordance with BERA guidelines. (BERA, 2018) Both schools are located in South Wales and School 1 (my research partner’s school) is situated in a village on the outskirts of an industrial town whereas School 2 (my school) is in a suburb of a small city. The class at School 1 was a mixed Year 4/5 class of 27 children aged 9 and 10 and the class at School 2 was a Year 6 class with 30 children aged 10 and 11.

Differentiation is a topic that has generated several libraries-worth of literature and debate which is perhaps not surprising when one considers the wide range of factors that may be accounted for when differentiating in the classroom. My own observations and practice so far have mainly been concerned with differentiating in the form of providing tasks and activities broadly intended to cater for pupils with prior attainment at lower, middle and higher levels. The aim being to enable all children to engage with the learning at an access point that is appropriate for them, or as Tomlinson terms it “to provide learning options that are a good fit for each learner.” (1999, p.12) I anticipated finding almost unanimous support for differentiation amongst the academic research given that it is a feature of every school day, and indeed is considered so vital a part of a teacher’s skillset that it forms part of the Professional Standards for Teaching and Leadership in Wales. (Welsh Government, 2018) It was therefore interesting to discover many conflicting opinions. Delisle’s contentious assertion that “differentiation doesn’t work” (Delisle, 2015, p.29) is more direct than Didau’s (2016, p.321) tentative presentation of Ashman’s research suggesting that there is no apparent positive correlation between differentiation and high performance in a TALIS survey, but both acknowledge the complexities of the concept. Delisle cites the unmanageable degree of variety within a classroom as a barrier to efficacy, yet Tomlinson in her interview with Wu (Wu, 2013) describes how this infinite variety was her motivation to establish a differentiated approach. She acknowledges the magnitude of the task but this does not diminish her passion for it. Tomlinson’s recognition of the inefficacy of a universal proposition would seem to echo Donaldson’s findings that “a one-size-fits-all approach to learning will not meet this wide range of needs,” (Donaldson, 2015, p.67) and would

therefore put differentiation at the heart of the curriculum review currently being undertaken in Wales.

Didau colourfully describes differentiation in terms of “different ladders” (Didau, 2016, p.325) that children may need to all reach for the same high level of expectation but cautions that students who are treated differently may behave accordingly. This bears some resemblance to the findings of Weinstein et al across several studies as referred to by Rubie-Davies (2010, p.124) where the pupils taught by “high-differentiating” teachers appeared to operate within the boundaries they felt their teachers expected of them whereas their peers taught by “low-differentiating” teachers appeared to not be so confined. The findings of Weinstein et al were of particular interest as one of the common characteristics of the former type of classroom was children being seated in ability groups but this was not so in the latter type of classroom. Relating this to our own locations, the children in School 1 are seated in ability groups whereas the children in School 2 are not. While this was not the focus of our research we felt that this may become a factor for consideration when evaluating our findings. This research has also underlined for me the importance of teacher expectations and this is something that I will keep at the forefront of my mind in my own practice. The literature I have reviewed for this research study has highlighted that differentiation may also need to consider external factors such as cultural and socio-economic background in order to be truly catering to individual needs (Taylor, 2017, pp 60 – 64). This would be individualised learning in its truest sense and whilst I can appreciate the advantages this may bring, the inclusion of such wide-reaching considerations is beyond the scope of this investigation.

It would seem to be a sensible conclusion that children who are engaged in their learning should learn more and hopefully retain more to be applied in the future as suggested by Park (2003, p.183), and higher levels of engagement are anticipated in classrooms where there is suitable challenge in the learning (Shernoff & Czikzenhmlayi, 2009, p.133). With this in mind and given the size of the differentiation debate, it was decided that our research would focus only on whether or not differentiation by task has an impact on pupil’s engagement.

Regardless of their opinions on the efficacy of differentiation most of the authors cited so far in this study agree on one salient point – that for differentiation to be successfully employed in the classroom much depends on the ability of the teacher to make this work. This strikes a chord with me as a student-teacher currently honing and refining my practice and this also informed the research methodology. The aim was to conduct a close-to-practice study in order to develop and improve our teaching and understanding, and an action research

model was therefore most appropriate for this purpose with Lesson Study being the model selected.

Peter Dudley asserts that lesson study can help teachers to “understand how to design, engineer and bring about learning much more closely matched to pupil needs,” (2019, p.3) which affirms its suitability for use with a research question examining differentiation. As an action research model lesson study has several distinctive features which combine to give insight into a lesson from many perspectives, and there is an emphasis on collaboration throughout as teachers usually work in pairs or groups of three. In his essential manual on the method Dudley (2019) broadly outlines the initial structure as the joint planning of a “research lesson” and the selection of a small group of “case pupils” (2019, both p.1) who are a representative sample of the whole class. The lesson is then taught for the first time by one teacher with the case study pupils being the focus of observation by the other teacher or teachers. The teacher delivering the lesson is also able to observe the case pupils during the lesson to gain their own insight into the learning. The case study pupils are then interviewed after the lesson to give their views on the learning from their perspective which are then reviewed by the teachers in conjunction with the data gathered in observation. Analysis of these two data collections, combined with teacher reflection, is then used to adjust the lesson and this can then be taught again by the other teacher. The same observation and interview processes are utilised and implications for practice can then be evaluated. The benefits are underlined in Olsen’s (2005) findings where teachers participating in lesson study reported changes to their practice “when they reflected on their own practices from a new perspective,” (Olsen, 2005, p.599).

In designing our own lesson study, my research partner and I were conscious of the fact that the data we would collect would be qualitative rather than quantitative as we were seeking to understand the quality of the pupils’ engagement or involvement rather than consider this in statistical terms. We aimed to capture this data through the creation of an observation schedule (appendices 1 & 9) which recorded observable behaviours and their relative degrees. The degrees were based on some of the definitions provided by Laevers (1994) in the “Leuven Involvement Scale” and then distributed across six areas: Interest, Attention, Concentration, Challenge, Activity and Enjoyment. The behaviour of each child in these areas was to be observed in the lesson introduction, during the differentiated task and then during the plenary to see if there was a significant change in engagement when differentiation was applied. The observation schedule was completed by the non-teaching research partner in a non-participant observer role. Cohen, Manion and Morrison (2018) suggest that the use of a more structured observation schedule may mean that certain elements of the setting may be overlooked if they are not included in the schedule,

something that perhaps explains why both myself and my research partner felt the need to make additional notes on the schedules during the observation. However, we felt that the schedule was an appropriate tool as we were hoping to observe specific behaviours and the structure of the schedule allowed us to do so. It also enabled us to ensure parity for the case-pupils as we were not comparing them with each other but simply noting the absence or presence of certain behaviours. The data captured by the observation schedules was then supplemented by the responses (appendices 3 & 11) to the semi-structured interview questions (appendix 4) posed to the case-pupils. A semi-structured interview was considered an appropriate format as it provided sufficient guidance and prompts to generate responses from the children but also gave the flexibility for the researchers to explore or expand on these responses where suitable. Cohen, Manion and Morrison (2018) devote several pages (pp. 528 – 531) to the considerations of interviewing children, including the importance of an environment of trust and the fact that group interviews can promote discussion between the participants rather than a question and answer situation between child and adult. We tried to account for as many of these factors as possible and achieved insightful and interactive interviews as a result. The case-pupils were selected to be a representative sample of attainment across the class, which was pertinent as we were examining the effects of differentiation and in both lessons the focus group was made up of three pupils. Consultation took place with the class teacher to ensure that the sample group represented a mix of attainment but also pupils who would be comfortable in expressing an opinion in an interview. It was decided between the research partners that although the teaching partner was aware of the prior attainment levels of each of the case-pupils in their class they would not share this information with the observing teacher until after the lesson to ensure this could not influence the observer.

In order to reflect on the data gathered and the lessons as a whole, a set of reflective questions was devised (appendix 5) using Brookfield's (2017, p. 61) "Four Lenses of Critical Reflection" as a base model. The questions were separated into 'Autobiographical' which was self-reflection by the teaching teacher (appendices 6 & 13), "Students' Eyes" (Brookfield, 2017, p.62) which was reflection on the interview responses and comparison with the observation notes (appendices 15 & 16), 'Colleague's Experience' which was the observing teacher's reflection (appendices 7 & 12) and 'Critical Literature' which reflected on the Lesson Study findings in relation to relevant research. Brookfield's model works very well in conjunction with Lesson Study as it naturally offers reflective consideration from all of the viewpoints involved in this type of action research.

As Ramrathan, Le Grange and Shawa (2017, p.433) state, it may not be possible to for-see every point of ethical contention that may arise when conducting research in the classroom,

however it was a priority that the study be conducted with the utmost respect for the participants, their rights and their data. The purpose, aims and methods of the research were explained clearly to both classes and written consent for every child as a potential participant was sought from their parents or guardians. The consent letter(appendix 17) also contained full disclosure of the intended research so that parents were giving informed consent. Not every consent form was returned, and the focus group sample participants were selected from those where consent had been obtained. In addition to parental consent, verbal assent was sought from each child to confirm that they were happy to participate and it was made clear in both the consent letter and to the children in person that participation was voluntary and that they could withdraw at any time without having to give any explanation. Cards were provided for this purpose with a green side indicating "happy to proceed" and red indicating "I wish to withdraw." The children were aware they could turn the card over at any time and their wishes would immediately be respected. This method would also not draw undue attention to them which could cause them to feel uncomfortable. Participants and parents were assured that the anonymity, privacy and confidentiality of each child would be protected and that they would not be named or identified in the study. All of their data would be anonymised and held securely, with electronic data being protected by encryption and password secured systems and the paper consent forms and observation records being held in a locked cabinet at the school until electronic submission of the study. The paper records would then be destroyed securely. As already alluded to, consideration was also given to the environment for post-lesson interviews and this was in familiar surroundings within the school where the children felt comfortable.

The children in lesson one were all able to fulfil the lesson objective of calculating the area of irregular shapes (appendix 8) but there were significant differences in the ways that this was achieved. Child 1 appeared to be the most capable of working independently and was generally suitably challenged in all parts of the lesson. He showed good attention and concentration throughout, and intriguingly only demonstrated confusion when the usual class teacher sat down near him and began to re-explain the concept to his peer. This distracted and appeared to confuse him, possibly because this was explained differently to the way the lesson had been taught by teacher 1, he then seemed to doubt his understanding briefly. Ultimately he regained his focus and completed the task well, in his interview comments (appendix 3) he was the only one of the three to confidently assert he had learned to calculate area. His visible engagement and independent work led me, as the unfamiliar observer, to assume that he was the higher attainer of the three case pupils whereas he was actually considered to be representative of middle attainment. Child 2 showed interest in the lesson introduction for the first minute or two and then appeared to feel overly challenged

and almost “step back” from the activity. She still showed concentration but couldn’t seem to transfer this to action on the task. She received considerable support from a teaching assistant during the main task and while she initially seemed confused there was a moment where her understanding became apparent and she worked diligently after this. Once that comprehension occurred the differentiated task seemed to be at a suitable level and she could complete the activity. She demonstrated enjoyment while working on the task and confirmed this as her favourite part of the lesson when interviewed. She appeared to struggle to make the link between the work demonstrated on the board and the main task and this was addressed by the teacher in the lesson evaluation when considering future lessons. Child 3 appeared disinterested throughout the introduction and did not seem to understand the learning. He was easily distracted by his neighbour and this continued into the main task. He received some further explanatory input from the teacher and then proceeded to quickly complete the work. It transpired from conference with the teacher that he was under a misconception about the nature of the task and had been trying to do something beyond the requirements of the activity. It was therefore interesting that he deemed himself to be still in need of practice when interviewed, particularly when considering the fact he is deemed to be the higher attainer. It is possible that his misconception contributed to this or it may be that the higher differentiated task was too challenging. He was very enthusiastic about the Kahoot online plenary and cited this as his favourite part of the lesson (appendix 3). He showed great self-awareness in expressing that he enjoyed working against the clock and competing against his peers.

On consideration of the information gathered from lesson one changes were made to the second lesson. I ensured that the example on the board was in exactly the same format as the introduction task sheet so that the children could make the connection between the learning and I made the plenary matching activity into a game where the children were competing against each other. These changes were in response to comments made by the children in the interview (appendix 3). I also gave the children the choice of entry point for both the introduction and main task so that they determined the level of challenge rather than it being selected for them with the aim of maximising suitability. The task also had several levels of increasing difficulty for the children to work through at their own pace. The reason for this was that whilst we felt differentiation had been effective in the first lesson, the process of lesson study had shown us that our perception of how a child may work is not necessarily 100% accurate and we wanted to give the children greater agency in handling differentiated tasks. We considered changing the observation schedule to accommodate more comments but felt that we were able to work sufficiently with the original format with annotations and this ensured consistency between the two observations.

Lesson 2 reinforced some of the findings of Lesson 1 but also posed some further questions. Once again all children achieved the lesson objective (appendix 14) and demonstrated this through completed work and comments when interviewed. All of the class, regardless of differentiation, were confused by one question in the introduction task where the required answer was a free-hand list rather than completion of the boxes present in every other question. In hindsight it would have been beneficial to have explored this question on the board as a group. Child 2a showed the greatest concentration levels and a high level of effort despite being of a lower attainment level than her peers. As anticipated she required additional teacher input at each stage of the lesson but then built on this to complete the task in hand. She reported the differentiated task to be her favourite part of the lesson and the observation notes supported this (appendices 11 and 9). Interestingly she completed the main task ahead of both of her more able fellow case-pupils. She showed signs of being overly challenged in each part of the lesson although she was able to complete with additional support, which suggests that in her case differentiation alone is not enough to ensure access to the learning, additional support makes a difference. However, differentiation of the tasks definitely increased her levels of engagement. Child 1a typically displays intermittent attention and concentration and this was the case during Lesson 2 where he was frequently distracted by a neighbour. He requested a more difficult task for both introduction and main activity than I would have anticipated, taking some pride in a greater challenge, but also then required peer and teacher support to confirm his understanding. In both instances, he then focused on the work and appeared to be suitably challenged. It was interesting that the observing teacher noted that once his distracting friend left the table he became motivated to concentrate and produced some impressive work (appendix 10). He stated during the interview that he had enjoyed the introduction as he found it easy which confirmed the observation at a later point in the introduction but not at the start, he also appeared pleased with his achievement in the lesson (appendix 11). With the benefit of knowledge of Child 1a outside of this observed lesson I know that there can sometimes be a tendency on his part to 'play to the audience' and that it is 'not cool to work,' but the fact that he chose to challenge himself and worked well when not distracted suggests that he may benefit from being seated with a group more focused on their work. Child 3a produced some of the most interesting results across this study. He had been identified as a higher attainer, but demonstrated the least attention and concentration of all 6 case pupils. I had anticipated he would complete the differentiated task with relative ease but I was surprised at his comments during interview (appendix 11) that he hadn't learned anything as he understood the topic already and that there was no point in working very fast as everybody else would take a long time. He produced less work than any of his peers and showed the greatest interest when he was engaged in working calculations out, particularly

in plenary when he observed he had a particularly challenging question. This led me to consider if my differentiation was sufficiently stretching for him. I felt that the format of this lesson built on lesson 1 by prompting me to offer a choice of differentiated tasks which both myself and my research partner felt worked well. The lesson could be improved by providing further challenge for more able pupils and in the opinion of the children, by the inclusion of a digital interactive element. All of these findings were shared with the class teacher for consideration for future learning and also provided us as researchers with material for reflection.

In broad terms, it would be possible to reflect that differentiation has a positive impact on pupil engagement as all six case-pupils were able to access the learning and all achieved the lesson objective regardless of prior attainment level. In most instances there was a visible increase in the signs of engagement when work was differentiated, and for the two lower attaining case-pupils this was particularly apparent with both of them citing this as their preferred part of the lesson, suggesting that they benefitted from tasks that “respect their entry points.” (Wu, 2013, p.128) This outcome was largely in line with our expectations for this study. The choice of differentiated task in lesson 2 also prompted many children to challenge themselves further than they might historically have done and this again supports the suggested benefits of differentiation. The more surprising finding related to the higher-attaining pupils, particularly Child 3a (lesson 2). His observed behaviours and interview comments suggest that in this lesson his needs as a more able student had not been met and that, as proposed by Tomlinson (1998) and Hertberg-Davis (2009) amongst others, higher attaining students may require careful and considered differentiated planning on an individual basis rather than a more complex version of the work being undertaken by their peers. As Hertberg-Davis states their “needs cannot be met by a single ‘gifted’ curriculum” (2009, p.251) This will inform my future planning.

The geography of the classroom may also be considered a factor in engagement levels. As this study sought to observe visible behaviours such as concentration as indicators of engagement it was interesting to observe how this could be impacted upon by peer interaction. Child 1a’s (lesson 2) change in behaviour on the absence of his neighbour underlines this, and Child 3 (lesson 1) was also considerably distracted by a friend despite being seated in more ‘ability grouping.’ Tomlinson makes the point in her interview with Wu (2013) that there is a distinction between differentiation and ability grouping with the first as an enabler and the latter as a means of classification and separation. The observations in this study would suggest that being seated with peers of similar ability does not necessarily promote greater concentration or interest, as Child 2a (lesson 2) made valiant efforts to focus despite considerable distraction from higher attaining neighbours, but it does suggest

that seating with peers who are more task-focused and less likely to interact may benefit those who are more prone to being distracted. There is however possibly an efficiency consideration to being able to provide focused adult support to those most likely to need it if the children are located in the same area of the classroom. These are factors to consider in future practice.

The methods employed in this lesson study generated some interesting results. The use of case-pupil observation provided "live data in-situ" (Cohen, Manion & Morrison, 2018 p.542) which captured details that may go unnoticed when teaching a whole class. The risks of misinterpretation or observer bias were minimised by the subsequent pupil interviews which provided clarification and explanation. The pre-determined observation schedule was quite specific, but we deemed this appropriate as we were seeking to observe specific behaviours. We also made further notes to support the marks on the schedules and for clarification. It could be argued that the definition of engagement in the research question is subjective as the measure was behaviour driven, however Laevers' (1994) broadly similar identification of these behaviours as indicators of engagement means they could therefore be considered as representative. The semi-structured interviews with the children were a rich source of information and it was truly enlightening to view the lessons from their perspective. There may have been the temptation for them to provide responses they felt we were looking for, but their candour suggests this was not the case. Their feedback felt honest and authentic and all of the children were considered by their class teachers to be likely to respond truthfully.

This research may have been limited by the fact that the lesson topic was different, although they were both mathematics lessons, in that the two groups of children were not responding to the same material. However, as the study sought to evaluate behaviour in relation to differentiation as a concept rather than in a single context it was decided that the method would still provide valuable data.

In conclusion, I would tentatively state that differentiation does have a positive impact on pupil engagement, whether this is in providing a secure entry point for the less confident learner or offering differing degrees of challenge for the more self-assured. The importance of suitable and varied challenge for the most able learners has also been highlighted by this study and will be a key consideration into my next teaching experience and beyond. Taylor (2017) makes the valid point that differentiation has many factors to consider besides attainment, and that truly personalised learning should also embrace the wider implications of gender, culture and socio-economic background to name but a few. Whilst this is undoubtedly a noble aim it is also important to recognise that it may be an overwhelming

expectation of every teacher, all the time. However, an awareness of the many types of differentiation a child may benefit from can only enrich practice.

I am forced to concur with most of the authors referenced in this assignment that for differentiation to be truly effective and to benefit all students much depends on the skill and ability of the teacher. I am conscious that as a student-teacher I still have significant progress to make in this area, but the valuable insights provided by this lesson study will mean that these considerations remain at the forefront of my mind in future planning and teaching. It is reasonable to assume that the findings relating to the case-pupils would be replicated across most classrooms in varying degrees and this underlines the importance of ensuring I implement differentiation techniques to the best of my ability.

Differentiation as a topic for discussion has occupied many pages but it could be considered that much of the literature is more anecdotal than empirical, which is no less valid but may indicate an argument for concentrated research. We are at a point of great change and reflection for education in Wales and there could be significant value in the empirical exploration of differentiation as a part of this.

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