

Assignment Title: Design, conduct and critically evaluate a close-to-practice research project (lesson study) focusing on the model of the transformative teacher in developing practice that has a positive impact on the learner.

Lesson Study Title: do reward points increase engagement levels in a lesson?

Targets from previous assignment:

- Further analysis and evaluation of personal professional experiences is needed. For example, within both the annotated examples and the critical reflection, you describe and explain classroom experiences, but both the rationale and the impact on the pupils' learning needs further discussion.

This lesson study greatly considers the impact on pupil's learning whilst evaluating professional practice of both myself and others from a critical perspective.

- Use the Harvard Referencing handbook to check how to reference long quotations accurately. There are also minor inaccuracies within the Reference List.

The Havard Referencing Handbook has been used for all references.

The importance of research has been highlighted as a priority for Wales in Donaldson's report of 2015 Successful Futures. Donaldson believes in a curriculum that will help shape future generations, creating ambitious, capable learners with the ability to undertake research, evaluate their findings from a critical perspective and continue their learning into adulthood. This may be a fresh approach in Wales but is not a new notion for Donaldson as he adapts his previous methods utilised in Scotland prior to his involvement in shaping a new curriculum for Wales. Donaldson's inquiry and subsequent report on the curriculum in Wales follows a period of research conducted by BERA and the Royal Society for the Encouragement of the Arts, Manufacturing and Commerce (RSA) during 2013 and 2014 looking at the contribution research can make to improve the quality of teaching. (Research and the Teaching Profession Building the capacity for a self-improving education system BERA and RSA 2014) The report acknowledges the divide between teacher researchers and researchers in the wider community and calls for a harmony between the two worlds for the benefit of all. This form of conflict can be seen in Hattie's comments to William Stewart of TES in 2015 where he recommends that teachers not concern themselves with the conducting of research, rather that they continue to remain a vital part of the research itself. He goes on to explain that teachers should focus on their skill of evaluating the impact of their own practice. Furthermore, Hattie suggests that research only be carried out by research academics who have honed their skills specifically in this area of expertise. This being said, the influence of the recommendations provided by the BERA report can be seen in teacher education at present in Wales and as a result we see student teachers carrying out their own research projects as part of their learning journey.

In this piece we will be discussing a lesson study carried out with the intention of establishing whether incorporating a reward system into a lesson increases the engagement levels of pupils. Both student teachers conducting the study had been on their first teaching practice placement in a foundation phase setting and would soon be embarking on a second placement in a key stage two setting. During a discussion regarding their research options, the students discovered that they had both been tasked with creating a suitable reward system as a behaviour management tool for their upcoming placements. This led to a discussion on the effectiveness of reward systems and concluded with the research question becoming – "do reward points increase engagement levels in a lesson?". The question appeared to be realistic, measured and indeed answerable.

Prior to developing the strategy for the lesson study further reading was required to ascertain the common beliefs and perspectives associated with the use of reward systems in a classroom setting. The readings came in the form of books, UK government reports and documentation, newspaper articles, government websites, and further on-line material. In order to understand the consequence or response of reward or punishment one must first look at the behaviour or actions of the individual. Skinner (1953), a behavioural psychologist, discussed the notion of punishment and reward as a tool, he also stated that to understand the behaviour we must first understand the cause and effect connection.

“We are concerned, then, with the causes of human behavior. We want to know why men behave as they do. Any condition or event which can be shown to have an effect upon behavior must be taken into account. By discovering and analyzing these causes we can predict behavior; to the extent that we can manipulate them, we can control behavior. “

B F Skinner, *Science and Human Behavior*, 1953, p.23.

Skinner is renowned for his work on behaviour responses, he produced these results through a series of experiments involving rats. Skinner added the term ‘Reinforcement’ to the Law of Effect. He stated that a behaviour that is positively reinforced is strengthened. He demonstrated this with his experiments. He also concluded that a behaviour which does not receive reinforcement weakens over time. Skinners beliefs have been supported and developed through the years as a fundamental truth of human behaviour. We see positive reinforcement and negative reinforcement as part of the culture in educational settings as well in the workplace. The Motivation Pocketbook (1999) is a toolbox for people managers and we see here the ‘Rat Man’ Skinner’s behaviourist theory being used as a motivational strategy. Skinner’s work shows that positive and negative reinforcement increases productivity, which shows that whether we are keen to receive a reward or just attempting to avoid punishment the results both increase production. Porter, Lawler and Hackman (1975) reveal the opposing argument to Skinner as that of the view from a phenomenological perspective. This argument proposes that in order to comprehend the behaviour that is presented we must first “somehow get inside” the individuals subconscious as this is what is at the heart of the behaviour (Behavior in Organizations, p34). The book describes in a later chapter how one interprets an individual’s behaviour can often differ to the intended action by the individual. What one person may perceive as irrational may be wholly rational and a meaningful part of a process to the person carrying out the behaviour or action (p,60). It is also suggested that despite one’s motivation or indeed the influences on one’s behaviour, we as humans have a limited capacity to “behave in certain ways”. They go on to discuss human behaviour as a combination of one’s tendencies and their learning through experience and training (p, 61-62). Is it the learning through experience to which Skinner is

referring, this element which requires affirmation and recognition in order to strengthen behaviour and mould an individual as the man at the forefront of operant conditioning suggests that he can?

Research in later years tell us that there are guidelines in association with reinforcement, in a school setting this is usually in terms of praise and sanctions. Docking (2002) suggests that the reinforcement is given promptly following the desired behaviour “catch the child being good”. What is interesting here is that he distinguishes between the key stage one pupils and older children. Docking states that teachers use praise freely with younger children, however he acknowledges a need to be more selective when it comes to older children and to look for “alternative ways of showing approval.” (J Docking *Managing Behaviour in the Primary School* p.45). Docking’s research suggests that the time spent praising behaviour in key stage two pupils is significantly less than in key stage one, rather the focus is on rewarding good work at this level. Developmental studies have shown that children’s desire to please adults begins to fade at age seven or eight therefore his suggestions are based on scientific research. The argument for the use of praise is supported by Canter and Canter (1992) who suggest that the most effective way to develop positive relationships with students as well as a positive teaching and learning environment is to use praise as the heart of the classroom management plan. The use of praise is recognised as highly beneficial to not only the teacher and learner, but to the classroom atmosphere also. This being said, Pritchard (2006) recognises the need for considerations to be made when using rewards. These include ensuring the rewards add value to the pupils, are given for effort not achievement and also add an element of fun to the task. Pritchard suggests that rewards can cause issues such as generating feelings of jealousy, competition, unfairness and isolation. It can also mask barriers to learning as well as causing pupils to not produce the highest quality work. The type of reward is discussed in depth by Cowley (2010), she acknowledges the need to consider the audience and whether group rewards would work better as they contain an element of peer-pressure and satisfaction at having worked as part of a team. Cowley recognises the need for rewards to be spontaneous, earned and appropriate for the age group. What considerations need to be made therefore for those with additional learning needs in order to be appropriate? Pollock and Warner (1997) discuss the importance of feedback done well. Docking states that vague statements of praise “do little to help the pupil learn” (p, 48) and that constructive feedback should be an intrinsic part of any praise given. This is supported by Pollock and Warner who discuss the need for feedback, corrections and verbal praise to be done well in order to ensure a positive effect on the learner. Whilst the book is discussing pupils with dyslexia the comments ring true for all pupils. They recognise that comments made by teachers on their

efforts in class remain with pupils in later years. It also notes the use of some punishments as counter-productive such as keeping students in during break to complete work when they need that free time to re-settle and be able to start work afresh (p,160-161).

What then of the Governments' perspective? Welsh Government in 2012 issued a handbook for primary classroom teachers labelled 'Practical approaches to behaviour management in the classroom'. What we see in this document is an echo of Skinner's work, advising to reinforce positive behaviours and sanction unwanted behaviours (p, 6-7). The document acknowledges that there are several factors contributing to behaviour in pupils including biological, behavioural, cognitive, systemic and psychodynamic factors (p,4). The handbook goes on to say that praise should be genuine, spontaneous and well-deserved. This should encourage "continuous learning" and decrease "competition among children." (p, 9 gov.wales 2012). Further reading on this subject found the Government of Guyana concurring with Welsh Government within their Ministry of Education website. Whilst they condone the appropriate use of rewards, they recognise there is a common drawback "though rewards motivate students to participate in school, the reward may become their only motivation." (education.gov.gy 2016).

Does it stand to reason therefore that reward and sanction is the only way forward for education given the amount of evidence and support it has received over the years and continues to receive? Robin Grille writing for The Natural Child Organisation refers to reward and praise as the "poisoned carrot" in their online article of 2005. Grille describes in detail the harm that praise and reward is causing to the development of children, suggesting that rewards are really a form of punishment as the child does not receive a reward unless the child performs as we see fit. He goes on to say:

"Children, just like adults, naturally recoil from being controlled. We all want to grow toward self-determination. Praise can therefore create resistance, since it impinges on a child's developing sense of autonomy."

Robin Grille, *naturalchild.org*, 2005

The article recommends a move towards genuine and precise feedback based on emotions and a focus on the child self-evaluating their own work as a more productive way of development.

Following consideration of the beliefs held on their chosen topic the student teachers set about creating their lesson study plan. This consisted of utilising a range of methodology to ensure a fair and ethical research project. As per Dudley's lesson study (2014) recommendation the location of the first lesson was decided upon and the pupils to be

observed were chosen from differing ability groups. Dudley also suggests that the group being observed could be the less engaged pupils but given the subject matter it seemed more appropriate to choose a blend of ability from both classes and settings. The choice of utilising a focus group supports the methodology for a lesson study as Litoselliti (2003) writes “focus groups may be seen to occupy a middle ground between participant observation and in-depth interviewing.”. She goes on to state that focus groups rely on the interaction between the participants as well as what is spoken. Litoselliti acknowledges the mediator in a focus group and the importance of being flexible, confident and non-judgmental (p,53-54). The mediator is not always the researcher but in this lesson study they are one and the same due to the set-up of the study. There is also the need for the environment to be informal and relaxing, and so a neutral room was decided upon rather than the classroom where the lesson would take place.

A semi-structured interview was chosen as the best method of interview during the focus group discussion. As stated by Drever (2003, p, 1) “within one interview you could collect statements of their preferences and opinions and explore in some depth their experiences, motivations and reasoning.”. Due to the school environment, time was a likely inhibitor and therefore semi-structured interview would allow a certain amount of freedom as well as providing a more relaxed approach seeing as the interviewees were to be aged 7-9. The questioning technique could therefore utilise both open and closed questions and allow for follow-up questions in response to the pupils’ answers. Kumar (2014 p,26) recognises the occasional need for qualitative data to be used to explain quantitative data to give a full and comprehensive explanation of the findings.

During the lesson study in the classroom, non-participant observation was to be used in order to capture quantitative data from the group under observation. A tally chart would capture the usage of reward points during the lesson and their distribution, see Appendix 1. Kumar (2014, p174-175) discusses the benefits of quantitative data in non-participation observation. He also acknowledges that a scale may be of benefit during observations as it allows the observer the opportunity to analyse what they are seeing on a first hand basis and grade it as the observe, in this case the behaviour of the pupils.

A vital part of any lesson study is the period of reflection immediately following the lesson. The student teachers decided to utilise the reflection model of Kolb (1975). Kolb’s method was chosen due to the experience of a lesson study being new to them both and the set-up of the study allowed the ‘testing phase’ to be implemented. The four stages of the model consist of encountering a new experience, understanding the experience and putting it into

context, learning from the experience and generating new ideas, and finally implementing the new ideas. Kolb's reflection model can be seen in use in Appendix 2.

As with all research there is an emphasis on ensuring the research is of an ethical standing due the potential impact on both the people involved as well as the organisations. In order to ensure this lesson study and all its parts are of a morally and ethically sound basis there are guidelines to which one must adhere. The first of which comes from the University of Wales Trinity Saint David (UWTSD) as the university overseeing its' student teachers research. The guidelines state overarching principles of honesty, rigour, transparency and open communication as well as "care and respect for all participants in and subjects of research." (UWTSD Research Ethics & Integrity Code of Practice, 2017-2020, p, 3). The second comes from UWTSD also in the form of data management guidelines. Information is shared on how to collect, collate, store, transfer, protect and destroy data correctly, this is an essential part of any research. The final guidelines utilised are from British Educational Research Association and their guidelines of 2018. The guidelines contain detailed description of the researcher's responsibilities and how to go about ensuring ethical standards including obtaining permission, confidentiality, data storage and transparency at all stages. All noted guidelines were adhered to at each stage of the lesson study and can be seen in detail within the ethics form of Appendix 4.

The lesson study took place across two school settings. The first was a primary school in an urban area with approximately 500 pupils. Welsh is the main medium of the school with 10% of pupils coming from Welsh-speaking homes. On average 7% of pupils are eligible for free school meals. The school has identified 22% of its pupils as having additional learning needs, which is similar to the national percentage of 21%. The school is currently a pioneer school and is working with Welsh Government and other schools to proceed with developments relating to the curriculum. (Estyn). The lesson took place in a year 3 Welsh medium classroom which consisted of 31 pupils aged 7 and 8. The second setting was a primary school in a predominantly urban, partially rural area with approximately 500 pupils. On average 8.2% of pupils are eligible for free school meals. Welsh is the main medium of the school with 13% of pupils coming from Welsh-speaking homes. The school has identified 25% of its pupils as having additional learning needs, which is higher than the national percentage. The lesson at the second school setting took place in a year 4 Welsh medium classroom which consisted of 30 pupils aged 8 and 9.

In order for the lesson study to be as fair as possible when drawing comparisons, the lesson plan needed to be as similar as it could be whilst adhering to the requirements set by two

different schools and tutor mentors. This being said, the methodology for both lessons would be the same, both lessons set a task of creating a poster encouraging people to participate, which required the correct use of adjectives in order to succeed. The first lesson took place in a year 3 classroom, with two out of the four ability groups in the class. As a result of two groups being removed without notice to do a focus task with the school teacher the number of pupils in the class was reduced to 14. The pupils under observation had to be altered slightly based on the changes to the pupil numbers, two pupils were from the higher ability group and one pupil was from a lower level ability group. The student teacher presented the task through initiating a discussion about the topic, healthy eating. The correct use of adjectives was included in the success criteria and children were advised of the points system available. An adjective example sheet was given to the pupils to assist in creating their sentences encouraging people to eat healthily. The pupils were earning individual points and the winner would receive a mystery prize at the end of the week. One of the pupils under observation was currently in the lead with the second observed pupil close behind. This made for an interesting dynamic which will be discussed later in the findings. Data collected contained the number of points issued across the classroom as well as the number of points received by the pupils under observation. The scale of engagement as created by the student teachers was included on the observation sheet and each pupil's engagement level was assessed at the beginning of the lesson, during the task and at the end of the lesson. Pupil 1 (P1) received the greatest number of points over the four categories with 4 points. What is noteworthy here is that P1 was the most vocal during the lesson, keen to demonstrate their ability and eager to share their work with the class. There was a vocal and physical response to receiving their points, they got to their feet and said "yes" when receiving a point for their correct use of the Welsh language. This individual's engagement level was at the highest level throughout the lesson. Pupil 2 (P2) received 2 reward points which kept their position in first place. This pupil whilst retaining the highest overall number of points was quiet and was asked to share their work rather than offer to share. P2's joy was evident as they smiled however there was no vocal response. The engagement levels of pupil 2 remained high throughout the lesson, they contributed answers when prompted by the student teacher, worked independently on task and completed work to a high standard. Pupil 3 (P3) also received 2 reward points for their use of the Welsh language and their overall standard of work, they celebrated receiving their points by smiling politely. P3 chose to sit on a desk on their own at the beginning of the lesson whilst the others sat in a row in front of the student teacher. Their engagement level at the opening of the lesson was weaker, it did however strengthen as the lesson developed and was strong whilst on task and at the end of the lesson. The student teacher approached the pupil and explained again the requirements of the task and ensured comprehension as the pupil was

not fully engaging with the lesson introduction. This encouraged the pupil and appeared to increase their confidence as well as engagement. What could be seen during the lesson was the definite change in the pupil's engagement levels once the reward points began to be awarded to individuals. There was a clear increase in the number of pupils wanting to present their work for marking in order to gain points, a more focussed effort was made to complete the task and there was excitement in the atmosphere as the points were allocated.

Directly after the lesson the student's teachers, held a semi-structured interview with the three pupils under observation to ascertain their thoughts and feelings about the lesson. They discovered the pupils enjoyed the task as it was linked to the theme and gave them an opportunity to create sentences. They described feelings of excitement at receiving their own reward points, however, when describing their feelings at seeing others receiving points P1 described feeling competitive as they thought someone else would win the prize. Whilst sharing their feelings, P1's facial and body expressions relayed feelings of jealousy or perhaps anger towards others receiving points. The results of the interview reflected positively on the findings from observation as the pupils had indeed enjoyed contributing to the lesson and the task and were therefore engaged. They also corroborated that receiving reward points had encouraged them to work harder. In line with the recommendation from P1 the student teachers ensured that a leaflet was utilised for the second lesson with examples of adjectives and key words to use as they advised they had found this helpful. A transcript of the interview can be seen in Appendix 3.

The second lesson was held in the second school setting with 30 pupils seated in their ability groups. The student teacher introduced the task through presenting a new theme and discussing the language requirements as part of the success criteria. The theme differed from one lesson to the next due to the requirements of the school, however, the task and success criteria were identical. The second class were advised of the group reward system and the reward was additional playtime for the whole class. The pupils under observation were from three different ability groups. The theme for this lesson was wonders of Wales, the pupils were tasked with creating a poster to encourage people to attend the Principality Stadium for different events. Pupil 1 (P1) from this class was from the higher ability group, pupil 2 (P2) from a lower ability group and pupil 3 (P3) from the lowest ability group. During the introduction phase of the lesson P1 was not offering answers to the student teacher's questions despite listening and paying attention to the presentation and therefore were not considered fully engaged. They did engage well with the task however and produced work to a high standard earning a point for the class. P1 happily received the point and continued to work on their poster. P2 was fully engaged with the introduction phase and offering answers to questions. Their engagement level dropped however as the task phase began and they

needed to work independently. They became quiet and didn't seem to know where to begin. After some time had passed the student teacher checked on their work and could see they had been struggling to produce sentences including adjectives, the pupil had focussed instead on drawing a suitable picture. The student teacher discussed the options available to P2 to produce suitable sentences and they seemed more confident to continue, engaging once more with the task at hand. P2 received a reward point at the end of the lesson for persevering and making an effort to complete the task, they were smiling gratefully at the teacher when receiving their point. P3 was considered to be at the highest level of engagement during the introduction and was offering to share their experience of being at the stadium. Once the time came to begin the task their engagement dropped slightly and they too initially focussed on drawing a picture. Once the student teacher had discussed their options and reminded them of the points available, they began to include sentences. After a period of fifteen minutes on task the student teacher began assessing the work of the pupils and issuing points for correct and appropriate use of adjectives. P3 received theirs at this point, they then continued to produce further sentences using the appropriate adjectives, showing them to the student teacher, earning a second reward point. They were observed smiling and celebrating their second point. As with the first lesson there was a surge of energy as the pupils began to receive reward points. The pupils began presenting their work more eagerly, raising their hands and walking towards the student teacher. The energy built as more and more points were rewarded in the final minutes of the lesson. The students achieved the necessary number of points to win the prize and celebrated as one. As with the first lesson the interview took place immediately after the lesson in a neutral room. The pupils spoke favourably of the lesson including being able to colour and be creative. They felt happy to earn reward points as a team, they felt good as others received points as they were contributing to a common goal, this differs to the first lesson where points were on an individual basis. This group also agreed that they worked harder in order to obtain points, and would feel sad if people were not contributing. What was not observed however was pupils encouraging each other to make an effort, this raises questions regarding the dynamics of the class.

As we look at the findings from the lesson study, we see that although the fundamental question has been answered, this in fact raises more questions. In short, do reward points increase engagement levels in a lesson? The answer is yes, but for how long? What impact does it have on the standard of the work? What effect does it have on pupil wellbeing? Does this higher level of engagement over a short period of time assist the retention of knowledge or development of skills? Let us firstly acknowledge the fact that the reward systems were different, one was focusing on individual and the other on group effort. This altered the

perception the children had of receiving points. The first lesson had pupils feeling a sense of jealousy or resentment towards others receiving points, this may not lead to a healthy perspective of success in others. The second produced a more harmonious atmosphere, however, no one encouraged others to do better, to seek reward, they were still very much focussed on their own achievements but happy when someone contributed to the “chance of winning”.

The dynamic between P1 and P2 in the first lesson was interesting. P2 was in the lead with the highest number of overall points, this individual was softly spoken, and smiled at the student teacher when being awarded additional points. In contrast P1 was close to the top of the leader board, was outwardly celebrating their successes as well as involving others on the table in their celebration. P1 alone received two reward points. Is this proving that those who shout loudest are heard? Or did this pupil produce the best work? This brings us to the next observation which is the subject of standards. During the reflection period the student teachers agreed that their pupils had not produced their best possible work, both discussed the work being rushed. This is corroborated by Kohn (1993 p, 42-45) as he describes studies which show evidence of the promise of rewards causing people to make more mistakes or produce inferior work than those who were not rewarded. He goes on to say that those who were not offered a reward developed their skills faster. The studies went so far as to demonstrate lower scores on standardised tests for those pupils concerned about rewards and approval. It is Kohn’s belief that the increased use of rewards has had a detrimental effect on schools. When discussing the effectiveness of feedback Hattie (2009) states that “praise, punishment, and extrinsic rewards were the least effective forms of feedback for enhancing achievement.” Hattie goes on to concur with Pollock and Waller that rewards are not to be classified as feedback. Hattie’s meta-analysis supports the theory that rewards reduce performance and leads to competition which undermines “enhanced engagement”. What is interesting is that meta-analysis shows that whereas extrinsic rewards produce negative effects, verbal rewards, praise, produced positive effects on the intrinsic motivation of pupils. It is therefore as Canter and Canter suggest:

“What is the easiest way to motivate students? Praise. The most effective? Praise. What positive recognition can you give to your students at any time? Under all circumstances? Praise.”

(Canter and Canter, 1992, p.62)

The evidence from this lesson study demonstrates that a focussed effort on rewards during lessons did not produce greater results in terms of production but did cause a short-term surge in engagement as supported by the pupil’s answers during interview. It has led to one

pupil receiving a prize in one school which no doubt would have brought a sense of satisfaction to that individual. It has also led to a class receiving additional playtime where a football game ensued leading to a shared sense of achievement. Could this have been achieved without the reward system? Quite possibly yes. Was it a positive experience for those receiving the award? Kohn (1993, p.74) suggests even a short-term reward system can have a negative effect “A single one-time reward for doing something you used to enjoy can kill your interest in it for weeks.”.

On reflection, the lesson study was a success in the way it was carried out and provided answers. Casual observations were also generated which Skinner (1953, p.37) tells us not to dismiss as they pave the way for future research. For reasons of fairness, in further lesson studies it would anchor the research if more variables were kept consistent such as the type of reward and the lesson theme. That being said, constraints were placed upon the student teachers which were outside of their control, such is the nature of the school environment and must be accepted freely as they were in this case. The guidelines provided by UWTSD and BERA were adhered to at all times, this was simple to follow and did not hinder the lesson study. With hindsight perhaps the Leuven Involvement Scale as described by Barnes (2015, p. 262-263) may have provided further insight into the engagement shown by the pupils under observation. The student teachers generated their own based on their previous experience, they also adapted their observation sheet based on what was being presented. The initial suggestion was to score engagement levels with the lesson as a whole, it became evident that a three-stage evaluation would provide better information as can be seen in the adapted observation sheets in Appendix 1.

In conclusion, this lesson study has provided an insight into classroom practice of reward systems, it also provided an answer which was unexpected giving the need for further discussion and reflection. The pupil's agreed that they were engaged throughout the lesson and were putting more effort into their work in order to achieve the reward. Despite what the external information states, the thoughts and beliefs of the pupils, those who played a central role in the research should be the main focus of the lesson study. We cannot stress enough the importance of listening to the voice of the child and therefore the answer is yes, reward points increase engagement levels in a lesson. As we have discussed the topic reaches further than the question asked by this study. This study concludes with the following:

“ “Do this and you'll get that” turns out to be bad news whether our goal is to change behavior or to improve performance, whether we are dealing with children or adults and

regardless of whether the reward is a grade, a dollar, a gold star, a candy bar, or any other bribes on which we routinely rely. Even assuming we have no ethical reservations about manipulating other people's behavior to get them to do what we want, the plain truth is that this strategy is likely to backfire."

(Kohn, *Punished by Rewards*, 1993, p. 47)

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