Teachers' and Students' Experiences when Implementing a Card-Based Wellbeing Initiative in New Zealand Primary Schools

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Abstract

Student wellbeing and engagement are critical to foster positive outcomes for children, yet data shows that New Zealand children are in a poor state of wellbeing. Teachers in New Zealand are time poor and find it difficult to implement new resources into their classrooms, due to increasing workload demands. One way to improve engagement while targeting wellbeing is through gamified learning. To operationalise this intention, a card-based initiative called the 1% Kids' Club was used to support teachers and enhance students' understanding of aspects related to their wellbeing. Card-based initiatives in schools are currently under researched in the New Zealand setting.

This study aimed to explore how students and teachers experience the implementation of a card-based initiative in New Zealand primary schools and the perceived outcomes from using the cards. Semi-structured interviews with New Zealand primary school teachers (n=10) and focus groups with students aged 8-13 in years 4-6 (n=24, six focus groups) were conducted across two primary schools. Data was analysed using thematic analysis.

Participants reported that overall, they enjoyed the initiative, yet there were barriers that prevented them from fully integrating it into their daily routines. The most significant barrier was having time to fit the initiative into the teaching and learning schedule. Teachers have planned learning experiences for their students based on the New Zealand curriculum, with various constraints it can be difficult to be flexible to add new resources. Through encouraging the teachers to organically implement the resource, some teachers found more effective ways of implementing the resource into their day such as using it in a quick morning activity. In contrast, others found it challenging to find time to engage with the cards. After using the cards, both teachers and students reported some perceived benefits, such as improved mental health discussions, increased physical activity, and dietary changes.

Overall, these findings highlight the potential impact of using a gamified approach to a card-based initiative to support and enhance child wellbeing. They also highlight the importance of having a low-burden and flexible resource that can be integrated into the learning environment and existing classroom planning and routines.

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Chapter 1 – Introduction

1.1 Background

Wellbeing has been shown as a key contributor to foster positive outcomes for children (Kutsyuruba et al., 2015; Ministry of Education, 2017; Waters, 2011). For school-aged children, wellbeing is important as it is a key developmental stage in their life and studies have shown that children who have a better wellbeing have a better quality of life and perform better in school (Clarke, 2020; Statham & Chase, 2010). Wellbeing can be considered as a multi-dimensional construct, consisting of four domains: physical, mental and emotional, social, and spiritual (Durie, 1994). The multi-dimensional framework of Durie's (1994) Te Whare Tapa Whā conceptualises a holistic view for wellbeing. This acknowledges that for children to be in a complete state of wellbeing, they need to be in more than just good physical health.

Like wellbeing, student engagement is also considered a multi-faceted construct, consisting of cognitive, affective, and behavioural domains (Martins et al., 2022). Because of this student engagement will be used as a catchall phrase for the purposes of this thesis and will refer to all domains unless otherwise stated. There has been an association between student wellbeing and engagement with student outcomes. For example, one study showed that wellbeing and engagement had a positive correlation with each other and being used as a predictor for academic success (Schnell et al., 2025).

One way to enhance student engagement in education is through gamified learning, which consists of adding game-like elements to a learning environment (Smiderle et al., 2020). This is an approach used in education to motivate learners in a fun and interactive way, which sometimes includes rewards, challenges, and badges (Bolstad & McDowall, 2019). An example of gamifying learning is through using cards and card-based learning.

Cards are an adaptable, tangible and interactive resource, and they can be used to facilitate problem solving skills through purposeful challenges.

1.2 Research Rationale

1.2.1 New Zealand Primary Schools

This study focused on the implementation of a card-based wellbeing initiative in New Zealand Primary schools. These schools have to follow a national curriculum that has eight learning areas (English, arts, health and physical education, languages, mathematics, science, social sciences, and technology) (Ministry of Education, 2007). It is also known that primary schools tend to have a focus on numeracy and literacy, making up ~2/3 of the school day, with the other 1/3 being left for the other areas of the curriculum, e.g., health and physical education, science, technologies and art (Ministry of Education, 2007). The New Zealand curriculum is also subject to change, with the mathematics curriculum being changed three times over the last two years. This can add to teacher workload and stress, which builds on the fact that teachers are time poor in New Zealand (Day et al., 2019).

1.2.2 New Zealand Children are in a Poor State of Wellbeing

New Zealand children are currently in a poor state of wellbeing compared to other OECD countries. In a recent report released by UNICEF (2025), New Zealand was ranked 32nd out of 36 for child wellbeing compared to other OECD countries and 36th for mental health. According to the most recent New Zealand health survey data, around 12.5% of children were classified as obese compared to 9.5% in 2019/20 (Ministry of Health, 2024b). Poor wellbeing in school-aged children has also been linked to worsened student engagement (Boyd et al., 2017; Evans-Whipp et al., 2017; Gutman & Vorhaus, 2012), such as worsened motivation towards school, poor behaviour, and worsened academic results.

There has been an increase in attention and resources to address the poor state of wellbeing in New Zealand school children. One example is the Children's Act (2014), which is a New Zealand legislation designed to allocate resources and monitor the wellbeing of New Zealand children. However, there are other barriers within the school environment that make it difficult to implement some of the resources such as time availability.

1.2.3 There are Wellbeing Initiatives Designed to Address Poor Wellbeing

In New Zealand, there have been several initiatives to address the concerns of poor child wellbeing, including large ones such as FRIENDS for life, Mitey, Healthy Active Learning, Pause, Breathe, Smile, and Positive Behaviour for Learning (FRIENDSs Resilience Organisation, 2019; Ministry of Education, n.d.; Sir John Kirwin Foundation, 2020; Southern Cross Healthcare, 2022; Sport NZ, n.d.). However, despite these initiatives, New Zealand children still rank poorly in wellbeing-based statistics (Ministry of Health, 2024a; UNICEF Office of Research - Innocenti, 2025). These initiatives tend to focus on one specific domain of wellbeing such as mental or physical wellbeing.

Although there are wellbeing initiatives being used, there are currently none that use cards to gamify learning to both improve wellbeing and student engagement in the classroom. Gamification through cards may help by:

- Increasing engagement
- Facilitating an integrative approach of wellbeing instead of a single domain
- Being versatile, being embedded in the New Zealand school curriculum, reducing workload on the overburdened teacher

The use of a card-based wellbeing initiative is a new approach that aims to positively impact child wellbeing via the content and activities proposed by the cards while stimulating student engagement through gamification. Evaluating this approach is particularly important in the current New Zealand context as an adaptable, scalable, cost-effective approach is missing. This might help mitigate some barriers such as, poor engagement, single wellbeing domain approaches, and time poor teachers, to effectively integrating a wellbeing initiative by having an engaging resource. Through the evaluation of the card-based initiative, this study aims to contribute to existing research on approaches that promote child wellbeing and student engagement.

The cards that are being used for this study are a multi-purpose tool as they have been designed to enhance and promote child wellbeing through fun facts, activities, and challenges. The 1% Kids' Club also has four domains, *eat well, sleep well, move well, and think well*, aimed to address wellbeing. This card-based initiative aims to address all four domains of Te Whare Tapa Whā to provide a well-rounded approach to the improvement

of child wellbeing. Each card displays a wellbeing-based message under each of the above domains and is backed by relevant research and literature (see Appendix A). An example of this is the *Five of Hearts*, which displays the message "Cheers! Swap juices and fizzy drinks for water this week. Hydrate to feel great and appreciate!". This card was designed to increase water consumption and decrease sugar consumption by making a small meaningful change, while having the relevant and in-depth information available to the reader as a quick response (QR) code (Imago Wellness, 2021).

1.3 Aims

This study aims to qualitatively evaluate the experiences and perceived impact of a card-based wellbeing initiative in primary school-aged children in New Zealand.

1.3.1 Objectives

Teachers

1. Explore the approaches teachers use to implement a card-based wellbeing initiative in their primary school classrooms.
2. Explore barriers and enablers that teachers experienced when implementing a card-based wellbeing initiative in their primary school classrooms.
3. Identify perceived implications and outcomes of implementing a wellbeing card-based initiative from the perspective of teachers.

Students

1. Explore how primary school-aged children experience a card-based wellbeing initiative in their classroom and at home.
2. Identify possible implications and outcomes of implementing a card-based wellbeing initiative from the perspective of students.

1.4 Research Question

The following research question guided this study: *how do New Zealand primary school teachers and students implement and use a card-based wellbeing initiative?* In addition, *what are the perceived outcomes and impact on the students' wellbeing and engagement?*

1.5 Significance of the Study

The findings of this study will help better understand whether a card-based initiative as an example of gamified learning may have a positive impact on student wellbeing and engagement. Findings of this study will also help obtain insights on the wellbeing of students in New Zealand.

Practically, this research provides insight into how a cost effective, adaptable wellbeing initiative can be integrated into time-constrained classrooms in New Zealand. Given the fact that there is an increase in workload and curriculum changes, identifying sustainable ways to support wellbeing without adding significant burden to teachers and students is essential. Therefore, the findings may inform on the future development of scalable initiatives that align with national priorities for child wellbeing. The scope of this research will also include feedback from teachers in terms of how this initiative could be integrated into learning and into the already existing curriculum to be of more benefit to the teacher.

1.6 Structure of Thesis

This thesis has been structured into four chapters. Chapter 1 provided a background and an overview of the topic, including the research aims and objectives guiding this thesis. Chapter 2 is the literature review that provides insight into previous research into areas that are covered by this study, such as child wellbeing, student engagement, gamified learning, and card-based initiatives. Chapter 3 consists of the manuscript for this thesis. The manuscript includes an abstract, introduction, methodology, results and findings, discussion, and conclusion. Chapter 4 will explore the discussion of this thesis including strengths and limitations, directions for future research, and final conclusions.

1.7 Researcher Contributions

Author	Contribution to the study
Owen Keenan MSc Nutrition and Dietetics Candidate	Wrote thesis. The primary author of this research conducted a literature review, survey and focus group analysis, interpretation and discussion of the results, and recommendations.
Dr Kaio Vitzel PhD, Primary Thesis Supervisor	Review of the thesis, intellectual contribution to data analysis and discussion.
Dr Jared Carpendale PhD, Thesis Co-Supervisor	Review of the thesis, study conceptualisation and design, intellectual contribution to the data analysis and discussion
Prof Ajmol Ali	Study conceptualisation and design, development of the cards, negotiation with schools for implementation of the study.
Dr Krutika Nanavati	Implementation of the card-based intervention into schools: schools visits, instructions, interaction with teachers and students, questionnaires and interviews, data collection.
Research Assistants Ceri Douglas Elisabeth Oldridge Eleanor Whitfield Megan Porter	Implementation of the card-based intervention into schools: schools visits, instructions, interaction with teachers and students, questionnaires and interviews, data collection.

Chapter 2 – Literature Review

2.1 Introduction

This literature review analyses and explores meaning of wellbeing, building on earlier descriptions and how this has been conceptualised in public health programmes and education. This chapter then reviews the current status of wellbeing for New Zealand children and different initiatives that are currently in place attempting to support them. Student engagement is then defined and the link between child wellbeing and student engagement explored. Research suggests that student engagement may be improved through gamification and gamified learning (Smiderle et al., 2020). This connection will be discussed, followed by describing one potential method that could be used to implement a wellbeing initiative while simultaneously improving student engagement.

2.2 Wellbeing

2.2.1 Defining Wellbeing

Wellbeing is thought to be a multi-dimensional construct, that consists of four domains (physical, mental and emotional, social, and spiritual) (Durie, 1994) that underpins what makes one well (Bautista et al., 2023). The wide scope of wellbeing has led to different definitions being espoused by different authors. One example is from the World Health Organization (WHO) (1946) which states that health is “A state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity”. This definition of health by WHO (1946) has since been developed into what we now understand as wellbeing (Larsen, 2022), with the inclusion of three domains which will be explored further.

One example of wellbeing being defined succinctly is from Dodge et al., (2012, p. 230), who state: “The balance point between an individual's resource pool and challenges faced”. Dodge et al., (2012) highlight the challenges in defining such a complex term and describes wellbeing as a state of equilibrium. Although this term is succinct and useful for comprehending if an individual is likely to be in a state of wellbeing, it lacks depth and the inclusion of the different dimensions that need to be considered to encompass the

full-term wellbeing. Another example of a wellbeing definition by Disabato et al., (2025, p. 3), which argues "General wellbeing is defined as the experience of personally valued fulfilment within one's life". Similar to the definition by Dodge et al., (2012), the limitation with generic definitions results is lack of depth and meaning that directly relates to what the researcher is referring to when using the term wellbeing (Disabato et al., 2025). Whereas, with the definition by WHO (1946) about health, which is now better known as wellbeing, it is clear that wellbeing is complex and needs to be considered with different parts.

In the New Zealand context, the most commonly used definition for wellbeing draws from Te Whare Tapa Whā, which depicts, four walls and roof of a house (see Figure 2.1) (Durie, 1994).

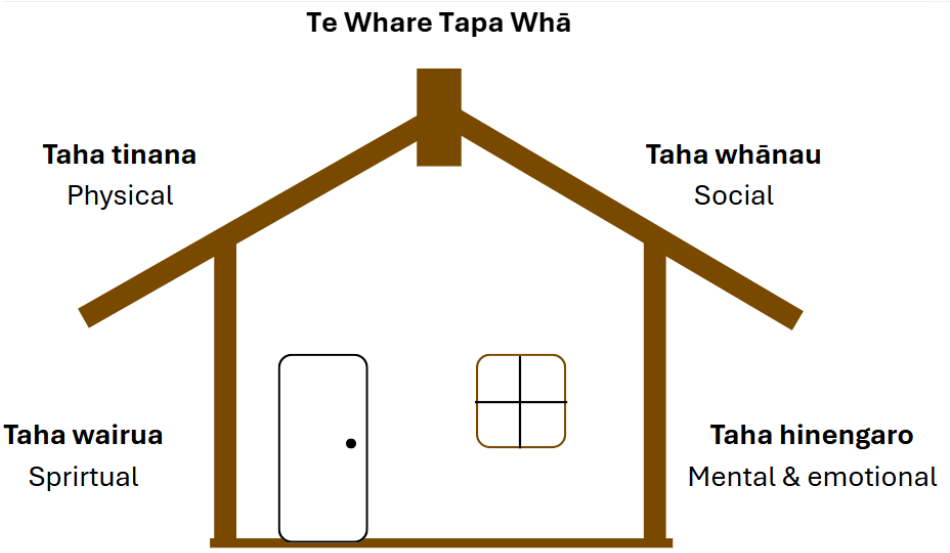

Figure 2.1. *Te Whare Tapa Whā framework of wellbeing,* adapted from Durie, (1994, p. 70).

This definition is also used as a framework as a Māori health promotion tool for Hauora, which is a holistic view of health and wellbeing, placing importance on four domains of health rather than just physical (Durie, 1994). As a definition for wellbeing, it encompasses the physical domain, mental and emotional domain, social domain, and spiritual domain. Using Te Whare Tapa Whā as a framework for wellbeing is a way to encompass a holistic approach to wellbeing.

Jarden and Roache (2023), recognise that most definitions accept the fact that wellbeing is multi-dimensional. Yet, academics seem to disagree on what those dimensions are, which seems to change mostly to do with context. For the purposes of this thesis the term wellbeing will refer to the Te Whare Tapa Whā framework as a whole and will cover general wellbeing across the four domains (physical, mental and emotional, social, spiritual) unless specifically stated. Furthermore, as this thesis is focussed on primary school aged children the term wellbeing will also be used specifically for children unless otherwise stated.

2.2.2 Wellbeing models used in New Zealand

Wellbeing models are tools often used in public health that can help people understand wellbeing and inform actions to promote better outcomes (Powell et al., 2024). This is done by compartmentalising wellbeing into discrete domains or areas means that they can more explicitly linked to parts of an intervention. These models can often have specific settings or purposes that they are used in, for example Te Whare Tapa Whā is used more for individuals (Durie, 1994), compared to other models which may be used for populations like Te Pae Māhutonga (Durie, 1999). The principle of having a model being used for specific groups, can also be applied for different cultural groups and settings, Te Whare Tapa Whā being an example developed for a New Zealand context with a specific consideration for Māori peoples. A study conducted by Rix and Bernay (2014) looked at the effects of mindfulness in primary schools found that incorporating the principles of Te Whare Tapa Whā into their programme assisting in building a well-rounded outlook on wellbeing for the children.

In addition to providing an overall approach to wellbeing, Te Whare Tapa Whā also provides researchers with aspects of importance to consider when developing an intervention. This model is divided into four domains to complete ones Hauora: Taha Tinana (physical wellbeing), Taha Hinengaro (mental and emotional wellbeing), Taha Whānau (social wellbeing), and Taha Wairua (spiritual wellbeing). Taha Tinana represents one being physically well, this means having good health and is important in feeling healthy and being able to move and exercise. Taha Hinengaro is about one's mental health, feeling happy towards life. Taha Whānau represents an individual's social connections from their family, to friends, and other relationships in their life. This is

important in the school setting for a student to build relationships and have a good wellbeing. Taha Wairua reflects what is important to an individual. The spiritual domain in this case does not just represent religion rather than the connectedness to everything around us. In a school student this may mean how much they feel they belong to that environment. This model is particularly important in the New Zealand setting with the inclusion of a spiritual domain, because of the importance New Zealand places on culture and identity in schools (Ministry of Education, 2007).

Another example of a wellbeing model being relevant for schools is Te Kura Tapa Whā, which is an adapted model of Te Whare Tapa Whā, with the addition of extra domains adding more significance to the school setting (Welch et al., 2021). The additional domains to consider when promoting wellbeing in a New Zealand school were community, school history, inside the classroom, and school environment. The complexity of adding four extra domains results in a more in-depth level of intervention design. However, using Te Kura Tapa Whā instead of Te Whare Tapa Whā adds more complexity that may require the need to adapt an intervention on school specific basis. This adapted model would be valuable for a New Zealand school specific intervention that can promote school involvement but provides challenges for a widespread intervention.

Similarly, Soutter (2014) has presented a case study that focusses on a wellbeing model in the New Zealand context. The student wellbeing model (SWBM) is a wellbeing model designed for children that consists of seven domains (see Table 2.1) instead of four: Having; Being; Relating; Feeling; Thinking; Functioning; Striving (Soutter et al., 2014). Within these domains there are similar themes that occur across other models, such as *Feeling* and *Thinking* which link closely in with Taha Hinengaro in Te Whare Tapa Whā (Durie, 1994; Soutter et al., 2014). Soutter et al. (2014) discusses how each of the seven dimensions fit under three broader categories: Assets; Appraisals; and Actions. The SWBM address factors that are vital for students in a school setting that otherwise might have been missed when evaluating an individual's wellbeing, which is similar to Welch et al., (2021) adapting an older model to include school-based domains. An example of some of the seven domains being sorted under one of the three broader categories is, *Functioning* and *Striving* both coming under the action category. This means that

students require some sort of action input to improve their wellbeing under these domains. Soutter et al., (2014) also highlighted that students will have different wellbeing needs at different points in time. Therefore, it is critical that researchers and educators are aware of these needs so interventions and support can be adapted as needed. This also highlights an area for further research to better understand points of time where students' wellbeing needs may change as they move through the school system.

Table 2.1. *An Overview of the Student Wellbeing Model* from Soutter et al., (2014)

Domain	**What the domain entails**
Having	Tools, resources and opportunities available.
Being	Intrapersonal aspects of wellbeing and autonomy
Relating	Relationships to others and the surrounding environment
Feeling	Emotions and mental health
Thinking	Cognition and thinking in the classroom. Includes learning, problem solving, and questioning
Functioning	Activities, behaviours and involvement
Striving	A want to learn and excel, these students are motivated and value excellence.

The global problem with the *Having* domain is that most tools, resources, and opportunities require an external input such as money and time (Soutter et al., 2014). This relates quite closely to the definition of wellbeing by Dodge (2012), where the resources available need to match the challenges faced. The theme of autonomy that is mentioned in Table 2.1, suggests that students should oversee their own wellbeing with teachers playing a more supportive role rather than a managing role (Soutter et al., 2014). It is important to consider equity and if a child starts falling behind in terms of wellbeing markers, will this create an even larger gap with this autonomous way of treating wellbeing. In the *Relating* domain we start to see some similarities with the overarching approach to wellbeing as conceptualised by Durie (1994). Relationships with others links closely with Taha Whānau, where both domains include the importance of interpersonal relationships (Durie, 1994; Soutter et al., 2014). The SWBM differs because it includes the addition of having a relationship with surrounding environments, whether that be at

home or at school. At a basic level, the *Feeling* domain suggests that children who experience more joy and happiness are in a better state of wellbeing under this domain (Soutter et al., 2014). On a deeper level, children who can experience a full range of emotions in a safe environment seem better off than those who cannot. When schools are supporting wellbeing from the *Feeling* domain, they are providing an environment where children can feel and explore their emotions (Soutter et al., 2014). This domain is quite similar to Durie's (1994) Taha Hinengaro, where emotional seems to be a common occurrence between definitions and models used for wellbeing. *Thinking*, *Functioning*, *Striving*, are all similar in the sense that children who are actively problem solving, joining in activities, and have a drive for success, are all engaged in the classroom. Similarly to Welch et al. (2021), The SWBM presents a limitation of not yet having enough evidence of it being used in intervention development.

These three models used throughout New Zealand provide context in how to address wellbeing. In combination with understanding the current status of wellbeing in New Zealand children, researchers can develop and study interventions in attempt to improve the status.

2.2.3 Addressing wellbeing

Before unpacking how addressing wellbeing has been theorised, first it must be understood how wellbeing can be measured and what it means to have 'good wellbeing'. With wellbeing being a multi-dimensional construct, it means that some dimensions may be better than others. The dimensions can be looked at independently to evaluate each domain, for example, looking at physical indicators such as nutrition, physical activity, or obesity for the physical domain of wellbeing. Another way that has been used to determine overall wellbeing is from UNICEF (2025) who released a report comparing OECD countries against similar metrics available. The dimensions used for this report are mental wellbeing, physical health, and skills, which align closely with Te Whare Tapa Whā. In the New Zealand context, a national health survey was conducted and published in 2024, that contained some wellbeing indicators that are measured against government recommendations (Ministry of Health, 2024b). For example, mental health concerns as an indicator for mental wellbeing or physical activity recommendations as an indicator for physical wellbeing. Using a combination of both reports, researchers can assess the

current status of wellbeing in New Zealand children. Through understanding this current state, a more targeted approach to improve wellbeing can be taken.

Boyd et al., (2017) reported on New Zealand based data from 2016 that assessed the state of wellbeing, how to foster good wellbeing, and different community roles for enhancing wellbeing in these children. In their report, they explained how schools can use wellbeing resources to target more students (see Figure 2.2) with an emphasis on "Prevention is better than a cure" (Boyd et al., 2017, p. 11).

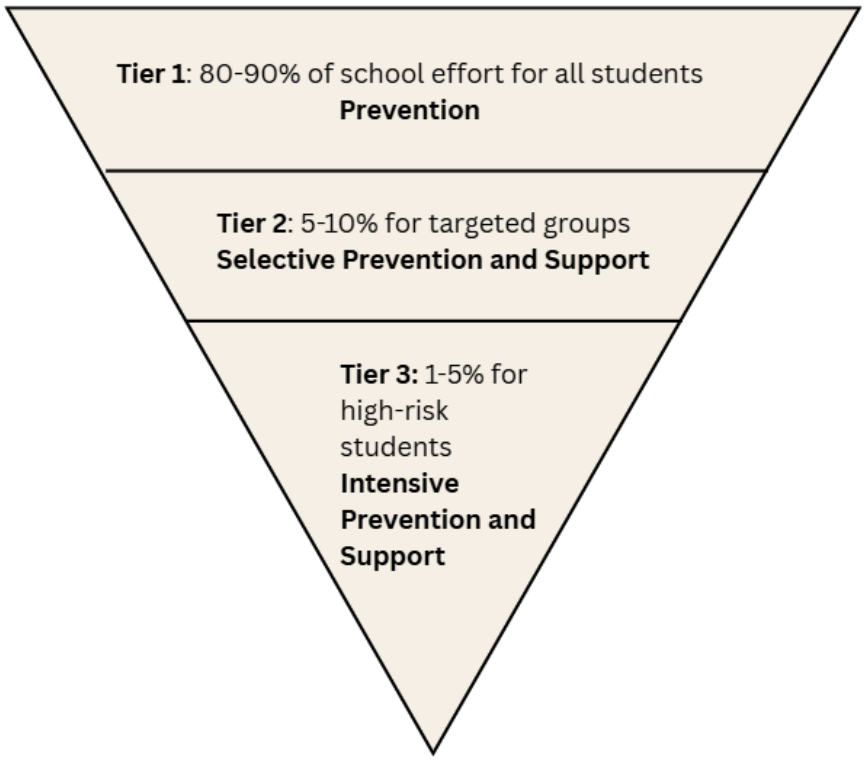

Figure 2.2. *The Intervention Triangle: Planning to promote wellbeing and behaviour*, modified from Boyd et al. (2017).

Boyd et al. (2017) explains how wellbeing resources available can be split into three tiers of allocation. Tier one should reflect around 80-90% of the resources available to be used universally. This approach is proactive and aims to prevent poor wellbeing status for all students. Tier two should utilise 5-10% of wellbeing resources available, and target select groups of children who may be at risk of having poor wellbeing or would benefit from having additional support. Finally, tier three of the intervention triangle is more direct prevention and support for the high-risk students who are more vulnerable. This three-

tiered approach presents the idea to researchers that interventions that address a wider audience can be more beneficial in preventing poor wellbeing (Boyd et al., 2017). Although the intervention triangle (Figure 2.2) is recommended by the Education Review Office (ERO) (2016), it is unclear as to whether this has yet become standard practice across New Zealand. Some researchers and organisations are aiming to tackle that with some wellbeing-based initiatives.

2.2.4 New Zealand Wellbeing Initiatives

In New Zealand there are a variety of wellbeing initiatives that have been developed by different stakeholders such as, large companies, charities, and government organisations. Following this, five examples from different stakeholders will be discussed.

- FRIENDS for Life programme: Australian-based company. (https://friendsresilience.org/)
- Pause, Breathe, Smile: Developed by New Zealand-based organisation. (https://pausebreathesmile.nz/)
- Mitey: Developed by a New Zealand based charity. (https://www.mitey.org.nz/)
- Positive Behaviour for Learning: New Zealand government-based action. (https://pb4l.tki.org.nz/)
- Healthy Active Learning: New Zealand government-based action. (https://sportnz.org.nz/healthy-active-learning/healthy-active-learning/)

One example of a wellbeing initiative being trialled in New Zealand is the FRIENDS for life programme, an Australian-based initiative designed to reduce anxiety, depression, and build resilience (Friends Resilience Organisation, 2019). This programmed is recognised by WHO and claims to promote emotional regulation and develop confidence, through cognitive behaviour therapy. This aligns with ideas suggested by Soutter (2014) and addresses multiple components of wellbeing to foster an overall improvement. As this is an Australian-based intervention, it is yet to be understood if this programme would be as effective to address mental health concerns in the New Zealand setting. An evaluation of the FRIENDS programme showed that students aged nine-10 years old (n=197) who took part had significantly reduced anxiety, as well as significantly improved self-esteem

(Stallard et al., 2005). This was replicated by Ruttledge et. al. (2016) who conducted a randomised controlled trial in Irish primary schools (n=709) and found similar results through a mixed-methods approach. This programme seems to be a beneficial to improve emotional resilience, yet it is not currently widely used across New Zealand and only addresses the mental and emotional aspect of wellbeing.

Pause, Breathe, Smile (PBS), is mindfulness-based wellbeing programme based in New Zealand (Southern Cross Healthcare, 2022). The PBS programme highlights the importance of mindfulness in primary and intermediate school children, creating a calming environment for students. By educating the teachers how to implement the programme and offering ongoing support, it allows the teachers to include this programme as they see fit. A study evaluating the PBS programme suggested that after completing the programme, primary aged students (n=124) showed an increase in mindfulness and a significant increase in wellbeing for the first three months (Bernay et al., 2016). Although showing promising short-term results, the sustainability of outcomes still seems to be unresolved, therefore they have recommended for more mindfulness programmes to be introduced.

Another example of a programme targeting primary and intermediate students is the Mitey programme by Sir John Kirwin (Sir John Kirwin Foundation, 2020). Participating schools will partner with a coach, who helps embed mental health education into the classroom and learning that best aligns with the New Zealand curriculum (Ministry of Education, 2007). Unlike PBS, Mitey coaches work closely with primary schools across the whole implementation of the programme. This design has meant that the coaches can support teachers to integrate the programme, rather than add on extra workload for the teachers. Mitey was recently subject to a longitudinal mixed-methods evaluation (Chu et al., 2025). This evaluation showed that Mitey was effective in supporting mental health and building on teacher confidence in mental health education. Additionally, Mitey has had longevity and has maintained quality over the three-year study. This programme, like FRIENDS and PBS has a focus on the mental and emotional domain of wellbeing, which highlights gaps for overall wellbeing.

Positive Behaviour for Learning (PB4L) is designed to promote wellbeing and is a prerequisite for engagement and achievement (Ministry of Education, n.d.). This involves

changing the environment in schools rather than changing the students. Schools that incorporate PB4L foster better wellbeing and can be tailored for schools one needs, providing students with a better sense of belonging. After being evaluated, the findings report showed that this programme had some meaningful change through implementing PB4L into schools (Boyd & Felgate, 2015). Although a government-based initiative, it seems to focus on enabling schools to support student wellbeing, rather than focussing on wellbeing directly. PB4L reflects the intervention triangle (figure 2.2) by focussing on supporting wellbeing across the whole school to every student (Boyd et al., 2017).

One of the largest wellbeing initiatives with ~900 schools taking part, that has been implemented nationwide is the Healthy Active Learning programme, designed to support wellbeing through healthy eating drinking and quality physical activity (Sport NZ, n.d.). Similar to Mitey, the Healthy Active Learning programme is designed to be integrated within the New Zealand curriculum (Sport NZ, n.d.). An evaluation of Healthy Active Learning showed meaningful impact in both teacher confidence as well as primary and intermediate school students' wellbeing (Ali et al., 2025). This initiative has been developed to predominately target the physical domain of wellbeing through improved nutrition and physical activity.

All of these initiatives focus on different aspects of wellbeing models to best support students in their wellbeing journey. Despite a variety of wellbeing initiatives being used throughout New Zealand, there are still some challenges that are discussed by Thabrew et al. (2023). One challenge includes the need for a more rounded wellbeing approach for primary students, as is seen in other secondary school-based initiatives (Thabrew et al., 2023). Another factor that needs consideration is the level of engagement the initiative can provide the students. Jayman and Ventouris (2020), report that students who seemed more engaged with an initiative appeared to have better wellbeing outcomes.

2.3 Supporting Student engagement through Gamified Learning

2.3.1 Understanding Student Engagement

Similar to wellbeing, student engagement in education is a multidimensional term which is usually comprised of cognitive, affective, and behavioural dimensions (Martins et al., 2022). For the purposes of this thesis student engagement will be used as a catchall phrase encompassing all three domains. Each domain will be unpacked below to provide further understanding to the term engagement.

Cognitive as a domain refers to the level engagement that a student has towards their academic work and learning (Fredricks et al., 2004; Martins et al., 2022). After reviewing 20 years of literature on cognitive engagement, Greene (2015, p. 15) defines cognitive engagement through "the type and degree of cognitive strategy used, the use of self-regulatory processes, and the degree of effort exerted". When this is applied to a child wellbeing initiative, a student may exhibit cognitive engagement through showing effort to achieve the goal of improved wellbeing/learning.

The affective domain refers to a students' emotional reactions associated with teachers, classmates, schoolwork, and school in general (Fredricks et al., 2004). Indicators of this include, showing interest and happiness, and the lack of boredom, anxiety, and sadness (Alrashidi et al., 2016). In the context of a child wellbeing initiative, affective engagement will be best understood as a student's feelings and motivation towards the initiative.

Finally, behavioural engagement refers to the students' actions in school. This may vary from classroom participation and participation in extracurricular activities, to attending class and following the rules (Fredricks et al., 2004; Martins et al., 2022). Indicators of a student exhibiting good behavioural engagement would be actions such as, asking questions, discussion contribution, following rules, and paying attention (Alrashidi et al., 2016).

Over time, there have been more ideas and theories surrounding student engagement that have been developed as an extension of the work done by Fredricks et al. (2004). Through exploring student engagement, we can begin to understand the link between wellbeing, engagement, and why these are important to consider in primary children.

The theory behind engagement and student behaviour/motivation in the classroom is a critical area to focus on in primary and intermediate aged children. This is because children tend to carry their early engagement with them through school, with studies showing that disengaged children will often not participate or not try as hard resulting in poorer results (Skinner et al., 2008). The consequence of this is that these students end up under performing and self-confirming that they are not good enough further contributing to their disengagement.

2.3.2 Child Wellbeing and Student Engagement Correlation

Research suggests that there is a close association between child wellbeing and student engagement, including some overlap in definitions (Boyd et al., 2017; Evans-Whipp et al., 2017; Gutman & Vorhaus, 2012; Schnell et al., 2025). There are complex links the resonate between both wellbeing and engagement, with studies showing that high levels of wellbeing has a positive association to high engagement and vice versa (Schnell et al., 2025; Upadyaya & Salmela-Aro, 2013).

One explanation of how wellbeing and engagement are connected comes from Schnell et al. (2025), who conducted research with Swiss secondary school students (n=754). Results from this study showed a positive correlation between student wellbeing and school engagement, where the result is academic success. Additionally, students who presented with poor wellbeing, also exhibited poor engagement at school. As both terms are multi-dimensional, there are complex links between the different domains and how they impact each other (Schnell et al., 2025). For example, there was a poor association between affective engagement as a predictor for academic success, suggesting that this domain may be a prerequisite for the other engagement domains (Fredricks et al., 2004; Schnell et al., 2025).

Another study by Datu and King (2018) conducted in Filipino high school students (n=389) highlighted that there is a two-way relationship between student wellbeing and engagement, where life satisfaction positively predicted academic engagement and negative wellbeing negatively predicted student engagement. This study contributes to the growing evidence that improving wellbeing may also improve student engagement. It has also been shown that high levels of student engagement foster several aspects of

child wellbeing, such as life-satisfaction and positive emotions (Upadyaya & Salmela-Aro, 2013).

Targeting child wellbeing in an engaging way and looking to improve engagement may be of benefit when implementing a wellbeing initiative. One example of a method to improve engagement in education is through gamification or gamified learning (Smiderle et al., 2020), which is discussed next.

2.3.3 Gamified Learning

The term "gamification" was first coined in 2002 by Nick Pelling, who used the term to describe adding game-like elements to non-game contexts (Marczewski, 2013). The term later became popular in the early 2010's where the term was brought into mainstream context, one of which being education (Deterding et al., 2011). Gamified learning, an extension of gamification, is an educational approach that involves incorporating game-like elements specifically in a learning environment. Game-like elements are varied but can be distinguished by having structure and a set of rules (Deterding et al., 2011). Gamifying learning was developed as a novel way to motivate and engage learners (Kapp, 2012).

One benefit to using gamified learning in to increase motivation and engagement in a learning environment (Dichev & Dicheva, 2017; Smiderle et al., 2020). A meta-analysis by Sailer and Homner (2020) showed significant beneficial effects on behavioural, motivational, and cognitive learning outcomes when gamified learning was used. An additional benefit of gamified learning may include social interaction, specifically collaboration and competition (Sailer & Homner, 2020). It has been shown through wellbeing models that social interaction and interpersonal skills are an important domain when considering one's wellbeing (Durie, 1994; Soutter et al., 2014). Therefore, gamified learning may also have benefits to one's wellbeing as well as their engagement as suggested by the research.

Research suggests that there are benefits to different types of gamified learning in schools, including the benefit of inclusive learning (Bolstad & McDowall, 2019). In a study conducted over a period of two years with interviews with primary and high school aged children (n=100), the students were able to clearly articulate why they found gamified

learning helpful and how they could apply this to their school learning (Bolstad & McDowall, 2019). This included the opportunity for challenge, creativity, autonomy and having a "safe place" to fail. These findings are important because part of being engaged in class is being persistent, and in order to be persistent the student needs to fail or require improvement (Skinner et al., 2008), In addition to the 100 students interviewed, there were also teachers interviewed (n=21) about their use of gamified learning in the classroom. Findings from teacher data showed that there was a tremendous benefit to student engagement not just in the context of the game but also in contributing areas such as numeracy and literacy (Bolstad & McDowall, 2019). In this study it was found that nearly all subjects could be gamified to some degree and could help the students identify connections between games and their subject content (Bolstad & McDowall, 2019). An important finding from the teacher interviews was the challenges they faced with integrating game-based learning in the classroom. These challenges included knowing where to start, finding relevant resources, budgetary restraints, other staff questions the value of game-based learning (Bolstad & McDowall, 2019).

2.3.4 Using Cards to Gamify Learning

One approach to gamify learning is by using a deck of cards, as their interactive design supports strategic thinking, problem solving, and memory recall, while enhancing motivation and engagement (Alomair & Hammami, 2024; Singh et al., 2021). A study conducted in Taiwan using card-based games for learning in high school students (n=175) showed benefits of using game-based learning to teach concepts (in this scenario, immunology) (Su et al., 2014). This study showed that there was a significant difference when the students underwent a free recall of information. The students who used the cards to learn had a significantly better understanding of the concepts that were taught compared to those taught using traditional lecture style (Su et al., 2014). The student perception also showed that the students who used the cards found this approach more interesting and perceived the learning to be more effective. Students in the intervention group were more engaged and had a positive learning experience compared to those who were in the control group (Su et al., 2014). After the completion of this study Su et al. (2014) concluded that the idea of card-based learning is beneficial and can be transferred to different topics and age groups. It was also highlighted that

most of the studies on card-based learning focussed on medical students and has now been shown that the concept can be altered for different age groups (Su et al., 2014). Similarly, a Malaysian study utilised a card-based game to teach mathematics (Yung et al., 2020). Students (n=12, 14 year-olds) seemed to enjoy a gamified approach to learning mathematics and results showed significant improvement in pre- and post-test results after using the cards (Yung et al., 2020).

Overall, there seems to be only two studies conducted internationally that evaluate the impact from using cards to gamifying learning. Additionally, there is a lack of literature that could be identified of card-based initiatives currently being used and evaluated in New Zealand primary schools. These gaps provide a need to explore the use and effects of using card-based initiatives in New Zealand primary schools.

2.4 Summary

Wellbeing is a complex, multidimensional term consisting of physical, mental and emotional, spiritual, and social domains (Durie, 1994). A holistic approach is one way to ensure that all domains are being accounted for. The current literature shows that there is an association between child wellbeing and student engagement. The interconnectedness of them can be associated with outcomes for children, with most of them being school related, such as academic success. There are several initiatives the exist to support and improve wellbeing in New Zealand currently, yet child wellbeing in New Zealand is still poor.

One method of improving student engagement when using initiatives is through gamified learning where game-like elements can be added to activities to support learning which in turn, may help improve wellbeing of New Zealand children. One approach to gamifying learning is through using cards. Research has also shown that cards-based learning may be beneficial and support improvements in learning, recall, and engagement (Alomair & Hammami, 2024; Su et al., 2014; Yung et al., 2020).

The lack of research in card-based initiatives in primary school-aged children and in New Zealand presents an opportunity to explore the role that card-based initiatives may play in improving wellbeing and engagement from the perspective of teachers and students.

Chapter 3 – Research Study Manuscript

3.1 Abstract

Student wellbeing and engagement are crucial elements contributing to life success. However, current evidence suggests that children in New Zealand experience low levels of wellbeing and classroom engagement. Gamified learning is a technique which offers a practical approach to supporting the growth of student wellbeing and engagement. This pilot study explored teachers' and students' experiences, perceptions of the implementation, and perceived outcomes of a card-based wellbeing initiative, the 1% Kids' Club, in New Zealand primary schools.

A qualitative design was used, involving semi-structured interviews with teachers (n=10) and focus groups with students aged 8-13, from years four-eight (n=24 students) across two primary schools after 10 weeks of using the cards. Data was analysed using thematic analysis.

Both teachers and students reported positive experiences with the initiative. However, limited classroom time emerged as a key barrier to consistent implementation. Some teachers were able to integrate the cards into their existing routines through short morning activities. These teachers reported greater feasibility and sustained use. Teachers and students also perceived several wellbeing-related benefits associated with the cards, including increased physical activity, increased discussions about mental health, mindfulness practices in the classroom and awareness about fruit and vegetable intake.

These findings suggest that engaging card-based initiatives may support student wellbeing when the implementation is flexible and teacher-led. This study contributes to emerging evidence of using gamification to enhance engagement on low-burden wellbeing initiatives in primary school settings and highlights the importance of adaptability for successful classroom implementation.

3.2 Introduction and Background

Child wellbeing is well understood to be a key factor to positive development, education and life success (Clarke, 2020; Gutman & Vorhaus, 2012; Ministry of Education, 2023).

Research has consistently shown that high levels of wellbeing are associated with better quality of life, social relationships and academic success, while in contrast poor wellbeing is linked to poor student engagement and worsened school outcomes (Boyd et al., 2017; Clarke, 2020; Gutman & Vorhaus, 2012). Wellbeing is understood as a multidimensional construct that encompasses physical, mental and emotional, social, and spiritual domains (Durie, 1994). This conceptualisation of the term wellbeing shows an understanding that wellbeing is more than just physical health. A holistic approach is particularly important for primary school-aged children, as it is a key developmental stage and they are building habits involved with health, learning and engagement (Statham & Chase, 2010).

Student engagement also plays a key role in student success alongside wellbeing. The idea of student engagement is again understood as a multidimensional construct made up of, cognitive, affective, and behavioural components (Martins et al., 2022). Student engagement will be used as a catchall phrase the encompasses all three components in which make up the term engagement. This is to provide a more holistic approach similar to the approach of wellbeing. Higher levels of student engagement have been associated with improved learning outcomes, classroom involvement and striving for excellence, whereas disengagement has been associated with poor academic achievement and wellbeing outcomes. Due to the interconnected role that student wellbeing and engagement play in student success, educational initiatives that address both simultaneously may provide more benefit in a primary school setting.

One approach that has been shown to enhance student engagement is through gamifying learning, which consists of incorporating game-like elements such as challenges, rewards, and interactive tasks into education environments (Smiderle et al., 2020). Gamified learning aims to make learning more enjoyable and therefore support behavioural, emotional, and cognitive engagement (Bolstad & McDowall, 2019). Within gamified learning, tangible resources such as akin to a deck of cards can provide a flexible and adaptable mechanism that can promote engagement across a variety of learning contexts. Card-based initiatives, an approach of using cards as the delivery method, have the potential to be used as multipurpose resources. It can support learning while simultaneously promoting health and wellbeing. By offering a well-rounded

approach in an engaging format, card-based initiatives may represent a practical resource to enhancing wellbeing in primary school classrooms.

In the New Zealand context, despite continued effort to improve wellbeing, New Zealand children still rank poorly (32nd out of 36) in child wellbeing compared to other OECD countries (UNICEF Office of Research - Innocenti, 2025). Existing initiatives often focus on a select dimension of wellbeing rather than holistic approach and place greater demands on the teacher in an already time-constrained classroom. For example, Pause, Breathe, Smile and Mitey wellbeing initiatives being used in New Zealand have a more predominant focus on mental wellbeing (Sir John Kirwin Foundation, 2020; Southern Cross Healthcare, 2022). Furthermore, there is also limited research in initiatives that address both child wellbeing and student engagement using low-cost, adaptable resources for classroom implementation.

There is also a lack of qualitative research exploring the barriers and enablers of implementing these initiatives from teachers and students as they are the ones using them and most involved. Exploring and understanding how initiatives are implemented is crucial for determining the feasibility of new resources and better understanding the potential sustainability of their use. Evaluations that apply foundations of participant perceptions can provide valuable insight into how initiatives work within the reality of a primary school environment.

Using a card-based initiative in New Zealand primary schools is a novel approach with the potential to support both child wellbeing and student engagement through gamified learning principles. However, the implementation of such an approach has not been well explored. Given the ongoing concern regarding child wellbeing and engagement in New Zealand schools, there is a need for research that evaluates scalable and cost-effective approaches.

This pilot study aims to qualitatively evaluate the experiences and perceived impact of a card-based wellbeing initiative (The 1% Kids' Club) among primary school-aged children in New Zealand. Specifically, the study explores strategies of implementation used by teachers, while also exploring barriers and enablers that teachers experienced during the process. This study also looks how students experienced the implementation of the card-

based initiative into their daily classroom routine and any perceived implications and wellbeing outcomes from the perspective of teachers and students.

3.3 Methods

This research project is part of a broader evaluation of the 1% Kids' Club card-based wellbeing initiative. A mixed-methods approach was used for the full evaluation of this initiative to explore quantitative outcomes in overall child wellbeing and engagement, and better understand qualitative implementation and experiences (Fetters et al., 2013) when the cards are introduced by the teachers at school and used as a regular classroom activity. The following subchapter will discuss the methods used in this pilot study, which specifically analysed the qualitative data of a small subset of schools.

3.3.1 Research Design

A qualitative approach was taken for the methodologic orientation of this study, as it is best aligned with the aim of evaluating the lived experiences of the participants using the card-based initiative (Neubauer et al., 2019). Students aged 8-13 from two schools in Auckland received and used a card-based wellbeing initiative for 10 weeks as shown in Figure 3.1. Following this, 24 students took part in focus groups and nine teachers plus one principal participated in semi-structured interviews. Focus group and interview questions were developed by the primary researcher and reviewed and edited with research assistants that were assisting in data collection. The final set of questions was constructed to answer the research objectives from the perspective of a pilot study. This was the first time this card-based wellbeing initiative was being introduced widespread into schools. This study also provided preliminary insights of barriers and enablers for the use of the cards, as well as an initial overview of the possible wellbeing effects promoted by the use of cards. Ethics approval was obtained for this study from the Massey University Human Research Ethics Committee (OM1 24/57) (see Appendix B).

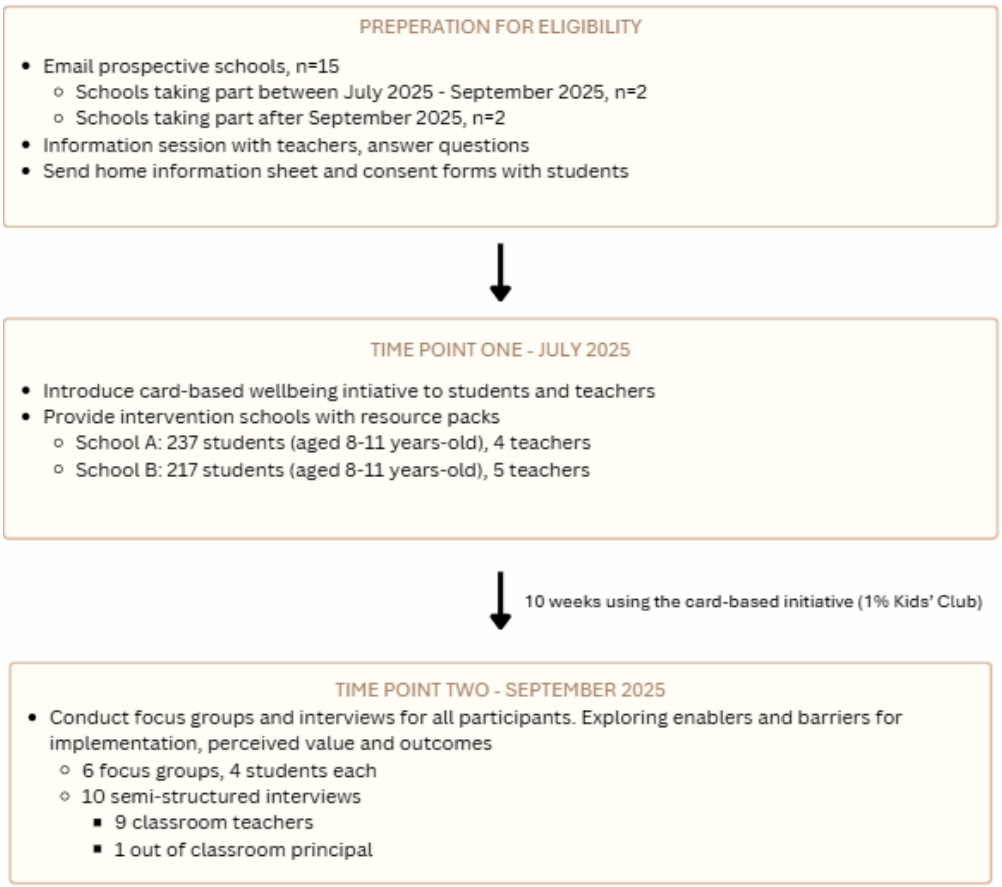

Figure 3.1. *Research Timeline: Overview of study design, including recruitment, implementation of the card-based initiative across two primary schools, and qualitative data collection following a 10-week period. The current study assessed the two schools that took part between July 2025 – September 2025.*

3.3.2 Participants

Participants were recruited by contacting school principals in the Auckland region via email, providing information about the study and an invitation to participate. Schools that were interested in taking part were then provided with additional information and resources to support their involvement in the study. An information session was also held during the morning tea break at prospective schools with the teachers of students aged eight-13 to provide examples, context and for the teachers to ask questions.

There were no school-specific selection criteria; instead, a convenience sample was used for the initial evaluation. Schools were selected from the North Shore of Auckland, New Zealand and therefore lacked a full distribution of socio-economic and ethnic backgrounds as shown across the full city. The only individual specific inclusion criteria were that the students needed to be within the correct age bracket (8-13 years old) and

coursing years four-eight. This is because the cards were developed with the intention of aligning the academic level of this age group and the reading level and skill that would be required to effectively use the cards. All students in these classrooms were given the opportunity to participate. In the case of mixed year group classrooms or children who did not meet the inclusion criteria, their survey responses were removed before data analysis.

From 15 schools that were invited to participate in this project, four schools elected to take part. For this current study the two of the schools that were assessed, took part from July 2025-September 2025 (school A and school B). School A had four classrooms that met the eligibility criteria with 237 students. This school had traditional single-cell classrooms where there was one teacher per class and students remained with the same teacher. School B had five teachers take part in the study, who were spread across two open-plan classrooms. Students at school B would move between teachers. There were 217 students that received the cards at school B.

A total of 24 student participants were randomly selected for the focus groups; these took place as six groups of four students. One focus group was conducted per class, per school. The only inclusion criteria required for the students to take part were that they needed to have returned a signed consent form from their parent or legal guardian and assent in taking part in the focus group. A total of nine teachers and one principal were recruited for semi-structured interviews.

3.3.3 Intervention

The card-based wellbeing initiative that was introduced as the intervention for this study was the 1% Kids' Club. This initiative is designed to support wellbeing by providing information on how to make small meaningful changes in four areas of health: Eat Well (nutrition), Sleep Well (sleep), Move Well (physical activity), Think Well (mental health). Like a regular deck of playing cards, each card in the 1% Kids' Club has a number and suit. What makes these cards different is that each card has a fact or activity that has been designed to support wellbeing as seen in (see Appendix A). The design of the cards was to facilitate a flexible resource that could be used in a variety of ways such as, playing

with the deck of cards and organically learning the information displayed on them, or randomly selecting a card and implementing the change.

All students that were in the classrooms that were taking part received a deck of the card-based wellbeing initiative. When the cards were delivered to the classrooms, an explanation of the cards was provided. Teachers and students were instructed to use the cards as they saw fit to allow for autonomy from both parties. This allowed for the study to explore the process of implementation from the perspective of the participants. Additional resources were provided to the teacher to support their process, these included examples of how to incorporate the initiative into classroom routines and a diary for the students to use if they wished to keep track of the cards they used. The intervention period lasted one New Zealand school term (July 2025 – September 2025) which was approximately 10 weeks.

3.3.4 Data Collection

3.3.4.1 Focus Groups

Focus groups were completed after students had been using the card-based wellbeing initiative for 10 weeks. There were six focus groups with four students each. The focus group sizes involved four students to include sufficient participants to generate ideas from each other and promote discussion (Albanesi, 2024). However, they remained less than nine, where participants are not heard, and ideas get missed (Albanesi, 2024). These were conducted on site for the students who volunteered and consented. Focus groups were facilitated by one of six trained research assistants from Massey University, with one other present to assist with field notes. The research assistant facilitating the focus group alternated for each group. No other non-participants were present, which maintained full confidentiality and encouraged honesty in responses. The interviewer sat in a room in the school environment with four students at a time and asked a set of questions (see Appendix C). Each focus group took approximately 30 minutes and were audio recorded for transcription later. The focus groups were semi-structured as the students led the direction and questions that were not relevant for that group were not asked.

3.3.4.2 Semi-Structured Interviews

Interviews with teachers were also conducted after their classrooms had been using the initiative for 10 weeks. Interviews were conducted in the classroom and all teachers who

taught a class (18 teachers across school A and school B) using the initiative were invited to take part. A total of nine teachers and one principal volunteered as participants. Interviews were conducted while their students were completing other tasks and were therefore at a time convenient to the teacher. Verbal consent was obtained prior to commencement of the interviews which lasted 10-30 minutes depending on the engagement level of the teacher. All the interviews were always conducted by the same trained research assistant with previous experience conducting semi-structured interviews. The research assistant followed an interview guide (see Appendix D) and tailored the interview based on responses given how the teacher used the resource. An opportunity was provided for all teachers at the end of the interview to contribute anything they wanted to add, which helped build on a rich data set. All of the interviews were audio recorded only and transcribed.

3.3.5 Data Analysis

The transcription derived from the focus groups and semi-structured interviews was interpreted using thematic analysis, following the guidelines of Clarke and Braun (2014). Additionally, all data analysis was conducted using Microsoft Excel (Microsoft 365, Microsoft Corp., Redmond USA). Clarke and Braun (2014) define thematic analysis as a method for identifying and analysing patterns of meaning in qualitative data. There are six phases included when using thematic analysis in qualitative research (Clarke & Braun, 2014). Phase one involved the researcher becoming familiar with the data and recording some key observational notes that may be valuable moving forward. Phase two began with coding the data, that the themes will be developed from these codes and therefore should be independent of the data. Following this, phase three consisted of formulating the themes. The previous codes merged to form themes which represented larger underlying ideas that the researcher could begin to reflect on. After a set of themes were developed, phase four commenced, which consisted of reviewing the themes against the data to ensure that the themes were cohesive and made sense in the context of the research question. The final two phases consisted of writing the theme definitions and presenting the data. Data extracts were provided as evidence to back up any analytic claims.

3.4 Results

3.4.1 Teacher interviews

During the interviews, the participants discussed how they used the card-based initiative, which included barriers and enablers for utilising this resource. Data analysis of these interviews revealed the following three themes: 1. Process of implementation, 2. Wellbeing outcomes, 3. Learning context. Teachers illustrated different levels of engagement throughout the intervention period shown in Table 3.1 Level of engagement was determined relative to other teacher participants. Teachers who were highly engaged used the initiative regularly, whereas teachers who showed low levels of engagement did not use the initiative at all or only a few times during the 10 weeks of intervention.

Table 3.1. *Teacher engagement level through the implementation of the card-based initiative.*

Teacher Pseudonym	Engagement Level
Charles	High. Using as a class activity
Kathrine	Low. Started implementing near the end of trial period
William	Deputy principal of one of the schools, gave insight of the school setting
Linley	Low
Melissa	Medium. Used the initiative for two weeks daily
Mike	Low
Ashley	Highly. Using everyday
Stuart	Medium. Used weekly
Polly	High. Used during morning slideshow
Linda	High. Used during morning slideshow

3.4.1.1 Process of Implementation

The nature of this study meant that the teachers could exercise agency and autonomy in how they incorporated the card-based initiative into their daily classroom teaching. The purpose of this approach was to organically understand how they implemented the resource to better understand the enablers and barriers associated with implementing a wellbeing initiative within a complex classroom environment. The theme of process implementation consisted of the teachers perceived value of the card-based initiative, including teachers wanting more support, and ideas around the use of technology were brought up.

Interviews showed that teachers had a perceived value associated with the wellbeing initiative, with seven out nine rating the cards a four or five out of five for usability and likeability. The other two practicing teachers rating the cards 2.3 and 3. When prompted, participants discussed what they liked about the card-based initiative. An example of this is from Stuart, who answered: *"the main thing was the whole concept. They looked like a regular pack of cards, so it was not a hugely strange thing. I think that the support material that came with it was quite good"*. Similarly, when asked the same question Ashley said, *"I think they're a fantastic idea"*.

Alongside perceived value, there were also challenges that came along with implementing the cards regularly into the classroom routine, in which the teachers wanted more support. Some areas that teachers recommended support could be added was through regular reminders, lesson plans, or more direction of how to incorporate the initiative.

Mike explained the support of a lesson plan by taking the additional work away: *"Teachers in general would like a lesson plan, 100% they would love it because it takes the work away from them"*. Kathrine also highlighted that reminders could be a good option by saying, *"It could be good to get weekly reminders"*, whilst also highlighting that this could add another level of stress, *"although hard if it was constantly pinging at you"*. Linley suggested, *"[Researchers] could have an introduction at the beginning of the year to provide everything at once"*.

Another barrier highlighted by three of the teachers was the use of technology, whereas for others this was seen as an enabler. This suggests a flexible initiative may work best for a classroom environment. By providing the teachers with a paper copy only, it limited the use of technology required to use this initiative. Both Polly and Linda integrated the cards into their morning slideshow, managing to implement the card-based initiative in a way that worked for their daily classroom routine. When discussing what they liked about the initiative, Linda talked about liking the ability to have it digitally based from using the website by saying, *"Teachers do a lot of planning and work at home. So, if you don't take those cards home with you, you are limited to be able to plan them into a lesson"*. Furthermore, Mike suggested that in the modern learning environment there is not as much use for cards: *"However, how often do we use card games in this day and age? Not as much as we might have 15 years ago"*. In contrast, Charles liked the use of physical cards, *"just having the physical cards and having that sort of stuff that can be laminated on the walls"*. These examples highlight that different factors, in this case digital vs. physical cards, can be viewed as an enabler or a barrier depending on the teacher's access and views.

Overall, the process of implementation was a positive experience for most teachers, and they were able to provide insight into how the process took place and ways that it could be improved. They were then able to discuss perceived outcomes after using the cards.

3.4.1.2 Wellbeing Outcomes

Following the implementation there were some outcomes from using the initiative that teachers discussed during the interviews. These were separated into, perceived improvement in wellbeing indicators, a promotion of discussion about wellbeing, and that their students were more engaged.

Through interviews with the teachers four out of 10 discussed that there was perceived improvement on wellbeing indicators, such as physical activity, social interaction, nutrition, and sleep. Polly explained how she noticed her students would have healthier habits and discuss wellbeing amongst themselves after using the cards. She recalled one of her students saying *"oh, look at my lunchbox, it has got the five rainbow colours"*. Linda

also shared as a result of using the cards that: *"I've had more of a focus on drinking water. I've had kids come up to me and be like, I've finished my bottle already"*.

A more prominent outcome, however, with seven teachers discussing it was how the wellbeing initiative promoted conversations and discussions about wellbeing amongst the students. Teachers who may not have used the cards into classroom routine as much as other still found that their students were discussing wellbeing more. Stuart talked about how the visual prompt of the cards was a good segway into discussion, *"Quite a nice visual prompt as well, I like to get them talking. It's quite nice"*.

When asked about changes noticed in their students, Ashley said *"They're always talking about eating and sleeping well, which is good. I don't think they ever cared about sleeping before..."*. When asked the same question, Stuart said *"[The card-based initiative] means the students have more awareness. It gives us a framework to talk about"*. As a result of using the cards, students seemed to be engaged through class discussions. In addition to this, five teachers also thought overall engagement related to the card-based initiative increased. When also asked about changes they have noticed in their students Linda said, *"We have had the school show, so the kids have been exhausted. But hey have been really engaged in discussion and engaged in the humming and moving"*.

Outcomes that stemmed from using the card-based initiative varied, and teachers were able to provide perspective from their own experiences. It became apparent that these experiences need to be considered in the wider learning context.

3.4.1.3 Learning context

Learning context as a theme is about understanding the enablers and barriers to implementing a card-based initiative into primary schools in the New Zealand setting. Data analysis revealed that promoted or inhibited the use of the initiative, which were at the government, school, or classroom level.

At the government level, the curriculum and amount of flexibility by teachers was limited with the recent structural change to numeracy and literacy. The enablers and barriers at this level are consistent across the country as all schools face the same challenges with time available. There are also enablers and barriers that can vary between schools, such as events, classroom resources, classroom layout (e.g., mixed classrooms vs. single cell

classrooms). Finally, these differences can also be seen at a classroom level and can be teacher dependent.

Government Level

The sub-themes at the government level were that teachers are time poor and there is an opportunity for the initiative to be integrated within the curriculum. These subthemes were replicated across both schools and all classes as they stemmed from a systemic level.

Time as barrier was brought up by every teacher who was interviewed. Five teachers found it difficult to integrate this resource as they felt they did not have enough time in the day. Callum gave insight into the difficulties of implementing a new resource by saying *"The nature of education at the minute means that when we're trying to put in support to help with this sort of thing [wellbeing], we just don't have time"*.

However, when asked if this resource could be implemented into their annual teaching plan or part of their wellbeing goal, all teachers said it could be added. Charles provided insight by saying: "as I've been going through some of the cards, there are elements that fit within a few of the curricular areas". Both schools A and B used Mitey another wellbeing initiative and four teachers highlighted that two resources could be used if integrated together to provide a more rounded approach. Mike said *"It would probably align quite well with Mitey, which is what we have been using. I do think the biggest barrier to utilising new things like this is time"*.

School Level

At a school level the sub-themes that developed from the interviews were the timing of starting the implementation and the length of implementation. It became apparent through the interviews that daily routine is something that these teachers valued, and adding in a new resource was difficult in term three of the school year. Four teachers raised that it would be better to start the implementation at the start of the year rather than term three as that is when they are setting up class routines and planning learning and teaching experiences. This was expanded on by Charles who said: *"It would be better if you started in term one rather than term three. It's probably going to be better and then*

you can factor it into your daily or weekly programme". Ashley also said, *"We just needed more time as we haven't been able to make the best effort we could"*, when asked how the implementation could be improved. When asked a similar question, Mike said *"I feel like because we've had our school show at the moment, we haven't been able to utilise them as much"*.

Classroom Level

At a classroom level, enablers and barriers to implementing this card-based initiative became more dependent on teacher preferences and classroom dynamics. This was shown through how different teachers used the initiative and how the teacher valued health and wellbeing.

Through letting the teachers implement the card-based initiative organically, it meant that, how teachers chose to use it differed between classes. For example, some teachers used them daily as part of their morning routine and others would use them randomly and pick a random card to discuss as a class. Another example was when teachers chose not to use them in the classroom setting and to let the students use them as they please.

Maggie described how they used the cards by *"I would do my morning Tikanga, and then just pull out a card, click on the barcode and then read the facts that it was giving us"*.

Teachers who had different backgrounds in mental health education or a PE background would tend use cards that aligned more with their own values. For example, Mike had a background in child mental health and said, *"I am quite a big mental health advocate, I think it is nice for them to look at [wellbeing] through a different lens"*. Ashley who had a background in PE said, *"I usually do the eating ones as I used to do health and PE so it's just my preference"*.

3.4.2 Student Focus groups

Focus groups conducted with the students, provided information and insight into the process of the card-based initiative being implemented into their daily routine, while also highlighting the benefits that they perceived. The engaged level displayed by each focus group is outlined below in Table 3.2 This level was determined based on consistency of use of the cards at home and/or at school. Students who showed "High" levels of

engagement were able to discuss how they were using the cards in both settings. Whereas students who showed "Low" levels of engagement had limited use of the cards in both settings.

Table 3.2. *Student focus group engagement level through card-based initiative implementation*

Student Focus Group*	Engagement Level
Focus group 1	High. Used at school and at home
Focus group 2	High. Used at home only
Focus group 3	Low. Used rarely at home only
Focus group 4	High. Used at school only
Focus group 5	Low. Used rarely at home only
Focus group 6	High. Used at home only

**Note: All focus groups consisted of four participants.*

3.4.2.1 Process of implementation

In situations where the teachers did not use them frequently in class, the students seem to have used them more at home which ended in a variety of uses for the cards, depending on the student.

It was apparent that the students liked the card-based initiative with 19 out of 24 students rating the cards a 4 or 5 out of 5 for likeability. Some reasons provided as to why the students liked the cards were, they liked the activities, they were learning new information, they found them interesting, and they were fun to use.

When asked what they liked about the cards, a student from focus group 1 said *"They are fun, and it gives me something to look forward to"*. After being asked the same question, a student from focus group 5 said *"I liked that they had a double use, I could use them as cards, and they helped with wellbeing"*.

In addition to the students enjoying the cards there were also barriers which prevented them being used as frequently as intended. Some of the barriers identified by the students were that they, wanted more guidance, context, and more relevant cards. Other

barriers included, their teacher not using the cards in class, and a few reported having technical difficulties. Firstly, students valued having clear purpose with an initiative. Some students reported that they enjoyed the resource but did not know how they should use the cards and what the purpose of them was. A student from focus group 4 said *"I didn't know the why behind the cards or what could be improved by using them"*, when discussing what could be improved about the initiative.

Students using the cards, especially independently compared to a class activity, were more likely to be selective of the wellbeing activities they were choosing to use. For example, a student from focus group 1 when explaining how they used the cards at home said, *"most are easy to understand by myself, so I choose a card and read it"*. This highlighted the importance of a wellbeing initiative needing to be relevant from both the angle of science but also what the students find interesting. For example, when asked to design their own card, 16 students suggested a card that combined their personal interest (e.g., sports, music, nature, food) with aspects of the original cards. Whereas a student from focus group 4 said *"Some of the pictures are cringy/creepy"*, when asked what they did not like about the initiative. This highlighted the relatability required for this age group.

A prominent barrier to the students using the cards was whether their teacher used them in the classroom or not. In cases where the teacher did not use the cards, it meant that students were limited in their ability to use them at school. A Student from focus group 2, when offered to share any other information said, *"Our teacher didn't put them out to play with, I wanted to use them at school more"*. One barrier brought up by six students was having some sort of technical difficulty with the cards, often having trouble scanning the QR code. A student from focus group 3 explained, *"I have been playing with the cards, but when I try and scan the QR code it did not work"*. This issue is something to consider when implementing any resource with a digital aspect, particularly for children as it needs to be as user friendly as possible along with troubleshooting guides and information.

3.4.2.2 Wellbeing Outcomes

Students seemed engaged and wanted to use the cards. This engagement was evidenced through students recalling wellbeing facts from the cards or through passionate discussion, which was portrayed by the use adjectives and tone of voice. For example, a student from focus group 2 recalled, *"I learnt you can reduce the chance of illness with certain foods"*. Seven students in total were able to recall specific facts from using the cards with another 10 signalling that they had learnt new information without expanding on specific points. When asked if they had a favourite card a student from focus group 4 excitedly described trying one of the activities at home, *"My favourite was testing one of your friends with a blind taste test of fruits, but I did it with my sister"*.

Another outcome finding of the focus group was that some students implemented a wellbeing-based action. A wellbeing-based action was determined by any action that could enhance any of the pillars from Te Whare Tapa Whā. For example, when explaining how they used the cards a student from focus group 1 said *"I convinced my mum to let me scooter to school with my friends"*. Additionally, a student from focus group 6 explained *"I now sleep better as a get off my devices earlier"*.

Following a lifestyle or a habitual change, some students were able to form connections relating to the perceived improvement of wellbeing. When asked what they have been learning through using the cards, three students from different focus groups described making a change and feeling "healthier". For example, a student in focus group 6 said, *"I sleep better and I'm healthier"*. In these focus groups other students seemed to agree with the statement, through verbal cues such as "mhmm" or "yes" although not directly discussing the point or elaborating.

3.4.3 Summary of Findings

Through data analysis of both the teacher interviews and student focus groups, an understanding of the process of implementation of a card-based wellbeing initiative could be better understood. Outcomes that resulted from using the initiative could also start to be understood through sub-themes from both teachers and students. Overall, the findings showed that most participants had a positive association but experienced some barriers that prevented the resource being used as part of a daily classroom

routine. It will now be discussed what these findings mean in the context of the literature review.

3.5 Discussion

This pilot study explored how a card-based wellbeing initiative was implemented and used in New Zealand primary schools, and the perceived impacts on student wellbeing and engagement from the perspectives of teachers and students. The findings suggest that both teachers and students saw value in the card-based initiative, however, contextual fit within the New Zealand school environment was a key moderator to the consistency of use. When the cards were embedded into existing routines, teachers and students reported good levels of engagement and small yet meaningful wellbeing-related actions across multiple domains.

3.5.1 The Role of the Learning Context

A key finding from this study was that teachers felt that they were time poor, which negatively influenced their ability to integrate the wellbeing initiative consistently. All teacher participants highlighted limited time as a barrier to implementation, which aligns with previous research identifying workload pressures within New Zealand classrooms (Maharey et al., 2021). Furthermore, initiatives that were perceived as add-ons were less likely to have uptake, which reinforces the importance of designing wellbeing resources that can be integrated into existing classroom routines.

Teachers who were able to embed the card-based initiative into their classroom routine, for example, using them as a daily morning activity to get their day started, reported fewer barriers and their students reported better outcomes. Another example of embedding the cards in daily classroom routines was through integrating the cards into existing learning areas. This was highlighted by students in focus group 4 who all discussed using the cards in numeracy lessons in some capacity, *"In maths we play the timer game"*. This reduced the time constraint in a crowded curriculum by supporting the learning of wellbeing alongside other areas. This supports integrated learning approaches, where multiple learning outcomes are addressed simultaneously, reducing the burden on teachers (Matinho et al., 2022). Similar findings have been reported in the New Zealand secondary school context, where integrated learning supported both teachers and

student experiences (McDowall & Hipkins, 2019). Together, these findings reinforce that resource flexibility and adaptability are critical design features that allow for integrated learning and supports wellbeing initiatives in New Zealand primary schools.

Through encouraging teachers to use their autonomy in how the cards were being used for this pilot study, different implementation methods were observed. Some creative and contextually appropriate approaches, such as adapting the cards themselves to build a morning slideshow or completing one card as a class together. In contrast, there were teachers who struggled to implement the resource into their classroom routines. When prompted, these teachers would have opted for more support to reduce burden such as ready-easy-to-use lesson plans. This shows that although flexibility is key, guidance and support during the implementation phase is still important.

Student voice during focus groups reiterated the importance of relevance and purpose. When students could make a personal connection to wellbeing domains that were represented by the cards, engagement seemed to be improved through excitement in the focus groups and vocalisation of the link. For example, one student was passionate about being taking his scooter to school rather than going in a car and increasing their physical activity. Where the relevance was unclear for the students, engagement seemed to be reduced. An example of this was one student discussing how they did not understand how sleep was relevant to their wellbeing and therefore would tend to not use those cards. These findings align with existing research showing that relevance enhances student engagement and learning (Bolstad & McDowall, 2019; Dowden et al., 2024).

Students also discussed how they enjoyed using the cards, which suggests that the gamified elements may have contributed towards engagement. Gamified learning has been shown to increase motivation and participation, thus improving engagement (Bolstad & McDowall, 2019; Smiderle et al., 2020). Enjoyment seemed to be an enabler in which the students engaged with the resource and wellbeing concepts, which supports the potential value of card-based approaches in wellbeing initiatives.

3.5.2 Wellbeing Outcomes

When the card-based initiative was used consistently, both teachers and students reported small but meaningful wellbeing-related actions. These outcomes aligned with

the Te Whare Tapa Whā wellbeing framework, encompassing physical, mental, social, spiritual pillars (Durie, 1994).

In the physical pillar, some students reported increased physical activity or small dietary changes, such as including a greater variety of foods in their lunch boxes. Although some of these changes may be small (hence, the name 1% Kids' Club), the actions may help improve the wellbeing state of children, as students take steps in the right direction, considering that physical inactivity and poor dietary habits are of concern in New Zealand (Ministry of Health, 2024a).

Mental wellbeing outcomes were most evident through a perceived increase in discussion and awareness during classroom activities. Teachers and students reported more open, frequent discussions about mindfulness and mental health when prompted by the cards. Given ongoing concerns about child wellbeing in New Zealand (UNICEF Office of Research - Innocenti, 2025), initiatives that normalise discussion and create a safe space add value.

Social wellbeing was supported when students were completing interactive activities with other classmates. Students also expressed during the focus groups a preference for collaborative activities rather than individual approaches. This suggests that the initiative may reinforce existing social strengths while supporting students who may benefit from the added help in this domain. Spiritual wellbeing was not directly targeted but supported indirectly through inclusivity, and whole-class participation that fostered a sense of belonging and community that is consistent with holistic wellbeing (Boyd et al., 2017; Durie, 1994).

3.5.3 Implications for further research

The findings above suggest that effective implementation of wellbeing initiatives is a prerequisite for wellbeing outcomes. Card-based initiatives such as the 1% Kids' Club in this study, show potential to support wellbeing through the use of gamification when they are adaptable, relevant, and can be integrated into the learning context. Designing resources that minimise teacher burden while also offering optional guidance may enhance usability and sustainability (i.e., cards being used for a longer period of time).

This study contributes with novel qualitative insights into the implementation of a card-based wellbeing initiative within New Zealand primary schools. Inclusion of both teacher and student perspectives have increased the quality of evaluation of the implementation process, usability, and perceived impact.

However, the study was limited by a small sample size and a relatively short implementation period, this restricted the ability to explore long-term sustainability and demographic differences. Future research involving larger, more diverse samples and longer intervention periods would provide a more comprehensive understanding of the effectiveness of card-based wellbeing initiatives.

3.6 Conclusion

This pilot study suggests that card-based wellbeing initiatives may support student wellbeing in an engaging way in New Zealand primary schools when implemented in ways that align with the learning context. Moderators, such as adaptability, relevance, and integration into existing classroom routines, influenced the usability and the level of wellbeing outcomes experienced from using the initiative. While preliminary, our findings suggest that low burden, engaging resources offered to students may represent a practical pathway to reduce some of the poor wellbeing metrics of New Zealand children, even if through the introduction of small yet meaningful changes, such as ones presented by the 1% Kids' Club.

Chapter 4 Discussion

This study aimed to answer the research question of *how do New Zealand primary school teachers and students implement and use a card-based wellbeing initiative?* In addition, *what are the outcomes and impact on the students' wellbeing and engagement?* The findings suggest that while teachers saw value of the cards, some barriers impeded implementing the initiative into their daily classroom routine. Although, when the card-based initiative was used regularly, teachers did notice some wellbeing-based changes in students. For example, they perceived an increase in physical activity or discussions about personal mental health, and reported that their students seemed to be engaged when using the initiative through discussion and enjoyment. The students also enjoyed using the resource, which was brought to light during the focus groups. However, students also found some barriers, such as understanding the purpose or being given adequate time and resources to use the cards, to implementing it into their daily routine at home and in the classroom. The students also reported more wellbeing-based actions as a result of using the cards such as increasing physical activity, more social activities, and aiming to eat a balanced lunch.

4.1 The Role of the Learning Context

Teachers in this study reported being time poor, which aligns with previous research (Maharey et al., 2021). Time availability acted as a barrier as they found it difficult to implement new activities into their routine.

The learning context, which draws from various moderators, can act as either a barrier or an enabler for a wellbeing initiative – depending on the specific nature of the context. The learning context as discussed in the results section refers to any aspect of the New Zealand school learning environment, whether that be at a government, school, or classroom level. For example, an initiative that requires a lot of extra time would be ineffective due to the limited time resource that teachers have. Furthermore, implementing a resource that is a contextual fit (i.e., can be imbedded within daily classroom routine) may help mitigate barriers by better aligning with the teacher's existing schedule and workload. At a basic level, an initiative needs to be implemented and used effectively in order for the users to gain any potential benefits from it. This

makes implementing the resource in a way that works for the user a priority to get maximal potential gain.

Considering the learning context also means that future researchers can focus on the enablers to enhance the usability of the resource. In the case of the 1% Kids' Club in this study, using cards as a mechanism to support learning about wellbeing meant that teachers had the option to integrate through with other content areas such as mathematics. This idea is referred to as integrated learning, where teaching multiple concepts can be merged into one lesson (Matinho et al., 2022). A study conducted in New Zealand found that teachers in secondary schools who had used this approach had an overall positive experience and identified benefits for themselves and their students (McDowall & Hipkins, 2019).

Due to the nature of allowing the teachers to organically implement the cards, some teachers were able to creatively find ways to integrate the card-based initiative into their routine in a way that worked for them. In contrast, other teachers who struggled to implement were able to highlight what they needed to reduce some barriers, such as short, easy-to-use lesson plans. The learnings and insights from the teacher interviews may be able to be replicated across other initiatives or activities that are being implemented throughout schools to help with usability and engagement.

The idea of a relevance was also reiterated by student voice. Findings from focus groups showed that students were more engaged and valued having purpose or relevance involved with this process. Relevance for the students meant having wellbeing domains that they could make connections with, for example, one student could not make the connection between sleep and wellbeing and therefore avoided the 'sleep well' cards. Another student discussed the relevance they found with not using technology (See *nine of spades* in Appendix A) one hour before bed as it was something they previously did before using the intervention. Studies show that when work is more relevant to students, they form a better connection with it and are more engaged (Bolstad & McDowall, 2019; Dowden et al., 2024). Another way by which relevance can be added is through gamified learning and making initiatives more fun and engaging for the students (Smiderle et al., 2020). Similarly, to the teachers, this highlights that first and foremost an initiative needs to work for the user to be effectively implemented. Findings from this study suggest that

ensuring initiatives are relevant for students and they can be integrated easily by the teacher may have more impact. Having effective implementation is currently relevant in the New Zealand setting as engagement and child wellbeing is poor. Improving wellbeing will only come from applying resources appropriately to best support and engage teachers and students.

4.2 When the card-based initiative is used, there are outcomes that follow.

Children in New Zealand are currently in a poor state of wellbeing (UNICEF Office of Research - Innocenti, 2025). After using the 1% Kids' Club cards, there were some perceived and actual outcomes experienced by both teachers and students. The level of engagement and using the wellbeing initiative was the biggest contributor to positive outcomes being experienced, meaning that the more engaged the participant was, the more outcomes or strength of outcomes were experienced. Following from this positive wellbeing outcomes were considered in a broad context as some wellbeing-based actions that aligned with Te Whare Tapa Wha (Durie, 1994). For example, some students reported making positive exercise or nutrition-based changes, which for the purpose of this study were considered a positive physical domain change.

Preliminary findings suggest that students who used the 1% Kids' Club cards were able to perceive some benefits and make some wellbeing-based actions. Teachers who participated in this study also noted that their students were engaged when using this resource, with seven out of nine teachers reporting that this initiative was promoting wellbeing-based discussion. This is an important finding as it provides a more holistic approach to enhancing wellbeing by addressing more than just the physical domain. The holistic approach of this initiative also means that it can cover aspects of other wellbeing initiatives through just using one, with many teachers reporting some similarities with a wellbeing programme they already use. Perhaps a well-rounded approach to wellbeing enhancement may help alleviate some of the barriers such as resource overload and time as a barrier.

The various outcomes that were reported are important in the context of wellbeing as it is such a broad concept with many different aspects. The purpose of the 1% Kids' Club is to have small achievable improvements that are compounding over time. However, due

to the nature of this study and some of the limitations, preliminary findings are only able to show small improvements.

Nutrition (Eat Well) is one area where participants explained they were able to make small achievable changes. For example, some students reported changing their lunch box to include more colours as per *Ten of Hearts* in Appendix A. Eating a healthy balanced meal is indicative of consuming a variety of nutrients, more fruits and vegetables, and less energy dense food. With New Zealand having high child obesity rates (Ministry of Health, 2024b) and obesity commonly being used as a metric to measure physical wellbeing status (UNICEF Office of Research - Innocenti, 2025), a small change to switch to a more balanced school lunch can be seen as a positive change which has the potential to improve an individual's wellbeing over time. In conjunction with this area, physical activity (Move Well) is another metric that New Zealand children are currently below the recommendations (Ministry of Health, 2024b). Increased physical activity in children has been shown to be beneficial and reduce risk of all-cause mortality (Juonala et al., 2011). One participant through using the cards opted to scooter to school rather than get dropped off via car.

Mental wellbeing (Think well) was an area that was reported to be improved predominantly through discussion for this study. Both teachers and students reported talking more about mindfulness and mental health in classroom discussion when prompted. New Zealand children are currently in a state of poor mental health with high rates of suicide compared to other OECD countries (UNICEF Office of Research - Innocenti, 2025). Promoting discussion around the topic and creating safe spaces for students to talk amongst themselves and with their teacher promotes a positive mental wellbeing environment that is set for growth and improvement.

Social wellbeing was perceived to be improved through interactive activities between students or teachers using the cards in a classroom activity. When prompted on what sort of card the students would design, most students suggested something that involved doing an activity with a partner. This highlighted that the participants in this study valued social interaction and likely already had a good social wellbeing. This may also indicate that students who also would benefit from an improvement in social wellbeing could gain value from the nature of interactive activities from this initiative.

Spiritual wellbeing was an aspect that was not directly improved but rather holistically supported. As encouraged by Boyd et al. (2017), this wellbeing initiative was implemented to all students (within the age range) and therefore also helped foster a sense of community. Spiritual wellbeing was promoted in this way by helping students all feel involved and building a feeling of community around the 1% Kids' Club.

4.3 Strengths and Limitations

The study proposed a novel way of addressing child wellbeing and student engagement simultaneously, which are two major problems in New Zealand schools. Gamification was used as a strategy to stimulate student engagement in combination with the holistic approach of the 1% Kids' Club cards, which stimulate students to adopt small but meaningful behavioural changes that contribute to better wellbeing. The well-rounded characteristics of the card-based initiative provided the versatility necessary for a flexible teacher-led implementation that fitted the framework and limitations of New Zealand schools.

Secondly, the inclusion of teachers' and students' perspectives meant that differences within schools could be analysed, and nearly all perspectives were captured to allow the researcher to draw conclusions about how to implement wellbeing resources in New Zealand primary schools in the future. Another strength of the research design was the study taking place in the New Zealand setting. There is an abundance of wellbeing-based resources available in New Zealand yet there is still a prevalence of poor child wellbeing seen. The approach of this study meant that researchers could better understand how to best design and implement wellbeing resources into schools to promote better usability from the teachers and students.

In addition to the strengths there were also some limitations. The predominant limitation stemmed from a small sample size. One of the main findings in this study was that teachers are time poor, therefore recruitment was difficult as schools did not have capacity to take part in the study. The small sample size also meant that demographical data was unavailable, and we were unable to determine any differences between demographics. Another limitation of having a small sample size was that data saturation was not reached. Due to the timing of the study, the length of implementation may have

been too short to fully evaluate the process of implementation. In combination with that, the short length of the study meant that it was difficult to fully comprehend the outcomes observed and the longevity of the habitual changes seen. A longer intervention period may have provided insight into if timing of year made a difference or if teachers needed more time to develop a routine around a wellbeing initiative.

4.4 Conclusion

This study explored the implementation of a card-based wellbeing initiative in New Zealand primary schools and the perceived effects from the perspectives of teachers and students. The participants signalled that the cards were effective and could be beneficial for their wellbeing. Through exploration of how teachers implemented the initiative it was uncovered that a key part of the process is considering the learning context. Teachers are time poor, and the curriculum is crowded, therefore embedding wellbeing initiatives into the existing curriculum may help relieve some added workload pressures. Through organic implementation some teachers did this quite well, where others found they needed more support, which is valuable insight that can be applied to further research.

The perceived effects discussed by the students often portrayed as a wellbeing-based action that stemmed from using the cards. Due to the holistic approach of the cards, it also meant that there were a variety of benefits perceived from different participants, with some gravitating more towards physical benefits and others towards mental health benefits. Again, due to limitations of sample size and study length, we can conclude that the 1% Kids' Club cards may have potential benefit to be embedded in New Zealand primary schools with some improvement to child wellbeing whilst supporting student engagement.

Teachers have a need for flexibility and autonomy when implementing resources into their pre-existing routines, and they also value quick and low-burden resources. Similarly, schools have a need for embedding wellbeing initiatives into the curriculum and avoiding add-on resources that cause more stress for teachers. For future wellbeing initiative developers, it is important to make flexible resources and to provide optional support with clear direction that teachers can use as required or if they found they would like more

support. As mentioned above, through the organic implementation teachers will have independent perspectives about what works for their routine.

Recommendations for future research following this study are to evaluate a card-based wellbeing initiative that is developed with teachers to promote usability. It is also recommended that further research of wellbeing initiative in New Zealand should be completed with larger sample groups, a larger demographic range, and a longer intervention period, to fully understand the sustainability of wellbeing initiatives.

In conclusion, this study highlights that card-based wellbeing initiatives such as the 1% Kids' Club may support child wellbeing and engagement in New Zealand primary schools when they are implemented in ways that align with the learning context. The changes proposed by the 1% Kids' Club, despite small, represent simple steps towards better wellbeing by addressing physical inactivity, poor dietary habits, and poor mental health, which are all concerns of New Zealand. The findings suggest that gamifying learning has potential to make the resource more engaging and promotes usability from the perspective of the student. Through flexible and integrated implementation, card-based wellbeing initiatives could be used to support students' wellbeing within the realities of the practical school environment.

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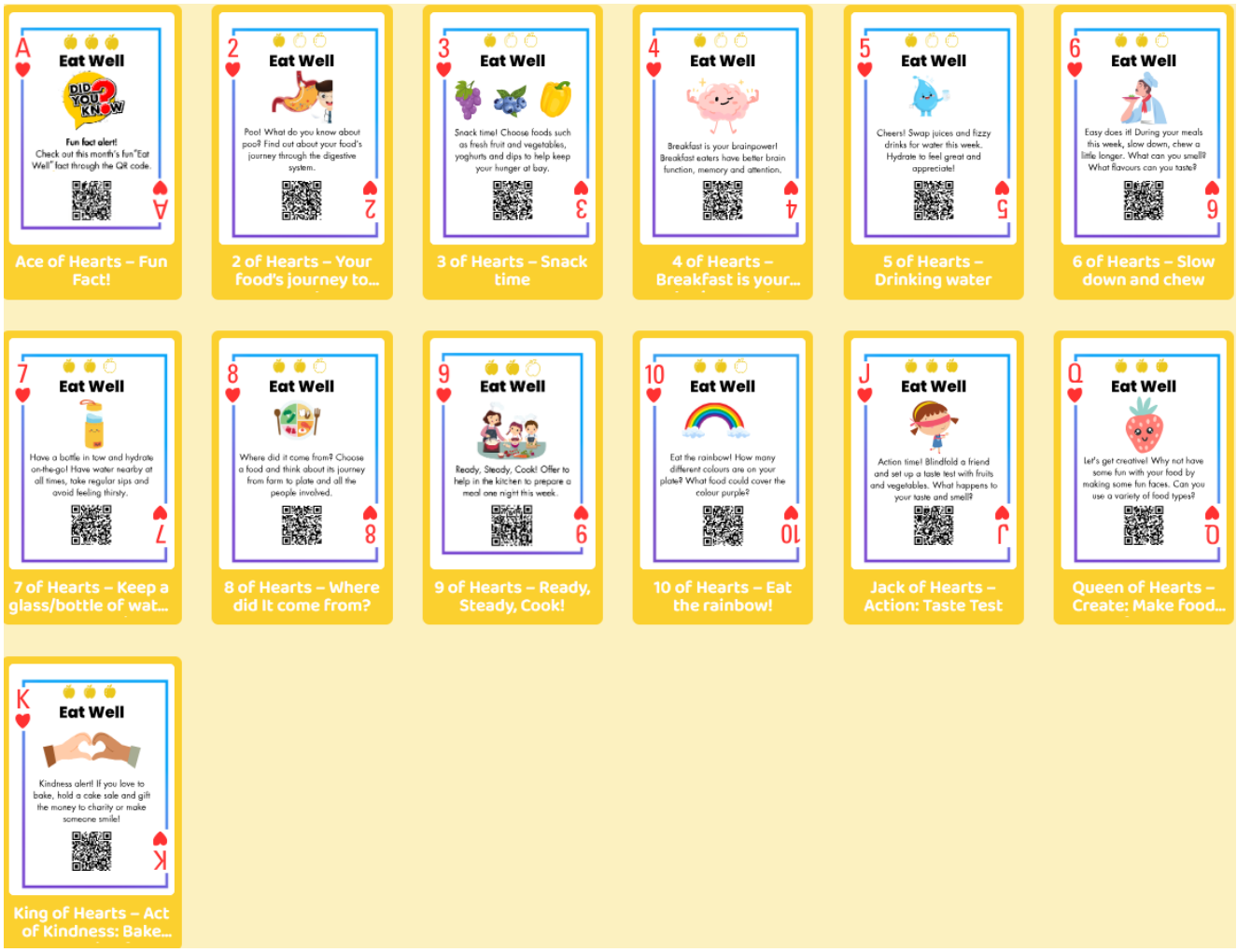
Appendix A – The 1% Kids' Club Cards


A
Eat Well
DID YOU KNOW
Fun fact alert!
Check out this month's fun "Eat Well" fact through the QR code.
A
Ace of Hearts – Fun Fact!
2
Eat Well
Poo! What do you know about poo? Find out about your food's journey through the digestive system.
2
2 of Hearts – Your food's journey to...
3
Eat Well
Snack time! Choose foods such as fresh fruit and vegetables, yoghurts and dips to help keep your hunger at bay.
3
3 of Hearts – Snack time
4
Eat Well
Breakfast is your brainpower! Breakfast eaters have better brain function, memory and attention.
4
4 of Hearts – Breakfast is your...
5
Eat Well
Cheers! Swap juices and fizzy drinks for water this week. Hydrate to feel great and appreciate!
5
5 of Hearts – Drinking water
6
Eat Well
Easy does it! During your meals this week, slow down, chew a little longer. What can you smell? What flavours can you taste?
6
6 of Hearts – Slow down and chew
7
Eat Well
Have a bottle in tow and hydrate on-the-go! Have water nearby at all times, take regular sips and avoid feeling thirsty.
7
7 of Hearts – Keep a glass/bottle of wat...
8
Eat Well
Where did it come from? Choose a food and think about its journey from farm to plate and all the people involved.
8
8 of Hearts – Where did It come from?
9
Eat Well
Ready, Steady, Cook! Offer to help in the kitchen to prepare a meal one night this week.
9
9 of Hearts – Ready, Steady, Cook!
10
Eat Well
Eat the rainbow! How many different colours are on your plate? What food could cover the colour purple?
10
10 of Hearts – Eat the rainbow!
J
Eat Well
Action time! Blindfold a friend and set up a taste test with fruits and vegetables. What happens to your taste and smell?
J
Jack of Hearts – Action: Taste Test
Q
Eat Well
Let's get creative! Why not have some fun with your food by making some fun faces. Can you use a variety of food types?
Q
Queen of Hearts – Create: Make food...
K
Eat Well
Kindness alert! If you love to bake, hold a cake sale and gift the money to charity or make someone smile!
K
King of Hearts – Act of Kindness: Bake...


A ♣ Move Well
Fun fact alert!
Check out this month's fun "Move Well" fact through the QR code.
Ace of Clubs – Fun Fact!
2 ♣ Move Well
Outdoor play. Can you swap playtime to "outside time" to feel great on the inside?
2 of Clubs – Play Outside
3 ♣ Move Well
No chair? No problem! Build up your muscle strength, balance and posture by sitting on the floor next time you watch TV or play games.
3 of Clubs – Sitting on the Floor
4 ♣ Move Well
Time for school but how will you get there? Try a new way to get there this week if you can.
4 of Clubs – Travelling to School
5 ♣ Move Well
Get moving! Move your body any spare minute during the day. Your body and brain will be thankfull!
5 of Clubs – Moving Minutes
6 ♣ Move Well
Dance party! Dancing is a fun way to move your body with family or friends and, even better, it feels great.
6 of Clubs – Dance Party
7 ♣ Move Well
Duck, duck, goose is a great playground game. Can you think of another, or make one up of your own?
7 of Clubs – Learn a New Game or Sport
8 ♣ Move Well
Avoid the traffic - walk or bike to school. Even better if it makes you move your body in the fresh air.
8 of Clubs – Think About Your Mode o...
9 ♣ Move Well
"I like to move it, move it!" Try to incorporate 1-minute bursts of fitness throughout your day. Find out how here!
9 of Clubs – 1-minute Bursts of Fitness...
10 ♣ Move Well
Run, run as fast as you can! Try running the Daily Mile (or kilometer). Do you notice changes to your body when you stop?
10 of Clubs – Run a Daily Mile
J ♣ Move Well
START
Action time: Sign up for a fun run or organise one with family and friends.
Jack of Clubs – Sign up for a Fun run
Q ♣ Move Well
Let's get creative: Make your own obstacle course for friends and family!
Queen of Clubs – Make your own...
K ♣ Move Well
Kindness alert: High five! Give someone a compliment and a high-5, see them smile! Make up your own handshake, if you like!
King of Clubs – Act of kindness: Give...

Ace of Diamonds – Fun Fact!

2 of Diamonds – Looking at a Photo...

3 of Diamonds – Breathing

4 of Diamonds – Self-care

5 of Diamonds – Be Grateful

6 of Diamonds – Power of a Hum

7 of Diamonds – Music Therapy

8 of Diamonds – How do you feel?

9 of Diamonds – Learn Well

10 of Diamonds – Visualisation

Jack of Diamonds – Go on a Senses Walk

Queen of Diamonds – Make a Stress Ball

King of Diamonds – Smile – It's...

Appendix B – Ethics Approval Letter

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA
UNIVERSITY OF NEW ZEALAND

7/04/2025

Dear: Dr Jared Carpendale

Re: Ethics Application - OM1 24/57 - Understanding the impact of the 1% kid's club

Thank you for the above application that was considered by the Massey University Human Ethics Committee:

Ohu Matatika 1 at their meeting held on **Tuesday, 12 November 2024**

On behalf of the Committee I am pleased to advise you that the ethics of your application are approved.

Approval is for three years. If this project has not been completed within three years from the date of this letter, reapproval must be requested.

If the nature, content, location, procedures or personnel of your approved application change, please advise the Secretary of the Committee.

Yours sincerely

Professor Tracy Riley,
Acting Chair, Research Ethics Chair's Committee

Research Ethics Office, Research and Enterprise
Massey University, Private Bag 11 222, Palmerston North, 4442, New Zealand T 06 951 6841; 06 95106840
E humanethics@massey.ac.nz; animalethics@massey.ac.nz; gtc@massey.ac.nz

Appendix C – Focus Group Question Guide

Question – Student **Guiding question/leading question**	**Probing/ follow up question**
1. How would you rate the 1% Kids Club from 1-5 and why? If low what could be done to improve the number? 2. Tell me about how you have been using your 1% Kids' Club cards? 3. Have you been learning anything through using the cards? Eat well, sleep well, move well, think well	Have you been using them in the classroom? How? Have you been using them at home? How? Have you been using the cards anywhere else? Where? What sort of games have you been playing with the cards? Have you used the QR codes at all? What did you learn/notice? What surprised you?
4. Tell me what you liked about using the 1% Kids' Club cards. 5. Tell me what you didn't like about using the 1% Kids' Club cards.	1. Did you have a favourite card what was it? And what was your least favourite? 2. Reasons for likes and dislikes: • Time needed to complete activity. • Changes in wellbeing • Changes in engagement • Changes in other areas of life • Access to the QR codes
6. Tell me what you would change about the 1% Kids' Club cards. Why?	Would you keep using the cards? If you could design a card what would be on it?

Appendix D – Interview Guide

Question – Teacher **Guiding question/leading question**	**Probing/ follow up question**	**Reason/rationale**
1. How would you rate the cards between 1-5. 2. Tell me about how you have been using your 1% Kids' Club cards and how has it been for the children 3. Do you think you could add this resource to your annual teaching plan or wellbeing goal? Have these cards felt like an add-in or an add-on?	How often have they been using the cards? Have they been using the cards during lessons? Have they been using the QR codes? Have they been completing the activities? How much guidance was required? Did this change over time? Have you managed to do any activities from each of the four sections? What was your favourite and how did they go?	Here I would like to evaluate the teacher perception of how their students have been using the cards.
4. Tell me about any changes if any you have noticed in your students' since using the 1% Kids' Club cards.	Have you noticed any changes in your students' wellbeing since using the 1% Kids' Club cards? (examples include, physical activity, nutrition, energy levels, mood). Have you noticed any changes in your students' engagement since using the 1% Kids' Club cards? Were there any of the pillars that your student's engaged with more than others?	This question is about teacher perception on their class. As they may notice changes in the students' that they do not notice in themselves.

	What was the most common pillar used? Have you noticed any other changes in your students' since using the 1% Kids' Club cards? Did your students ask any questions about the cards? If so, what types of questions did they ask?	
5. Tell me about what you liked about the 1% Kids' Club cards	Reasons for likes and dislikes • Were the cards a valuable resource or did it feel like extra work? • Could you use the cards within the curriculum. I.e. in structured literacy and numeracy?	
6. Was there anything you didn't like about the cards? What were they and why?		
7. Tell me what you would change about the 1% Kids' Club cards. Why?		This question will help develop future wellbeing and card-based initiatives to best suit the needs of this age group.