

How do Young Children Respond to Different Reward Systems?

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Targets

1. In terms of the teaching standards, think about how you will develop your understanding of the nature of responsibilities within schools and of the contributions individuals make towards the successful fulfilment of the school's vision to implement a SDP.
2. Try to separate misconceptions from facts, as they can lead to stereotypes and prejudice.

Introduction

The research question this paper will address is 'How do young children respond to different reward systems'. The objective of this research was to determine what behavioural responses primary school children exhibited to various extrinsic reward systems. Through reflective practice, a pattern was noticed particularly with children exhibiting challenging behaviour, in observed schools it was common for these pupils to be involved with extrinsic reward schemes as a form of behaviour management. This case study aims to explore the efficacy of this behaviour management strategy and the data can inform the implementation of reward systems in one's practice, allowing evidence-based decision-making (Pring, 2000). This also leans heavily into the professional teaching standards of "managing the learning environment" and "wider readings and research findings" (Welsh Government, 2019), working towards developing one's effective teaching practice.

The school context is situated in an area that belongs to the top 30% of the most deprived areas in Wales (WIMD, 2019). The percentage of free school meals is just over 40% and whole school attendance is at 90%, both factors further suggesting the level of disadvantage faced by a large proportion of the cohort. There is a "robust" correlation between poverty being a risk factor for behavioural problems in Western children (Mazza et Al., 2016). The specific class context is one with multiple cases of challenging behaviour, stemming both from neurodivergence and turbulent home life. Out of the class of 24, 18 are involved in some form of an individual development plan, with two pupils requiring a behaviour-related one-to-one member of staff. The class had four existing reward systems that were considered in this study; House Points which get tallied up at the end of the week with one of three houses winning, Monster Points where the highest two scores each week receive something from a prize pot, access to Minecraft on a Friday for completing all class challenges and stickers.

Literature review

The literature on motivators in children is itself a point of contention, a large proportion like this study takes a case study approach, meaning conclusions are highly contextual and vary in each setting. While the enjoyment of extrinsic rewards is consistent in the literature, their efficacy is not. Extrinsic motivation is when one receives some kind of reward for completing a task, whereas intrinsic refers to an investment in the task itself, be it enjoyment or a sense of fulfilment (Howe, 1998). Howe (1998) also states that there is a balance between the two, extrinsic is especially useful when introducing a young child to a new challenge, but one needs to be careful not to overshadow the intrinsic enjoyment of learning. Extrinsic rewards are important for many people when starting a new skill or tedious activity, but if a child is raised with solely extrinsic motivation they will be unlikely to have the emotional maturity to cope when these incentives are no longer in place.

One line of evidence suggests that extrinsic rewards are beneficial to pupils. Extrinsic reward systems are based on behaviourist principles (Payne, 2015), meaning that they are used as a method to change a child's existing behaviour. Behaviourist approaches such as these are often chosen as they are easier to implement than cognitive methods like consistent modelling (Payne, 2015), one can infer that a practitioner in a pressurised environment is likely to lean on more approachable behaviour management strategies. A study conducted in 2005 (Moberly et al., 2005) found 90% of 119 surveyed American kindergarten teachers relied heavily on extrinsic rewards to influence behaviour, supporting the suggestion that this is favoured in busier school settings. Admittedly this study is relatively dated, but its sentiment, especially in foundation settings (Kotaman and Aslan, 2020) has been echoed in more recent studies. A German case

study observed non-monetary rewards such as work avoidance, which interestingly produced a greater quality of work from pupils overall (Riener and Wagner, 2022). The study also notes a variability of preference among the pupils, with not all of them preferring the non-monetary rewards, it also acknowledges its pitfall of not observing the long-term performance of the children who showed an initial improvement (Riener and Wagner, 2022). Another concern also arises here that could explain the inconsistency prevalent in child motivator literature, one could argue that the potential reward possibilities are endless. It is difficult to draw comparisons between studies using drastically different reward systems, regardless if they all use principles of extrinsic motivation. Opposing non-monetary rewards, and making a case for this study's demographic, extrinsic rewards have been effective in more deprived school contexts. Children from low socioeconomic backgrounds tend to favour “tangible” rewards (Kotaman and Aslan, 2020), but the motivation is arguably high as these children receive fewer opportunities to access material goods. Another plausible explanation for this is that in cases of poor self-esteem, pupils can't intrinsically motivate themselves (Howe, 1998; Mckinney, 2014), meaning that they require additional support to improve their motivation while they develop the skills to motivate themselves.

Bill Rogers has written extensively on behaviour and classroom management, it is interesting that his works emit management strategies that relate to reward systems. Instead, he suggests behaviour is changed primarily through the setting of clear expectations, and boundaries and mirroring good behaviour (Rogers, 2015). As an authority on the subject, he does not appear to place much value on extrinsic rewards as a behaviour management strategy. Supporting this, it is argued that behaviour is improved by reducing pressures and supporting the child as opposed to controlling them (Lawrence, 2006). This could be because behaviourist systems are based on consistency (Payne, 2015). While the previous critique suggests cognitive methods are difficult, it is unrealistic to expect practitioners to be consistent with extrinsic rewards given

the variability of time, mood and resources in a classroom (Payne, 2015). Bill Rogers appears to be one of the many academics who have moved on from a seemingly outdated concept. Founding behaviourist Skinner (1953) stated that humans are comparable to machines, and that behaviour can be taught in a rigid and consistent method. A core behaviourist belief is that all actions are the result of rational decisions (Bush, 1981), but this suggests that people are always capable of making rational decisions, which is no longer a commonly accepted view. These suggestions are further discredited with the development of the understanding of neurodivergence. Those with ASD tend to make poorer decisions (Mussev et al., 2015) and “ineffective decision-making” is a symptom of ADHD (Sonuga-Barke et al., 2016; Morsink et al., 2021), suggesting that a notable portion of pupils don’t have the capacity to be fully affected by behaviourist strategies like extrinsic rewards. A case study from India found that extrinsic rewards had the opposite effect, it decreased motivation. Once extrinsic rewards for attendance were removed after attendance had been improved, attendance dropped to lower levels than they started with (Visaria et al. 2016). An American nursery study came to a similar conclusion, children who were told that they would earn certificates for completing an art activity engaged for nearly half the time compared to those who were not told about the reward (Lepper et al., 1973), suggesting that extrinsic motivation encouraged children to stop once they had reached the reward threshold, whereas the other children felt intrinsically motivated to complete the task to a higher standard.

Explanation of a case study

The current study adopts a case study approach, addressing a unique context by using an immersive multimethod approach, with the intention of these methods converging which will often generate further lines of question (Gillhan, 2000; Pring, 2000; Taber, 2013). It enables one to understand the meaning of phenomena (Gillhan, 2000), descriptive methods that allow the

interpreter to see things from the perspective of those they are studying. Case studies use an ethnographic approach, which takes perspectives and interactions within social groups into consideration (Pring, 2000). The primary benefit of a case study is its use of mixed methods, the data works in a complimentary way to address the research question more strongly (Maxwell, 2013). Yazan (2015) puts forward that methodologist Robert Yin favours case studies as they are a comprehensive way of evaluating phenomena, his rigid structure to case studies requires one to systematically consider the different forms of validity and reliability. This highly guided approach to case studies is favoured by novice researchers as it can produce quality results despite the researcher lacking experience (Yazan, 2015). Hopkins (2014) supports the suggestion that this method is approachable to novice researchers, with its flexibility and multiple approaches to identifying trends.

However, a principal limitation is that it is highly subjective, the further immersed the researcher becomes, the greater the risk to objectivity (Pring, 2000). In this study's context, the researcher is already fully immersed in the classroom as a practising teacher, which adds further concerns to the quality of the research. It is a difficult balance being both researcher and practitioner (Taber, 2013), both requiring high levels of attention. Subjectivity isn't necessarily a problem, as long as it has been addressed. Researchers must be willing to challenge their confirmatory evidence, they must ask themselves what they are expecting to find despite having little prior evidence (Gillham, 2000; Wellington, 2000), this is what the researcher's prejudices are. The use of triangulation in the case study methodology can help address some of these biases (Gillham, 2000) as there are multiple results to conclude from. Subjectivity is also addressed by sharing one's positionality, a process known as reflexivity (Homes, 2020). Homes (2020) further explains positionality as sharing one's worldview and assumptions, the key areas of influence are the subject, participants and the research context. One's positionality has a preestablished feeling of obligation to the pupils. There is an awareness of pupil background, which could lead

to one wanting to give pupils material rewards, especially stickers and toys, as a minor way to aid with prevailing deprivation.

The participants in the study will be the lower key-stage pupils in one's class, the two pupils didn't offer their assent so were not involved, bringing the sample size to 22. The observation aimed to take everyone within the sample into consideration, while accounting for the possibility of researcher bias arising during observation (Wellington, 2000), the sampling method itself has high internal validity. Wellington (2000) argues that "sampling is a compromise", and that one must choose whatever method would be most beneficial to the study. This argument is followed by the suggestion of guided sampling, which is the method used for this study's interviews. An expert in the environment suggests the sample (Wellington, 2000), in this case, the classroom mentor used her knowledge of what pupils would be most likely to engage, resulting in two groups of four. This sample contains 3 boys and 5 girls, with a wide range of academic ability, despite it not being the key intention, the sample is quite representative of the class given its size and diversity.

Research Methods

A qualitative mixed methods approach is used in this study, in accordance with it being a case study. The study also features an aspect of a mosaic approach, as it creates a larger picture from the basis of a collection of smaller pieces of data (Rogers, 2020), allowing one to analyse recurring themes. Mosaic approaches also do not rely solely on the participant's ability to write or verbalise data, there is always an alternative set of data just in case (Rogers, 2000), which is especially useful given the age of the participants who cannot consistently portray their feelings as their oracy and writing skills are still developing. Student teachers tend to have a difficult balance in research projects, producing worthwhile results in a relatively short timeframe (Taber, 2013), the mosaic approach has allowed for a lot of rich data to be generated quickly. The

methods were chosen with internal validity in mind, meaning the data interpreted offers a sound explanation of the research question (Hopkins, 2014). It is high in this case as the objective is to seek out meaning (Taylor, 2019), so the rich data had a high chance of being purposeful. Before delving into the methods, it is vital to establish its subjectivity. An interpretist researcher accepts that reality is socially constructed (Wellington, 2000), meaning one acknowledges that any conclusions drawn about observed phenomena are highly subjective. Wellington (2000) also argues that external validity is a point of contention, so it should be established that this study has no intention of making its results applicable to external generalisability (Taylor, 2019). This study could have been improved with the addition of at least one quantitative method that could offer empirical evidence, further adding to internal validity and making the study more internally reliable (Gilhan, 2000). However, there wouldn't have been many viable options in the given context as questionnaires can be viewed as "tokenistic" for young children (Clark, 2005), the simplicity needed to make a readable questionnaire would produce shallower data in comparison to the chosen methods. A drawback applicable to both methods is the risk of the observer effect (Wellington, 2000; Taylor, 2019), participants acting differently since they are aware of being watched. Countering this, the researcher is always present in class, and consistently takes notes for other projects, so it is less obvious to the participants that they are being observed.

The first method utilised is unstructured participant observation. Lampart (2019) describes this specific form of observation as one that is involved in a certain context, that closely follows an ethnographic approach. The unstructured element was chosen as it allows one to organically write notable incidents as they are seen in real-time, as opposed to numerical incident tallies (Lambert, 2019), this choice was made to generate rich and contextual data. The primary strength of this method is one notably overlooked in the literature, but extremely important to the class context, it has little noticeable impact on the pupil's classroom routine. The study was

explained to them, simplified in terms to gain assent, but other than that there were no changes to their routine. Children with ASD tend to show distress if their routines are interrupted (Mudi, 2024), this was an important consideration given the existing neurodivergence and behaviour problems in the class. In a joint role as a practitioner as well as the researcher, one wouldn't want to disrupt routine and risk behaviour outbursts. This ties to another benefit, usually, it is difficult to gain access to target populations in ethnographic studies (Wellington, 2000). However, as a participant observer, one already has access and an established rapport. The observation schedule was quite simplistic. Gillham (2000) suggests that practicality and usefulness should be considered during the making of observation schedules. The observation in this study took place over the course of one week, during lessons between 9:00 am and 12:15 pm (Appendix d). This choice was made because the position of break and lunchtime ensures accurate field notes can be taken recently following an observation despite teaching responsibilities. The field notes began with general observations, and then gradually progressed into the pre-established codes and themes (Gillham, 2000). Five key attributes can be discovered while observing children; preferences, development levels, strategies, skills and personality (Forman and Hall, 2005), this observation arguably encompasses all of these five attributes so was kept in mind to develop a deeper understanding of participants. A researcher must have a clear picture of what increased engagement looks like (Hopkins, 2014). By observing their personality, one can be aware of any changing behaviours.

While observations display behaviours in their intended context, interviews work towards explaining these behaviours and drawing inferences from them (Maxwell, 2013). Given their age, it was deemed appropriate to have a semi-structured interview for two small groups, four in one and three in the other. The semi-structured format allowed for the research question to be addressed but still allowed flexibility to clarify and expand questions (Taber, 2013). Group interviews address the power imbalance felt by pupils when the interviewer is an adult in school,

but can also lead to shy children not contributing (Clark, 2005; Ponizovsky-Bergelson et Al., 2019). To address this, groups were divided based on their personalities, with the three most confident being placed in the same group as they were unlikely to overpower each other. There is a risk to validity, given that as the sole interviewer, one could misinterpret responses (Maxwell, 2013), which is why steps were taken when writing the interview questions to ensure the questions were in familiar terms. One shouldn't assume that a concept means the same thing to a child, one must be aware of their "culture of communication" (Danby et al. 2011). Five questions were put to the participants to stimulate new ideas without overwhelming them (Gillham, 2000; Drever, 2003). A further advantage is simply that students enjoy it. Children tend to be happy talking about relatable topics (Denby et al. 2011), and encouraging them to share their opinions provides enjoyment for the interviewees and richer data for the researcher (Ponizovsky-Bergelson et al, 2019).

Analysis Methods

The analysis method adopted in this study is thematic analysis through the use of coding. One reason that this method is favoured by many qualitative methodologists is that it makes sense of raw data through the allocation of themes, allowing for discussion (Braun and Clarke, 2006). There were two preestablished codes for each set of data; positive impact on work and indifference. The rest of the codes will be derived from the data, making the analysis a mixture of priori and posteriori codes (Wellington, 2000). This study gathered extensive observation recordings to ensure confidence in its results (Pring, 2000), coding is a strategy that can cope with making sense of this descriptive data by filtering it through multiple stages (Maxwell, 2013). Analysis should begin with organisational coding, putting things together based on their subject matter, in this case, each of the different reward systems to provide a baseline for the second step. Then, substantive categories are introduced to describe and offer explanations for

occurrences within the subject matter (Maxwell, 2013). The first step was consistently done throughout the observation window, with field notes being split into four categories so that they could be understood when they were further decoded at a later date (Holliday, 2016). The second stage was completed by applying the two established codes and making note of any other substantial codes that arose, the field notes were to be sorted in line with these codes.

Despite its benefits, caution does need to be taken with thematic analysis, it is a difficult balance between ensuring flexibility to generate rich data and ensuring that the method has some form of definition and structure (Braun and Clarke, 2006). Wellington (2000) puts forward Piaget's 5 categories of responses while interviewing children, the two most prominent here being spontaneous conceptions, where the pupil gives an immediate passionate response and romancing, where the response appears to be greatly exaggerated. These categories were to be kept in mind when looking at the interview data, Piaget's theory suggested that romancing was particularly common amongst younger children. Another drawback is the threat to validity due to researcher bias, which can be acceptable as long as the researcher does everything they realistically can to prevent these issues (Maxwell, 2013). To address this, one must take all data into account and be well-read on relevant theories to minimise the risk of confirmation bias or ill-fitting theory allocations.

Ethics

Prior to commencing the study, extensive consideration was given to ethical clearance. Ethical considerations are an obligation, primarily guided by BERA guidelines, a code of conduct (Kirby, 2020). Acting per these guidelines is a matter of professional integrity (Denscombe, 2002). However, Campbell (2003) argues that educator's ethics shouldn't rely on formal codes of

practice. One must have an awareness and moral obligation to act ethically. Regardless of the internal motivators, there is a widespread consensus across literature that sound research must follow BERA and institutional guidelines unless it is unavoidable (Denscombe, 2002; Wellington, 2000), one would suggest that there is no circumstance excusing this study from the guidance. The ethics form addressed risk minimisation for emotional distress, planned research methods and objectives as well as the contents featured on the consent form. Following the approval of the study's ethics form (Appendix A), consent forms were drafted for guardians (Appendix B).

The first ethical consideration featured on the consent form was the assurance of the participant's anonymity and confidentiality, this is because confidentiality is "considered the norm" in educational research according to BERA (2018). Researchers should be aware of the risks associated with disclosing the identities of child participants (BERA 2018). The consent form also contained a full disclosure of the research question, its aims and intended methods, as well as ensuring the child's right to withdraw at any point. Guardian consent is particularly important as young children tend to struggle to understand what is being asked of them (Kirby, 2020; Hurley and Underwood, 2002), in this study the children are as young as five. While giving out consent forms, two children expressed that they didn't want to participate, so they didn't take a form. This leads to assent, the child's expression of agreement to participate (Kirby, 2020), one has ensured that the child has the right to withdraw as an ongoing verbal agreement (Hurley and Underwood, 2002). Assent was gained from the other children through a simple explanation featured in Appendix C. This was continuously monitored as young children often feel a moral obligation to obey adults due to "unilateral obedience" (Piaget and Inhelder, 1968), meaning the power dynamics of the school rarely allow for dissent (Kirby, 2020).

Analysis

Following Holliday (2016), the themes are broken down into separate headings to display the connectivity in the data. The objective of thematic analysis is data reduction (Hopkins, 2014), the raw data from the interviews and observation have been simplified through the process of coding. All data has been taken into account to aid the result's internal validity.

Positive Impacts

The first priori theme combines positive impacts on work outcomes and positive attitudes displayed by the children. The work outcomes appeared highly contextual, with positive changes in work most prevalent in supported children. The most obvious success was the Dojo awarded to those who completed their home reading and spelling, the class mentor shared that uptake on these activities was poor before the introduction of Dojo rewards. Dojos have specifically targeted children with poor attitudes to learning, already there has been a drop in them missing their playtime and an improvement in work quality. One child proudly showed their early finished work asking if they'd "blown [one's] socks off", showing a complete shift in their work attitudes. Pupils were frequently asked how they receive rewards and were observed adapting their behaviour or trying harder to meet the expectations.

Pupil well-being is an unintended positive consequence, something found in all four reward schemes. Pupils shared a sense of pride when discussing why they had received their dojos and displayed a great team mentality when discussing House points. Many looked forward to

playing Minecraft on Friday with their friends and enjoyed taking their stickers home. One child stated that they “do their jobs better when [they’re] happy and rewards make [them] happy”.

Indifference

The second priori theme is indifference to receiving an extrinsic reward, not being seen as a worthwhile motivator for the child. This was most noted with the stickers, many pupils were disinterested in the themes so were unbothered if they earned one, there were multiple instances of pupils losing or discarding theirs even if they wore them. Indifference was also prevalent in the interviews, several pupils didn’t like Minecraft and had other motivators to complete their challenges.

Intrinsic Motivators

One of the emergent themes, not expected in these levels given the participant's age (Kotaman and Aslan, 2020) was the ability of pupils ability to intrinsically motivate themselves to complete school tasks. A common theme from the interviews was the feeling of winning, one child, in particular, didn’t care if they received a reward, they “like[d] the feeling of winning”. The same child indifferent to Minecraft stated that she completes challenges because “they’re fun”, The following responses from the group echoed this, they enjoy completing tasks and would do so in the case of no rewards.

Piaget’s concept of romancing (Wellington, 2000) appeared to be present in one interviewed child who shared that they don’t enjoy sharing that they’ve earned something and that they enjoy completing tasks regardless of available rewards. However, this child was observed bragging when they had earned rewards and rushed through challenges so they could access the Minecraft reward.

Disruption

The other emergent theme is the disruption caused by extrinsic rewards. A frequently observed theme was one of conflict, with pupils getting visibly agitated if they missed out on a reward, didn't agree with who received a reward or reacted if another pupil was bragging. The conflict was caused in parts by the researcher, it became increasingly difficult to define thresholds to receive rewards and sometimes the choice was made to avoid a pupil reaction, which led to stickers in particular being given out too generously.

The disruption also presented itself literally. House point tiles were consistently observed to be disrupting lessons, with students fidgeting, losing them or getting agitated if the pot ran out. The stickers were also a lesson distraction, pupils interrupted to ask how they could receive one and traded with other pupils at inappropriate times.

Overall, these results do not indicate a definitive answer to the research question in a definitive, uniform way. Instead, it suggests that motivating factors are not applicable to whole classes, they are dependent on the individual. This statement fits in with existing literature, like other comparable studies the results do not correlate with any other school setting, further stressing the point that there is no consensus on the most effective motivating strategies for young children. The implications for the class in this study are more useful, it has shown that the strategies implemented, largely to replace punitive methods, have shown improvements in children who require additional support. An unintended result is the benefits extrinsic rewards provide for pupil wellbeing, while material rewards may not necessarily directly improve work output, they have undeniably increased levels of happiness among participants. This supports the claim that children from lower socioeconomic backgrounds benefit from receiving tangible

rewards that they wouldn't normally have access to (Kotaman and Aslan, 2020). Given the existing levels of intrinsic motivation, improvement in supported children and overall improvement in pupil happiness, it would be reasonable to continue using medium-term extrinsic motivators such as Dojos.

Conclusions and Recommendations

To conclude, one can say that in the context of this specific class extrinsic rewards drastically vary in their efficacy depending on the needs of each pupil. Children showed high levels of intrinsic motivation for their age, but improvements were also prevalent in behaviour changes. The claim that Class Dojo is the most favoured reward system can be made with high internal validity, but unfortunately lacking in terms of reliability. There was an absence of permission to create recordings, meaning one could only rely on notes and personal interpretations. It would be preferable in future studies to be able to revisit and get second opinions on interpretations. This study will be used to develop the standards of professional learning and managing the learning environment, future studies encompassing a colleague will work towards collaboration, further building a highly effective practice.

This study could be used to further develop interventions for children showing neurodivergent traits or behavioural difficulties. In one's future practice, the intention is to implement mid to longer-term reward schemes such as class dojo as a way to use extrinsic motivators to build up intrinsic motivations. Due to the study's results being mixed and the literature conflicting, further research should be carried out to explore the different motivators in young children and their long-term effects on different demographic classrooms. These findings could be taken further, given the prevalence of classroom Dojo there is a notable gap in relevant research. As arguably

the most effective reward scheme in this study, it would be useful to further explore changes in behaviour when introduced to children who struggle to intrinsically motivate themselves. Given the lack of generalisability of these studies, any further conclusions can be used to influence practices, especially those of newly qualified teachers. As Moberly et al. (2005) stated, newly qualified teachers need to inform their practice rather than mirroring the strategies used by their mentors.

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