

# **Creative Strategies for Engaging and Supporting Learning for Low Decile Intermediate School Mentees in Aotearoa**

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## ABSTRACT

This thesis addresses the value of activities designed to help young students between the ages of 11 - 13 years of age from low decile intermediate schools in Aotearoa NZ to engage with their learning. This group is at a critical point in their lives transitioning from intermediate into high school. They are experiencing many changes and exploring their identity, voice and abilities. This research involves designing and assessing activities based on five key design principles, identified as connectedness, supportive groups, collective reflection, collaboration and personal voice. Iterations of these activities were used by a select group of mentors and mentees who helped provide feedback on the value and outcomes of the process. It is the intention that through this design process, observations and reflections I will be able to contribute positively towards engaging young people with their education and establish an approach that can be utilised by others to do the same.

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## ATTESTATION OF AUTHORSHIP

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”

SIGNATURE:

DATE:

**05/12/2023**

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## INTRODUCTION

As a Tongan descendant, my passion for supporting Maori and Pasifika ethnic communities stems from a childhood belief in education as a key to success. Motivated by my parents' sacrifices, I aim to honour their aspirations by integrating personal reflections into the design processes of my thesis.

My role as a coordinator within the MATES program ('Mentoring And Tutoring Educational Schemes'), which is further discussed in this thesis, has prompted me to reflect on my own work. This reflection has, in turn, spurred this research, where I explore potential contributions I could make to the young people I work with and for. MATES serves as a significant source of inspiration for this research. Over the course of five years working within this mentoring program, I've had ample time to ponder my own practices as both a mentor and coordinator.

In the MATES junior cohort, comprising mainly 8th-grade mentees, our sessions emphasise interactive activities that engage mentees in various aspects of improvement—be it academic, physical, mental, or social. MATES aims to provide a space that encourages young people in reaching their fullest potential. To ensure active participation, it is encouraged that mentors choose activities aligned with mentees interests, amplifying their voices and encouraging contribution.

Each designed activity revealed varying levels of mentee engagement, ranging from disinterest to eagerness. In both scenarios, reflection played a crucial role in comprehending the results and formulating improvements for subsequent activities. It's important to note that each individual mentor approaches can significantly impact outcomes, underscoring the importance of recognizing diverse mentoring styles.

In all aspects of the design within this research, they contribute to my mentoring philosophy and reflects the values I have learned from my community and family. They are an extension of who I am and demonstrate how I build relationships within my own practice.

The challenges posed by the COVID-19 pandemic added an extra layer of difficulty to the operation and study of youth mentoring programs. This thesis was prompted by the sudden disruptions that can disproportionately affect the learning experiences of mentees in more vulnerable positions which was highlighted during the pandemic. The relevance and significance of this thesis extend to ideas generated during and after a pandemic, where the disparities in resources provided to mentees in high decile schools versus those in lower decile schools became more evident than ever. While both high and low decile schools faced school closures during the Covid pandemic, parents actively involved in their child's education could explore opportunities to prevent learning gaps, which, unfortunately, was not as feasible for many mentees in lower decile schools (Schleicher, 2020). Though the availability of devices and internet access highlights educational and societal disparities, it masks deeper issues that

significantly affect fairness in educational achievements (Hood, 2020). Among many other factors that had impacted the overall educational experience for mentees. Goal 4 of the United Nations (United Nations Department of Economic and Social Affairs, n.d.) emphasises accessible, high-quality education for all, promoting lifelong learning opportunities alongside other fundamental rights. These encompass adequate living standards, including access to food, clothing, and housing, as well as the rights to optimal physical and mental health, cultural preservation, intellectual property, and education (Asafo, 2020). This not only increased pressure on the educational outcomes of mentees who had fallen behind but also reshaped the concept of mentoring and redefined what engagement looked like for many mentees.

## Research Objective

The objective of this thesis is to explore the principles of designing activities that enhance engagement in learning for mentees aged 11 to 12, particularly those involved in the MATES mentoring program in low-decile schools within Aotearoa, Auckland. My motivation for delving into this area stems from my varied roles, including leadership positions in my church, university, and community and specifically within my coordinating role at MATES. These diverse experiences have significantly shaped my curiosity and desire to refine my mentoring practices. Whether drawing insights from my current or past roles, each space has contributed to influencing both my research questions and practical approaches.

## Overview of the thesis structure

The thesis overview unfolds in a logical structure. Chapter one, the Mentee and Mentor relationships, establishes the context by delving into various aspects of mentoring programmes and includes relevant literature. In chapter two, the methodology is explored, demonstrating the approach taken to determine the inclusion of design aspects for the activities and includes relevant literature. Chapter three delves into the iterative research process, encompassing the creation, completion, observations and reflection stages. Chapter four delves into the completed activity plan, providing insights into the observations and reflections derived from the trial implementation of the activities. Finally, chapter five serves as a platform to discuss and solidify thoughts, presenting concluding remarks for the entire research.

# CHAPTER ONE: MENTEE AND MENTOR RELATIONSHIPS

## OVERVIEW

In this chapter, we explore the concept of mentoring from the diverse perspectives of a teacher, student/mentee, mentor, and parent, all actively involved in the mentoring program. The examination of these themes and concepts aims to establish connections between the understanding of mentoring terms, their relevance to the provided definitions, and their contextual importance to the MATES program and church communities. This exploration not only provides insights into diverse viewpoints but also serves to validate the value of mentoring within the scope of this thesis and relevant literature.

## **1.1 Mentoring and Education**

In this chapter, we will examine prior research concerning present mentoring systems in education, with a specific emphasis on mentoring in Aotearoa. A clarification of the various roles within the mentoring MATES will be provided to enhance comprehension of the dynamics referred throughout this thesis.

### **1.1.1 Current Mentoring Systems In Aotearoa New Zealand**

#### **1.1.1.1 Mentoring in New Zealand**

Youth mentoring in New Zealand has grown considerably in recent years, but little research has been conducted here, particularly in contexts like low-decile schools, while mentoring has been more thoroughly studied in other countries (Dunphy et al., 2010). Through my youth mentoring experience, it is apparent there is a lack of research and resources being put towards youth mentoring with students at-risk of reaching their fullest potential in New Zealand. While various countries and educational systems have appropriate programs and models for effective youth mentoring, limited research has been dedicated to understanding the correlation between effectiveness and the cultural appropriateness of these initiatives (Farruggia et al., 2011).

#### **1.1.1.2 Teaching in New Zealand**

The roles of general teachers in mentoring relate to the exchange of ideas and teaching practices that are shared amongst the teaching team. As teachers come together and reflect upon their practices it creates a community where others share their experiences as well as learn from one another. As a result, teachers gain valuable advice, various approaches, styles and practices, common and insightful teaching plans, rationales and beliefs that are beneficial for their practice. This is where mentoring starts to take shape in teaching roles, as a space for reflection, advice and counselling. Teachers require a supportive network that offers emotional and psychological backing, as this support has demonstrated significant enhancements in teachers' character and confidence and consequently empowers them to gain perspective on various experiences, fostering increased engagement in their roles (Hobson et al., 2009). In this way, a strong connection is built among teachers and avoids any norms of isolation (McCann & Radford, 1993). Mentoring in teaching is crucial towards creating a positive environment and through these supportive communities, more teachers would feel motivated and involved in building upon each other's experiences.

#### **1.1.1.3 Mentoring Systems in after School-Based Programmes**

Mentoring programs are perceived as collaborative learning partnerships involving individuals from diverse backgrounds, offering the opportunity for mutual learning, insights, and personal growth (Poulsen, 2013). These programs contribute significantly to the formation and exchange of new knowledge within the academic and personal journeys of participants, facilitated by the face-to-face

support and guidance provided by mentors to their mentees. Notably, mentees express a desire to reciprocate the benefits of mentorship, evident in their eagerness to engage in activities initiated by mentors during sessions (Poulsen, 2013).

As mentors build connections with students and collaboratively work towards achieving set goals, they play a crucial role in enhancing the mentees' confidence, thereby empowering them to realise their full potential and excel academically through increased engagement. The process of matching mentors and mentees, often based on shared interests, is considered a best practice. This matching and pairing should be approached with sensitivity, emphasising the importance of fostering a natural and informal bond (McKimm et al., 2007). Such a thoughtful matching process creates a space for mentors and mentees to discover common ground, fostering a supportive environment as they work together to achieve their respective goals.

#### **1.1.1.4 Mentoring Systems in Church communities**

As observed in my personal practice, mentoring systems in church communities often adopt a group mentoring approach, wherein volunteers regularly interact with small groups of youth, serving as mentors. This approach is founded on the belief that these volunteers can act as trusted guides, simultaneously nurturing the development of numerous successful relationships (Wakeman, 2012). Members in these groups vary based on the initiatives' goals. For instance, the Sunday School nursery catering to 0-12 year olds, provides an environment where volunteer mentors lead Bible studies and oversee the care of young children during the service. Conversely, in settings like Youth groups, volunteer leaders focus on more in-depth teaching and encouraging a scholarly approach to understanding the Bible. Although mentorship roles in each setting differ, the overarching objective of Christian mentoring is clear to help individuals acquire the knowledge and skills necessary to fulfil God's intended purposes for humanity (Herrera et al., 2002).

##### **1.1.1.4.1 Sunday School Participants**

Apart of the church communities is the Sunday School that takes place during each Sunday service, concurrently with the sermon, in a dedicated area. It primarily caters to children, and dedicated Sunday school teachers, who are volunteers from the church, provide supervision. Their role is essential in offering support to youth as they navigate the development of their faith and beliefs through Bible teachings.

The Sunday School is organised into three classes: one for the creche (0-5 years old), another for middle childhood (6-9 years old), and a third for pre-teens (10-12 years old). This thesis primarily focuses on the pre-teen groups as they align with the study demographic. These pre-teens make for ideal candidates for comparison, given that they mostly attend low decile schools and have no affiliations with any mentoring programs. However, since this church group centers on the faith and beliefs of its members, there is less of a focus on the academic development when compared to mentoring programs like MATES.

## **1.2 Mentoring at MATES and Key Positions**

This section will delve into the complexities of conducting a MATES mentoring session, shedding light on the essential roles that play a central part in the process. Throughout the thesis, the primary roles of mentor, mentee, coordinator, and teacher have been consistently emphasised. It is crucial to grasp the dynamics of how these roles interconnect. Beyond clarifying the distinct roles within MATES, this section will also provide insights into the operational aspects, offering a comprehensive understanding of the mentoring environment.

### **1.2.1 What is a MATES**

The MATES program is dedicated to pairing university students with 8th grade students, providing crucial support and encouragement to help them realise their fullest potential. These mentoring sessions are consistently held after school, adhering to a set day and time each week throughout the school terms, encompassing a year. Specifically designed to contribute to both academic growth and personal development, the program acts as a preparatory platform for the transition from intermediate to high school, ensuring that students are equipped with the essential skills and knowledge to excel beyond the intermediate level.

### **1.2.2 What is a Mentoring session**

A MATES mentoring session is an after-school program running for two hours once a week, consistently on the same day. Commencing immediately after school hours, these sessions offer a dedicated two-hour window. To maintain consistency, the group of mentors and coordinators remains at the same school throughout the entire year. The two-hour duration of MATES sessions fosters an environment where mentors and mentees can forge meaningful relationships lasting throughout the year, engaging in activities that span academic and relationship-building aspects. Each session is uniquely orchestrated by the collaborative efforts of coordinators, teachers, and mentors, ensuring a diverse and tailored experience across all participating schools. Within the context of this study, my role involves serving as a coordinator, observing the activities while the mentors take the lead.

### **1.2.3 What is a Mentor**

A MATES mentor is a university-level student matched with a mentee based on mutual interests. This matching process is designed to foster a deeper bond through meaningful discussions centred around shared interests. Mentors are required to have completed at least one year of tertiary education, ensuring they possess firsthand experience with the transitions from intermediate to high school and subsequently from high school to university. This experience equips them to impart valuable insights and aid in the development of their mentees.

### **1.2.4 What is a Mentee**

In this context, a mentee is characterised as a participant in a mentoring program, specifically targeting intermediate students aged 11 to 13 years old. Teachers identify these individuals as mentees with the potential to achieve their goals but in need of guidance from a mentor. Despite displaying promise for significant accomplishments, these mentees require personalised support from a mentor. The demographic focus is on mentees from low-decile schools, signifying their affiliation with lower socio-economic communities.

In this thesis, the distinction between a student and a mentee is clarified within the context of their connection to MATES. In this research, students refer to individuals without affiliation to the MATES mentoring program, such as those in the Sunday school program. The term "mentee" is specifically reserved for individuals connected to the MATES mentoring program. It's crucial to recognize that the perspectives of students and mentees on mentoring may significantly differ due to their experience and exposure to participation in the MATES program. Mentees are inclined to better understand the expectations within the mentoring program compared to those who are not affiliated. Nevertheless, this research is relevant in various contexts, whether it is applied to a student or a mentee. However, when specifically addressing the mentoring program, it is preferable to adhere to the term "mentee."

### **1.2.5 What is a Co-ordinator**

The role of a MATES coordinator encompasses organising sessions, providing training, ensuring the availability of resources, and fostering communication with both school teachers and the MATES staff members. Coordinators oversee the sessions, overseeing the pairing of mentors and mentees, and addressing any mentee or mentor absences by integrating them into alternative groups for the session when necessary. Additionally, coordinators are accountable for reporting any health and safety incidents that may arise during the mentoring session.

### **1.2.6 What role does a Teacher have in MATES**

Within the MATES program framework, teachers play a crucial role in facilitating sessions and collaborating with MATES to oversee the mentee selection process. The criteria for mentee participation are based on teachers' assessments, considering factors such as attendance and potential benefits for the mentee's. Teachers are tasked with arranging suitable spaces within the school for sessions and providing necessary resources, including school equipment, as requested by the mentor team and coordinator. Additionally, teachers communicate with the coordinator regarding any mentee absences during the session. In instances where school events may interfere with MATES activities, arrangements might be made to potentially resume the session the following week.

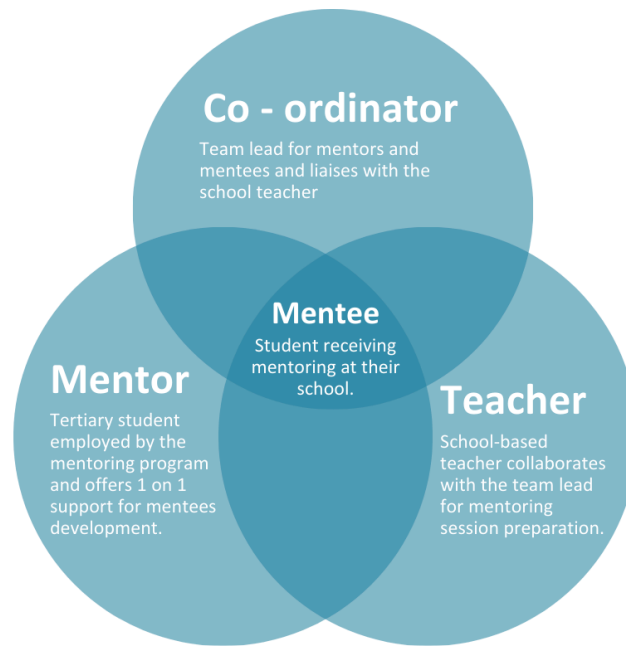


Figure 1. *Illustration of relationship between different roles of mentorship.*

As illustrated in Figure 1, the Coordinator, Mentor, and Teacher work collaboratively to create a nurturing environment that support the mentee in developing both their academic and personal growth. The mentoring sessions prioritize the mentee's progress and overall experience, ensuring they receive appropriate support from the mentoring sessions.

## 1.3 Learning Engagement in Mentoring

Analyzing learning engagement in mentoring and delving into the various roles within the MATES program will contribute to constructing a profile that clarifies their functions in this research, as detailed below.

### 1.3.1 Engagement

Throughout the thesis, the concept of engagement emerges as a pivotal point for evaluating the effectiveness of teaching methods and activities within a learning environment. Engagement is characterised by various elements such as involvement, commitment, passion, enthusiasm, focused effort, dedication, and energy (Pachtman & Wilson, 2006). Similarly, for mentees, engagement is defined as participating in educational practices, both inside and outside the classroom, leading to measurable

outcomes (Kuh et al., 2007). It is also seen as the extent to which mentees partake in activities associated with quality learning outcomes in higher education (Krause & Coates, 2008).

The measurement of engagement poses a challenge, as researchers adopt diverse approaches that may not encompass the full spectrum of experiences. Recognizing this, it is crucial to consider the unique perspectives of mentees, parents, mentors, and teachers, each offering valuable insights into the potential influences in a young person's life.

Informal mentoring relationships, formed organically with figures such as grandparents, neighbours, and extracurricular instructors, are common among young people (DuBois & Silverthorn, 2005). These informal connections have influenced the choice of viewpoints for this thesis, which explores youth mentoring from the perspectives of mentees, teachers, mentors, and parents. Drawing from personal mentoring experiences, there is a pressing need for research focused on New Zealand's at-risk youth and their educational fulfilment.

While effective youth mentoring programs and culturally tailored models exist, the connection between program effectiveness, research, and cultural appropriateness remains underexplored (Farruggia et al., 2011). Active involvement within communities is crucial for an understanding of the diverse perspectives shaping the educational development of our youth. Environments that facilitate engagement, such as after-school programs, provide conducive spaces for meaningful interactions. The MATES mentoring program, through discussions about mentee's experiences, presents a valuable opportunity to comprehend how mentees engage with their education, ultimately enhancing overall levels of learning engagement.

Understanding the factors influencing engagement in mentoring programs is vital, as this knowledge informs the reflection and development of effective activities. This understanding enhances the ability to implement strategies that capture mentees' interest and involvement in learning, shedding light on their connections to classes, institutions, and each other (Axelson & Flick, 2010). Participating in mentoring programs has demonstrated associations with improved academic performance, decreased school absences, positive attitudes toward learning, enhanced well-being, and stronger peer connections. Moreover, positive engagement has been linked to better decision-making regarding drug-related situations such as a reduced risk of initiating illegal drug use, decreased aggression, and lower chances of skipping school (Farruggia et al., 2011). The ultimate aim is to witness these positive outcomes stemming from mentees' active engagement in their education.

### **1.3.1.1 Gaps within mentoring and engagement**

It is intriguing to observe the influence of current events, such as a pandemic, on the performance and engagement of mentees in mentoring programs that adhere to structures designed to yield consistent, if not improved, results every year. The cohort of individuals navigating the challenges of the COVID era

has been exposed to digital technology from an early age, providing them with a range of skills, including multitasking, networking, and interacting with technology (Braccini, 2013). In order to stay up-to-date with the ever-changing landscape of technology and its impact on the mentees' learning environments, programmes involved in mentee improvement must show a proactive adaptation, harnessing the current trends and evolving technologies to its advantage.

## **1.4 Learning Engagement and the relationship to Key Positions**

In the interactions among crucial roles within MATES, various approaches to engaging with mentees' education emerge. Gaining insight into the perspectives and practices of key positions involved in mentees' education provides a clearer understanding of the diverse definitions of engagement across these roles.

### **1.4.1 Mentees**

From the mentee's perspective, learning engagement mirrors the dynamics observed in a mentee-teacher relationship within the mentor-mentee dynamic. Engaged students, as outlined by Outlaw (2004), demonstrate cognitive, behavioural, and emotional involvement. This engagement is further developed when mentees connect with the organisation, fostering a desire to learn, adherence to mentor expectations, and active participation in events (Outlaw, 2004). Mentees, as offered in the mentoring program MATES, demonstrate increased engagement and productivity in group activities (Pachtman & Wilson, 2006). The program facilitates this by offering choices and opportunities for self-expression, fostering authentic social collaboration aligned with mentees' interests and enhancing motivation to learn (Pachtman & Wilson, 2006).

While mentoring is acknowledged for its potential benefits, including the insights of Outlaw (2004), there are suggestions that the mentor-mentee relationship may not consistently yield desired positive outcomes for both parties, prompting concerns. This prompts an exploration into diverse outcomes and potentialities regarding how mentees may or may not feel supported by youth programs.

Reflecting on the mentor-mentee matching process, it becomes evident that certain pairings thrive from the beginning of the mentoring relationship due to mutual eagerness, while others evolve over time. Using either of these approaches, mentors can assess their performance by examining the mentee's cognitive, behavioural, and emotional characteristics.

### **1.4.2 Mentors**

A mentor, as defined within MATES, is an experienced individual dedicated to enhancing the character and abilities of younger individuals, specifically the mentees (Thompson & Vance, 2001). Drawing on their knowledge and past experiences, mentors, highlighted by Outlaw (2004), connect mentees'

activities to their own college experiences. This personalised mentoring approach leads to increased mentee engagement, as activities are customised to align with the strengths and needs of the mentees.

The mentor's role in engaging the mentees involves offering specific guidance and creating a connection through shared experiences and knowledge. This active involvement encourages the mentee to participate collaboratively in the relationship, establishing expectations and engaging in goal achievement. When mentees feel supported by caring mentors, positive learning engagement is displayed (Outlaw, 2004). The anticipation is that mentors striving to create a safe learning environment will excel in enhancing mentee engagement, fostering crucial connections for the growth, cognitive skills, and identity development of mentees (Rhodes, 2005).

Mentors exhibit different styles and perspectives on engagement, with some emphasising task-focused mentees. According to Outlaw (2004), consistent work on assigned activities is considered engagement. Conversely, some mentors define 'engagement' as mentees deriving enjoyment from the learning process itself, emphasising the experience over specific tasks. According to Outlaw (2004), students are considered engaged when they find activities enjoyable. It's crucial to note that there is no universal definition of how mentors should perceive engagement, and it can take on diverse forms.

### **1.4.3 Teachers**

Learning engagement, from a teacher's perspective, suggests that children's interaction with their environment, participation in learning activities, and relationships with teachers significantly influence academic performance (Roorda et al., 2017), contributing to their overall engagement in class. To enhance engagement levels, teachers must establish positive relationships with colleagues and mentees, showcasing a high degree of engagement, and their public behaviour directly shapes interactions with colleagues and mentees, creating an environment conducive to success. The unique level of social engagement required in teaching is not captured in other conceptual definitions of engagement (Klassen et al., 2013).

However, the importance of social engagement with mentees often goes unnoticed when evaluating teacher job engagement (Klassen et al., 2013). Teachers who feel encouraged in their work reflect this in their interactions and commitment to cultivating strong engagement for improving mentees learning experiences. Through collaboration, support, and recognition from school leadership departments, this then influences higher levels of effective teacher participation (Gu et al., 2007). When teachers perceive support from their institutions or schools, it is assumed that mentees will receive similar treatment. Social connection with both mentees and colleagues is a crucial factor in overall teacher involvement (Klassen et al., 2013) and the engagement of mentees within a classroom.

#### **1.4.4 Parents**

Parental support, as highlighted by Ansong (2017), exhibits a positive correlation with mentees behavioural engagement, support from classmates, and instructor support, while showing a negative correlation with children's emotional involvement.

Although parental involvement significantly enhances youth outcomes and shapes mentees foundational learning (Kaye & Smith, 2014), excessive parental support can have adverse effects on young individuals. The heightened demands from parents may significantly impact mentees emotional well-being, as indicated by Ansong (2017). Parental involvement can play both positive and detrimental roles. On one hand, parents engaging in monitoring their child's academic and extracurricular progress demonstrate high involvement. On the other hand, excessive encouragement might alienate mentees due to heightened parental pressure and expectations. Consequently, there are limits to parental involvement in education. It proves beneficial when parents genuinely prioritise their children's growth and strive for improvements rather than intensifying the situation.

#### **1.5 Reflection**

In summary, emphasised in the mentee and mentor relationships chapter is the importance of key positions in influencing mentee engagement, noting varying levels of impact among them. Specifically, examined in this chapter is the mentoring environments, whether in community settings, schools, or churches, and observed engagement levels within these contexts. Understanding this interplay is key to comprehending the dynamics at play in engagement and its connection to both design principles and cultural influences, topics which will be covered in the following methodology chapter.

## CHAPTER TWO: METHODOLOGY

This chapter seeks to clarify the strategy used for developing engaging activities. Additionally, relevant literature was explored to examine the alignment of different design principles with their educational definitions and how they are incorporated within the context of this thesis and relevant literature. The methodological framework aims to clarify the research approach and other considerations in activity design, including the choice of observation and reflective analysis (recorded interviews versus generated data from observations and reflections). Furthermore, it takes into account the mentoring journey and its potential contribution to the engagement levels experienced by mentees.

## 2.1 Methodological Framework

The methodological framework for Practice-led Research, as outlined by Candy (2006), focuses on the essence of practice and produces insights with practical significance within that area of expertise. This framework serves as a facilitator for observing and reflecting on participants' interactions during engaging activities. The goal is to comprehend the design principles and their effectiveness in fostering mentee engagement in their learning.

Practice-led research is dedicated to advancing understanding either about the practice itself or within its realm (Candy, 2006). Observations play a crucial role in learning from the design process and gaining insights into the design principles contributing to engagement. In the broader context of design practice, there is a growing recognition of the valuable role that design research can play in practical projects, marking an exciting period of potential for the design profession and its practitioners (Vaughan, 2017). The continuous development of engaging activities holds the potential to explore various perspectives on what constitutes an engaging learning activity.

### 2.1.1 Generated Data through observations

To maintain the authenticity of the generated data and mitigate potential research influence, interviews were intentionally not recorded during the activities. This decision aimed to preserve the organic nature of the ideas produced. Utilising observational methods, researchers immersed themselves in individuals' natural environments, gaining valuable perspectives (Baker, 2006). The close bonds between mentors and mentees contribute to the comfort and familiarity within their interactions. Observing these interactions during activity sessions ensures a natural environment, reducing the impact of research influence and aiding in the creation of engaging activities by maintaining a sense of normalcy.

Observing the reflective discussions amongst mentors, who possess a profound understanding of mentees on a personal level, offers valuable insights. Their input becomes instrumental in refining the designed activities, as they implement the process with care and contribute to the overall evaluation of effectiveness. Throughout this research, a key focus was to prevent the generated themes and ideas from influencing any preconceived views on mentees or mentors. Protecting the integrity of both mentees and mentors was paramount, leading to the decision not to record detailed personal information (e.g. which school they attend, their gender) to ensure the anonymity of the school and participants involved. This approach aimed to create genuine interactions and outcomes within the design practice.

## 2.2 Design principles in research

Five core design principles were derived from the observed engagement outcomes in MATES mentoring sessions. This was the result of a research initiative to identify the common principles underpinning the

successful activities. The design principles, thus formulated, served as aims to discern the principles of engagement that significantly contributed to the overall success of the activities. These design principles are identified as: connectedness, collaboration, supportive group environments, collective reflection, personal voice, and as shown in Figure 2.

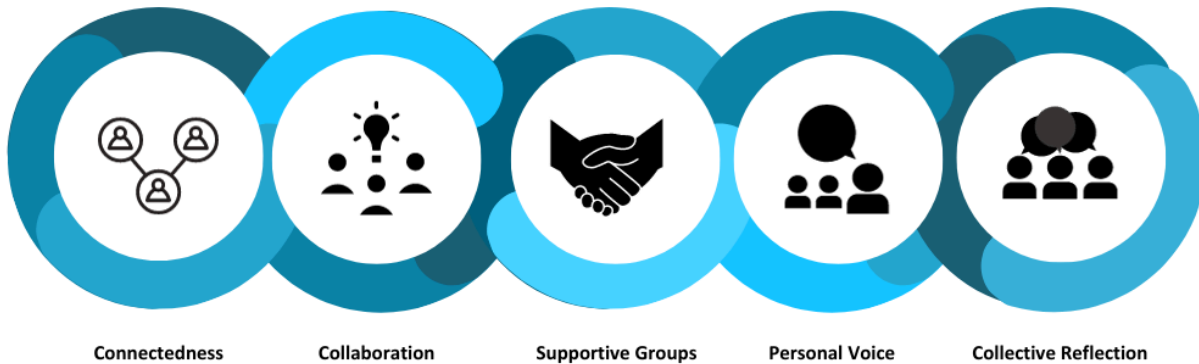


Figure 2. *Diagram showing the Design Principles.*

### 2.2.1 Connectedness

In this scenario, 'connectedness' involves the collaborative effort of both the mentee and mentor to create a comfortable space for sharing experiences, forming a community where common beliefs related to discussion topics are openly shared. This shared understanding builds common ground, fostering a strong connection between the mentor and mentee, leading to increased engagement in the mentee's learning.

The concept of 'connectedness,' often described as the socio-emotional bond among individuals or within a group, is crucial for mentees' overall well-being and socioemotional functioning (Hanewald, 2013). Mentees' adjustment and well-being are significantly influenced by their sense of belonging. A strong social connection and a feeling of belonging can enhance motivation and academic performance, while a low sense of belonging may result in feelings of alienation, potentially leading to lower academic performance and a sense of exclusion (Hanewald, 2013).

Hanewald's (2013) research, focused on the transitional journey of 8th grade intermediate mentees moving from intermediate to high school, emphasises the importance of mentees forming connections and experiencing a sense of belonging. This aligns with the fundamental concept of creating connectedness within a mentoring program to facilitate engagement in various activities.

### **2.2.2 Collaboration**

In this setting, 'Collaboration' is the joint effort of two or more individuals actively generating ideas for a shared solution in an activity. This collaborative approach typically thrives in an environment where each group member contributes their thoughts, leading to solutions that might not have been possible individually. It extends beyond verbal discussions, encompassing the active involvement of mentees through their physical actions, aligning with the goals of the activity or project.

A critical aspect of collaboration lies in fostering creativity, critical thinking, communication, and teamwork within the group (Institute for Teaching and Learning Innovation - University of Queensland, n.d.). Effective collaboration involves each team member contributing equally to ideas, practices, and discussions related to the subject matter. It becomes evident through shared actions and information among group members. A lack of collaboration is apparent when a mentor or mentee fails to engage in an equal distribution of roles, which can be observed through both verbal communication and physical participation.

### **2.2.3 Collective Reflection**

In this context, 'collective reflection' involves two or more people engaging in a joint process of reflecting on their experiences. All participants share their personal insights and provide feedback to enrich the overall group experience. The visibility of collective reflection hinges on the active participation of all group members in the discussion. If participation remains one-sided, it transforms into an individual reflection rather than a collective one.

Typically occurring at the conclusion of an activity, collective reflection seeks feedback from each participant, aiming for improvements in future engagements. When mentees evaluate their collaborative problem-solving approaches, it unveils implicit concepts that may require modification (Schwarz et al., 2015). This reflective process becomes a collective engagement among team members, strengthening both their teamwork and techniques. Taking a moment for individual and team reflection is crucial, as it can uncover themes and ideas that may not emerge without the discussion, offering valuable insights for personal and team growth.

### **2.2.4 Personal Voice**

In this context, 'personal voice' refers to an individual openly expressing their thoughts, ideas, and opinions. It represents a unique perspective shaped by personal experiences, with no constraints on whether the shared content directly relates to the topic. The emphasis lies in the mentee conveying their own opinions without external influences from the group.

The concept of personal voice is inherently individualistic, with mentees encouraged to contribute their thoughts actively during activities. This contribution extends beyond verbal communication, as personal voice can also manifest through a mentees actions. Both modes of expression are equally valuable; what matters most is that the ideas originate from the mentee and remain uninfluenced by external factors.

A comprehensive approach to a lesson acknowledges and accommodates mentees' social, physical, individual, and emotional needs (Institute for Teaching and Learning Innovation - University of Queensland, n.d.). This broad perspective encompasses various ways in which mentees can manifest the theme of personal voice, highlighting its significance in fostering a learning environment attuned to diverse mentee requirements.

### **2.2.5 Support Group Environments**

In the context of 'support group environments,' these are created when two or more individuals come together to foster a safe and comfortable space for mutual support. It's important to note that support groups extend beyond the mentor-mentee dynamic; they are defined by providing a space where everyone can feel unrestricted and valued. The topics shared within the group are entirely at the discretion of the mentees and may not always align with the activity's themes.

Support groups can be seen as communities where individuals feel secure sharing topics of interest and relevance with the group. The learning environment for mentees is significantly shaped by their interactions with parents, teachers, peers, and other support networks (Coffey, 2013). In this setting, each individual contributes to sustaining a safe and accommodating environment, encouraging growth and learning. The effectiveness of supportive group environments, whether formed between pairs or larger groups, depends on how individuals respond to each other within the group.

## **2.3 Design Principles in relation to Pacific Values**

Before embarking on our exploration of design principles in relation to Pacific Values, it's essential to define the group within this research and clarify the terms used to understand their cultural background. The term 'Pasifika' is employed to describe those born in Aotearoa, considering it their home (Ministry of Education, "Pacific and Pasifika terminology", n.d.). In contrast, 'Pacific' is an umbrella term used to encompass individuals who have migrated from the islands within the Pacific Ocean. Both groups maintain strong connections to the Pacific Islands nations, including the islands and rich cultures of Samoa, Tonga, Cook Islands, Fiji, Niua, Tokelau, Tuvalu, and other Pasifika heritages. In this context, I will be referring to Pacific ethnic groups, as it encompasses a broader range of cultures (Ministry of Education, "Pacific and Pasifika terminology", n.d.).

My Pacific heritage establishes a personal connection with the individuals involved in this research and the cultural traditions influencing these activities. Understanding the core values of mentoring within a diverse group, encompassing various cultures and customs, is crucial. This awareness becomes especially significant considering that decile 1–3 schools in New Zealand cater to 24% of the student population, with 45% of Maori students and 60% of Pacific students enrolled (Hernandez, 2019). Furthermore, in the MATES program there is a population of 57% are Pasifika, 24% Maori, 12% Asian, 4% European, and 3% Melaa (MATES: Facts & Figures, n.d.) mentees within the Junior (intermediate 8th grade) cohort. Those that identify as apart of the Pasifika group are Cook Island Maori, Tongan, Samoan, Niuean, Fijian, Tokelauan, Tuvalu and Kiribati people (Ministry of Education, “Pasifika in New Zealand”, n.d.).

Given that a substantial number of mentees are from the Pacific ethnic groups in Aotearoa and participate in the MATES mentoring program, it's essential to consider how the core values in their culture may be perceived through the perspective of Western values. Despite shared values in Western and Pacific customs regarding mentoring relationships, the interpretation of these values can vary among individuals. This framework extends beyond Pacific communities, embodying values relevant to everyone and open for each person's interpretation. It highlights the existence of shared values across the Pacific region, emphasising their universal importance.

While the Pacific Value Framework (NCEA Education, n.d.) serves as a teaching resource for National Certificate of Educational Achievement (NCEA) standard for teachers to enhance their awareness of adapting approaches to support Pacific learners in high school education (studying between year 9 and year 13), it's crucial to note that, in the context of this research, the age group does not align. However, adapting this framework to encourage activities that promote greater engagement among Pasifika learners, such as 8th grade intermediate mentees, would provide valuable experiences for future engagement when transitioning into NCEA.

It is essential to also recognize that the exploration of values and terms from the Pacific Values Framework (NCEA Education, n.d.), involves examining their potential alignment with various Western values. In the context of this research, direct translations between Western values and Pacific values are not immediately accessible, prompting an investigation into their potential correlations. The Pacific Values Framework, as described in education, illustrates values that aims to connect Pacific and Western educational principles (NCEA Education, n.d.) The translation is upon the research in this thesis and in no way is stating these are the definite translations of the design principles from the Pacific Values Framework (NCEA Education, n.d.) to the Western design principles. However, this is an attempt to contextualize the meaning of values within the mentoring environment of this research. It aims to present a designer's perspective (mine) on the transferable values within Western design principles and the Pacific Value Framework.

### **2.3.1 Alofa (Love, Dignity, Respect)**

In the Samoan language, 'Alofa' translates to 'love' and symbolises the expression of respect and dignity towards those within one's communities of support. Alofa holds diverse meanings in the context of the Pacific Value Framework, often observed in family relationships. Within the educational realm, embracing the value of Alofa entails maintaining elevated expectations for Pacific learners, their families, and communities and ensuring the voices of Pasifika learners are heard in decisions about what and how they learn (NCEA Education, n.d.) and is crucial for meaningful engagement. This involves incorporating them into various decisions to make their educational experience more impactful. By valuing the mentee's knowledge, experiences, skills, and values, along with those of their families and communities, in the learning process (NCEA Education, n.d.), they feel supported and empowered to contribute meaningfully to the discussions.

In Western contexts, the value of Alofa is exemplified through the establishment of the design principle of supportive group environments, with the intention of empowering mentees throughout their educational journey. A fundamental objective of education is to offer support to individuals (mentees), nurturing qualities like hope and dignity (Sanga, 2009) cultivating an atmosphere of care and support encourages mentees to actively participate in their learning (NCEA Education, n.d.). Within this supportive environment, a space is created for the sharing of personal knowledge, experiences, and identities, empowering their voice and aligning with the design principle being encouraging mentee's personal voice. Similarly, the assistance provided by those engaged in a mentee's educational path is crucial, fostering a nurturing environment that reflects care and respect for the aspirations of the mentees. While the Pacific values are not identical to the Western values outlined here due to inherent cultural differences, the Pacific values discussed are the closest and most relevant in this context. Moreover, the ones listed here are also the most transferable where they have been identified as most relevant.

### **2.3.2 Kuleana (Responsibility)**

In Hawaii, Kuleana means 'responsibility' and in education can be seen as a value that reflects an individual or collective sense of responsibility in leading inclusive activities for Pacific learners. The responsibilities each mentee carries can be demonstrated through leadership within their home or community, involving service and honouring those with whom they interact (NCEA Education, n.d.).

Similarly, in Western values, a mentor's responsibility is defined as giving a voice to the mentees around them (Sanga, 2009) in order for the mentees to also share their personal voice. This demonstrates the design principle of personal voice, which entails creating a space for mentees to express their thoughts and opinions. Consequently, it cultivates an environment where the mentee feels empowered to lead and take charge of their own learning (NCEA Education, n.d.) showcasing the design principle of collaboration as the mentee actively responds and contributes and is reciprocated by the mentor.

### **2.3.3 Vā (Relationships, Reciprocity)**

Vā is widely acknowledged across the Pacific communities, encompassing the concept of 'Sharing, giving, creating, and navigating space' (NCEA Education, n.d.) and defined by the relationships occurring within the Vā, representing the space in-between (Anae, 2010). Various types of Vā exist, such as the one between a mentee and a teacher, which differs from the Vā between two mentees or between the teacher and a family member. In the context of education, Vā facilitates an understanding of shared history, communities, and responsibilities—whether directed towards each other, the mentee and mentor's surroundings, families, or themselves (NCEA Education, n.d.).

The significance of 'Vā' resonates in nurturing and maintaining relationships between a mentor and mentee, emphasising mutual respect. This can be achieved through design principles such as connectedness, collaboration, and supportive environments. Vā serves as a space where individuals can foster their mentoring relationships, cultivating a sense of connection through the supportive interactions within these mentor and mentee relationships. Within this space, both the mentor and mentee collaborate to create a supportive and safe environment, fostering a sense of belonging and ultimately encouraging greater engagement in the mentee's learning.

### **2.3.4 Fonua (Belonging, Connectedness)**

In Tongan culture, Fonua embodies the connection between land and people, traditionally symbolising the placenta as a representation of birth and safety (NCEA Education, n.d.). For many Pacific learners, Fonua encompasses the notion of land and serves as a reflection of our identity within the place we stand. It establishes common ground and fosters connections that go beyond the physical space. This shared understanding allows Pacific learners to build upon their respective backgrounds, forming meaningful connections and signifying a profound sense of belonging within the learning environment.

Fonua in Tongan serves as a lens to understand education as a collective and interconnected experience (Kēpa & Manu'atu, 2011) within Western values, aligning with the design principle of connectedness. Establishing meaningful connections between mentors and mentees is crucial for their education. When mentees feel a sense of belonging and support, they are more likely to contribute to a meaningful relationship with their mentor. The mentor's acceptance of the Pacific learner's diverse history, background, values, and language is of utmost importance in creating a safe and respectful environment for the mentee (NCEA Education, n.d.). Western design principles, such as collaboration and supportive environments, further reinforce connectedness through the reciprocal sharing of culture and the feeling of acceptance in doing so.

### 2.3.5 Vaka (Collectivism, Shared journey)

In many Pacific languages, the term "Vaka" translates to 'canoe,' symbolising Pacific navigation and way-finding as communities navigated their unique paths, journeys, and narratives (NCEA Education, n.d.). This concept resonates with various aspects of the Pacific learner's life, encompassing education, life decisions, and choices. It urges us to delve into our roots and origins, offering valuable insights that shape our present movements and influence the trajectory of tomorrow (NCEA Education, n.d.).

Throughout the journey of navigating Pacific waters, there is a collective reflection among voyagers as they look back at where they've been to guide their next steps. In Western values, the metaphor of navigating the Pacific waters aligns with the design principle of collective reflection. The Vaka, carrying substantial knowledge (NCEA Education, n.d.), is crucial to understand as voyagers decide their next steps based on past experiences, enabling reflection on diverse stories, pathways, and journeys. Mentors and mentees collaboratively share their stories and collectively reflect on their past, shaping the future paths they embark on in their mentor-mentee journey.

## 2.4 Stages of the Design Process

This research adopts a practice-led approach, focusing on designing and trialling activities for mentors within their mentoring sessions with mentees. This chapter systematically outlines the three key stages of the design process: 'Research Design,' 'Trialing of Iterative Activities,' and 'Evaluation' (Figure 3). Beginning with the initial stage, inspired by mentoring sessions, the core ideas were shaped.



Figure 3. Diagram showing the Design Process.

## **2.4.1 Research and Design**

The design and research phase began by reflecting on engaging mentees during mentoring sessions. This involved applying key design principles—connectedness, supportive groups, collective reflection, collaboration, and personal voice—to generate activity ideas. Considering constraints within the time of the mentoring session, focusing on two design principles felt realistic, aligning with my role's priorities as a coordinator, ensuring task completion and adhering to safety regulations. Mentors prioritised addressing mentees' immediate needs, potentially impacting their involvement in running the engaging activities. Simplifying activities around two design principles allowed flexibility to accommodate constraints faced by mentors and the coordinator, maintaining ease and clarity for implementation.

### **2.4.1.1 Roles that influenced my design**

This research is influenced by experiences from a range of different roles in which I take part. The roles include mentoring and coordinating within the MATES program, leading the youth and Sunday School groups within my church, and lastly my involvement within the **Auckland University of Technology (AUT)** as a teaching and research assistant for the **Bachelors of Creative Technologies (BCT)**.

#### **2.4.1.1.1 Mentor and Coordinator**

The mentor and coordinator role influenced the research in this thesis from past and current experiences supporting mentees studying in low-decile schools. The weekly mentoring sessions have provided a space to observe, interact and understand the mentees' different levels of engagement and interest. Through this role, there were many opportunities to observe what activities engaged the mentees and how the five design principles such as connectedness, collaboration, personal voice, supportive groups and collective reflection work hand in hand. The design principles have been evidently seen through the connection made within the mentor-mentee relationship journey. There is a sense of collective reflection as an outcome of collaboration over activities and discussions. Many opportunities are open for the opinions of others to be voiced in providing feedback as a part of a supportive network and environment. Through these observations and experiences within the mentor and coordinator role, there is a deepened level of understanding the potential interactions and approaches from the mentees, so planning ahead of that will ensure that the activities have been conducted with purpose. In this thesis, I held the position of coordinator for two Junior and Senior schools within the MATES organization. Drawing upon my past experience as a MATES mentor and current coordinator, I focused specifically on MATES Senior for this research, as they are within the age range of my target audience, ages 11 to 13 years old.

#### **2.4.1.1.2 Youth and Sunday School teacher**

The Youth and Sunday School teacher played a crucial role in the iterative process. They provided observational feedback on the initial designs of the activities which helped refine the activities before they were later given to the MATES mentors to run at with their mentees. However, even though the Sunday School mentees fit within the ages of my target audience (11 - 13 year olds), the environment

would not have fully captured how to engage young youth studying specifically within an academic environment. Nevertheless, the church setting, along with the familiarity of working with the Sunday School students I've known for an extended period, fosters a space that allows me to confidently explore and experiment with activities, even when they don't succeed in engaging them. In this thesis, I held the role of a church member to observe the Sunday School teacher in charge as they conducted the activities. This allowed me to fully participate in the observation process and generate ideas to then guide my understanding of the next iterative activities. My influence during when the activities were being conducted was intentionally minimized to better understand how the dynamics between students and teachers unfold without my direct involvement. This approach aimed to provide insights into how the activities impact student and teacher engagement from an outsider's perspective. Given that MATES operates within a different power dynamic, where mentors occupy a role between teacher and friend, it is interesting to explore how this dynamic contrasts with the student-teacher relationship observed in the Sunday school setting. The valuable lessons learned from these experiences are essential for refining and improving the activities.

#### **2.4.1.1.3 Teaching and Research Assistant**

As a Teaching Assistant for the BCT program and research assistant within the Creative Future's project at AUT, has contributed valuable insight into the process of conducting research to inform activities and also knowledge within programming. Within the Creative Future's team, we had piloted two activities that encouraged activation of youth participation and support in finding their voice and exercising their creative capacities to solve problems and strengthen their confidence. The design process in creating the piloted activities broadened gave me insight into how I can create the engaging and learning activities. Within this role of a Teaching and Research Assistant, I actively contributed to the development of planned activities for piloting, engaging in the creation process and gathering feedback through conversations and observations. This played a key role in comprehending participant responses within my university projects, enhancing our understanding of what worked and what didn't, and bringing to light any overlooked findings. The content taught within the BCT course supported my learning within the subject of programming which was used on two iterative activities later named 'Coding Patterns' and also 'Coding Connect Four'. The opportunity to learn and teach as a part of these roles helped me especially being in a space where creativity and technology had been incorporated to broaden our ideas.

### **2.4.2 The Mentoring Journey**

When crafting these activities, I took into account Hay's (1995) mentoring life cycle research, which provided a relevant framework. This cycle outlines the progression of mentor-mentee relationships throughout the year. It's crucial to assess where the mentee and their mentor are within this journey as it would ensure appropriate action and nurturing of the relationship in relation to where they currently lie within the stages. Hay's (1995) described mentoring life cycle comprises four distinct stages:

Stage 1 - Introduction, orientation or partnership Stage

Stage 2 - Establishing their mentoring relationship, nurturing stage

Stage 3 - Developing individuality, maturing stage

Stage 4 - Closing the mentor-mentee journey together

In the initial stage of the mentoring relationship, as outlined by Hay (1995), the focus is on the introductory phase where both the mentee and mentor embark on their mentoring journey to establish a partnership. The activities tailored for this stage should concentrate on encouraging both parties to familiarise themselves, comprehend each other's backgrounds, and cultivate a partnership where mutual awareness of identities and contributions is fostered. Incorporating the design principle of promoting 'alofa' (love, respect, dignity) is crucial in creating a space for mentees to express their personal identity through sharing their opinions. Additionally, fostering an environment that encourages a sense of 'fonua' (connectedness) is essential for cultivating a nurturing environment that reflects care and respect for the mentees. This approach ensures that the mentoring space is not only supportive but also values the unique perspectives and individual identities of the mentees.

Furthermore, as Hay (1995) emphasises, stage two represents a pivotal moment in the ongoing journey of the mentee and mentor, aiming to establish and deepen their relationship, marking a nurturing phase. Therefore, the activities tailored for this stage should centre on expanding upon the groundwork laid in stage one by fostering a deeper understanding between the mentee and mentor, ultimately creating a more connected relationship. The design principle of 'vā'—highlighting the importance of mutual respect and support within this relationship—is particularly crucial at this stage. Having established a partnership, both the mentee and mentor are actively engaged in nurturing the relationship, evident through the support and openness of sharing common experiences.

In the third stage of Hay's (1995) mentoring life cycle, the focus shifts towards fostering individuality and maturation. In the context of this research, there is an emphasis on encouraging mentees to develop their individual interests, academic goals, and engage in activities that cater to their specific needs. Consequently, the activities planned for this stage should involve the mentor facilitating more intensive learning. This includes encouraging mentees to reconsider their perspectives, view things differently, identify potential changes, set goals, and explore alternative options (McKimm et al., 2007). It's important to note that at this stage, mentees have the freedom to pursue any path, making it particularly encouraged for them to develop activities that allow mentees to conduct their independent exploration of options. The promotion of activities that align with the achievement of academic goals and support mentees in their academic development becomes crucial at this stage. The design principle 'collective reflection' plays a prominent role in this situation. The Pacific translation of a 'vaka' metaphorically emphasises the importance of knowing where you have been to understand where you are going next. In this context, mentees and mentors are encouraged to reflect on their engagement during activities leading up to this stage. This reflection is crucial in tailoring activities towards individualised interests, goals, and determining the next steps in explorational options.

The concluding phase in Hay's (1995) mentoring life cycle marks the closure of the mentor-mentee relationship. An effective approach to wrapping up this association involves reflecting on both the positive and challenging moments, commemorating the accomplishments of both mentors and mentees throughout the year (Zachary, 2011). In examining the design principle linked to the final stage in the mentoring life cycle, collective reflection emerges as a key aspect, allowing both the mentor and mentee to revisit the achievements they attained together. Recognizing the emotional nature of this stage for both parties (Zachary, 2011), there isn't a specific designed activity for concluding the relationship. Instead, this time is dedicated to the mentor and mentee, emphasizing their personal reflections.

As the mentor-mentee relationship progresses, it becomes crucial to be mindful of the specific stage within the mentoring life cycle (Hay, 1995) they are navigating, and how the chosen activities align with their journey. For instance, in the initial phases of the mentoring relationship, activities should foster a secure environment where both mentors and mentees feel comfortable sharing personal opinions, establishing a connection between them. Initiating academic activities right from the beginning may not align with the stages of nurturing and forming connections, potentially leading to a lack of engagement from the mentee. Understanding why it's essential to tailor activities to complement the current stage in the mentoring life cycle is key to cultivating meaningful engagement in the mentees' education.

Several factors can impact the effectiveness of activities, given the diverse approaches each mentee may have. There is no one-size-fits-all activity that ensures consistent engagement among mentees, considering the varied styles and preferences of the mentees. Consequently, the initial design phase prioritized a range of activities to gain a comprehensive understanding of design principles and processes. By exploring different objectives and levels of engagement, a deeper insight is gained into how these design principles contribute to more meaningful and purposeful activities, enhancing the overall engagement with the mentees.

### **2.4.3 Choosing the Activities**

The selection of activities led by mentors was based on observations of what engagement styles and activities proved effective during mentoring sessions, as well as those that did not. The primary focus was on enhancing the development of mentee engagement. An activity was designated for each mentor-mentee pair, aligning with either of the mentoring life cycle (Hay, 1995) stages one, two, or three. After mentors led the trial activities and provided suggestions, three main activities emerged. These activities were then handed over to MATES mentors for further trialing, marking the commencement of the collaboration step. The selection of these educational and interactive activities was based on their alignment with existing successful activities at the mentoring sessions and their evolution through the integration of design principles and Pacific values. This approach tailors the learning and engagement activities to enhance the educational experience for mentees enrolled in low-decile schools.

## 2.5 Observation and Reflection

The introduction of observation and reflection stages aimed to assess the engagement levels of both the students in the Sunday School group and the Sunday school teacher (mentor) while guiding the learning and engaging activities. Subsequently, four activities will be selected from the initial set of learning and engaging activities, developed through the Design Process, to be led by mentors and mentees at MATES. The process of observing and reflecting holds the potential to unveil new ideas and perspectives that, as the designer, I might have overlooked.

## 2.6 Reflection

By drawing connections between the design principles and my cultural values from a designers perspective took on deeper significance. Exploring the alignment of different values with distinct design principles provided a fresh perspective, enriching my understanding of the research nature and, more crucially, the potential insights derived from experimental results. Recognizing that individual interpretations of core values can vary significantly, depending on one's exposure to their culture, underscores the importance of cultural context. For instance, a mentee immersed in a family that upholds traditions is likely to inherit and embrace those customs, while another mentee lacking exposure may view cultural customs differently. Within the context of MATES, our pacific mentees bring with them their experiences and knowledge, all different and unique. The upcoming chapter will delve into how design principles were applied in the development of engaging and learning activities.

## 2.7 Ethics

Ethics approval from AUTEK was not required for this research as it involved “observational studies in public places in which the identity of the participants remains anonymous (i.e. where the data by its nature cannot be used to identify individuals) and compilation of the data does not involve any harmful or objectionable activity” (AUT University, n.d.). I had thorough consultation with MATES and permission was granted regarding this research. This was conducted so that the ethical nature of this research was discussed and validated.

## CHAPTER THREE: TRIALLING ACTIVITIES AND DESIGN PROCESS

### OVERVIEW

The 'Trialling of Iterative Activities' involved observing the Sunday School teacher (mentor) lead the various activities with two Sunday School students. The 'Final Design' (Figure 4), 'Evaluation,' concentrated on identifying effective activities and refining them for ongoing development. The chapter provides comprehensive insights into the outcomes and results of each stage, highlighting the iterative nature of the activities' development. A key advantage of this approach lies in physically observing the activities' outcomes, and analysing their feedback between the Sunday School Teacher (mentor) and Sunday School students (mentee). Throughout the research, core principles were consistently applied to discern why certain activities proved more effective than others.

### 3.1 Trialling Iterative Activities

The development of the activities during the trialling research stage can be seen in three main phases based on the nature and aim of the activity in relevance to the Hay’s (1995) mentoring life cycle as established in the methodology. As mentioned in Hay’s (1995) mentoring life cycle, the first three stages in the mentoring journey involve stage one - introduction, orientation or partnership, stage two - establishing their mentoring relationship, nurturing stage, stage three - developing individuality, maturing stage. The three stages of the mentoring journey served as a basis for the aims within the different phases in creating the activities. Due to the nature of the final stage in the mentoring journey where the focus is on closing the mentoring relationship, there were no activities that were specifically designed for this stage to allow for mentors to decide between them and the mentee what activities they would like to do within the remaining sessions they have left.

## Trialling Iterative Activities

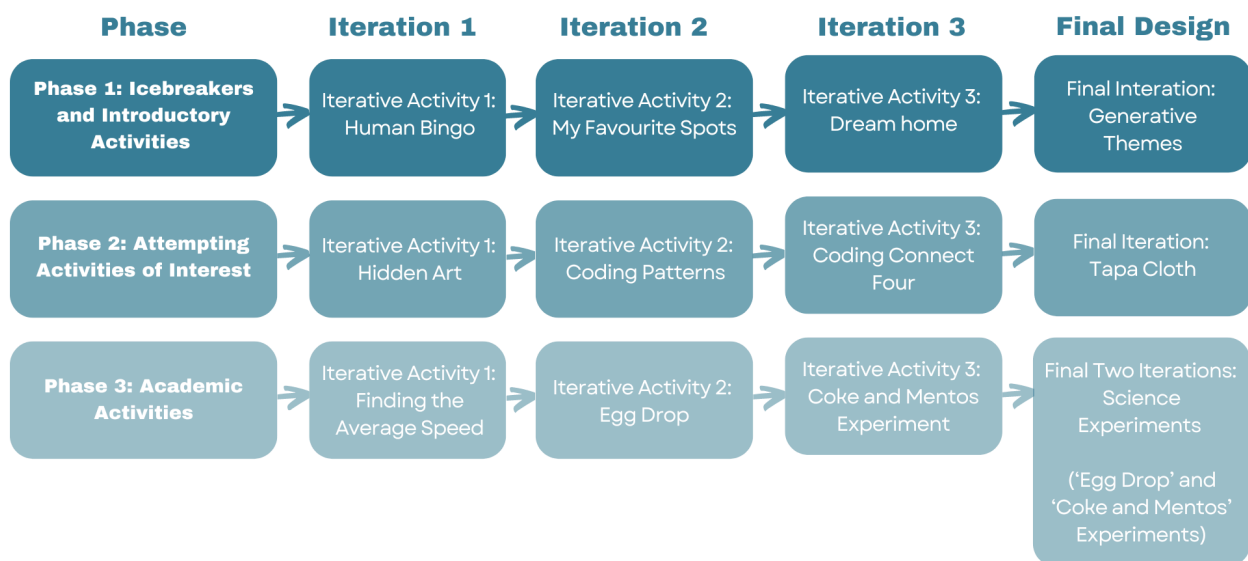


Figure 4. Diagram showing the process ‘Trialling Iterative Activities’.

The ‘Trialling Iterative Activities’ (Figure 4) is one where the development through designing, trialling and evaluating the activities is a cycle that continues for around four iterations during that phase, before settling for the ‘Final Design’ (Figure 4) which will be given for mentors at MATES that would lead the activities with their mentees. Due to the nature of the iterative process, the possibilities of facilitating nine or more sessions solely towards my research was not ideal in providing a space for the mentor and mentee to form strong connections. It is essential to give mentors the autonomy to run their own sessions as a crucial part in building upon their mentor and mentee relationships. Therefore, the iterative activities were not to be trialled with the MATES mentees.

Two students from the Sunday School group actively participated in the trial phase of activities as a Sunday teacher led them through the different activities. The two Sunday School students participated in eight iterative activities with their Sunday school teacher to gain insight into any aspects I might have overlooked. Following this, I observe the execution of four activities developed from the iterative process during the three stages of the mentoring life cycle. The four activities were then carried out with the mentor at MATES to lead with their mentees at the mentoring session. This comprehensive understanding aids in creating engaging activities relevant to the learning of young individuals. The engaging activities were run after the church service concluded, therefore there were opportunities to trial the activities with no limitations on time and capabilities to focus on the process and outcomes. The accessibility presented during the trialling stage meant that I was able to give a lot of attention towards the details in observations and reflections upon their interactions.

Due to only having three participants (Sunday School Teacher and two students), the 'Human Bingo' activity couldn't be conducted with the Sunday School group, as it requires more than three people to play. Reflecting on my past successes and iterations as a MATES coordinator, where the 'Human Bingo' activity was successfully played with multiple schools and groups of up to 16 students, I drew from that experience. My aim was to implement the successful aspects of the activity iterations into our current context. The rest of the activities were trialled with the Sunday School group.

Although not all activities discussed here were fully developed, their findings are relevant because the developmental design process helped me understand my personal process to then create a new set of activities.

### **3.1.1 Phase 1: Icebreakers and Introductory Activities**

The initial mentoring phase focused on fostering connections through activities that facilitated mutual understanding, encouraging mentors and mentees to share aspects of themselves for relationship deepening often relating to the concept in icebreakers. The engaging activities are outlined below.

#### **3.1.1.1 Human Bingo**

The Human Bingo activity involves (mentees and mentors) the group to find someone that best fits the description on the Bingo paper they are given. This activity can be played at any point of the mentoring relationship, in order to find out more information about the group. Human Bingo encourages mentees and mentors to connect with one another as they work together to find out more about each other in the group showcasing the design principles being connectedness. For this particular activity that requires a large number of participants, it was played with the MATES mentees as one of the ice-breakers the coordinator conducted to introduce everyone to each other. Having acknowledged this, the 'Human Bingo' activity held particular significance for me. Its past success in fostering engagement made it an

activity I was eager to integrate. Specifically, I aimed to draw from its most engaging aspects, such as its ability to facilitate connections among participants and create a welcoming atmosphere, and incorporate them into Phase 1: Icebreakers and Introductory Activities. This decision stemmed from its proven effectiveness in breaking the ice and setting a positive tone for interactions.

To tailor the activity towards the group, the descriptions were based off of the introduction sheets that mentees had to fill in before joining the program. Introduction sheets help us identify mentees hobbies and future goals and through this we are able to pair them with mentors who would suit along with the teachers preferences. By bringing their answers into one of the descriptions of the 'Human Bingo table' made sure that everyone had something that related to them. In order to engage them furthermore, putting in a description that could potentially not match with any of the participants would make sure that everyone has spoken to each other before finding that no one in the class fits the final description. In the end, if there are no winners then the prize can be given to the person who had the most descriptions filled with a name on their table.

An important observation noticed during this activity, is that though the activity opens up opportunities to connect with others in the group and discuss all sorts of conversations that led from the initial question in the table. With the challenging aspect in the activity this can both motivate the mentees to engage and also cause them to disengage. There is a possibility of mentees being upset due to not winning, and so putting in a system where you may have a first, second and third place could help to allow opportunities for people to not only win but also engage in the activity. Moving forward, activities would need to be thought out with how the rewarding system may impact the results. Judging how challenging an activity should be, would be different for each participant so moving forward onto the next iterations of having two main participants trial the activities to give more focus towards their engagement.

### **3.1.1.2 My Favourite Spots**

The Human Bingo activity then led me to create the 'My Favourite Spots' activity where the group pinpointed on the map some of their favourite locations and were encouraged to connect these dots with others in the group. Similar to the Human Bingo activity, the 'My Favourite Spots' activity aimed to connect people over shared experiences and in this case places on the map. This activity aims to encourage a sense of connectedness, collaboration and also collective reflection. Participants are encouraged to reflect upon where they would pin down which country they are from, which country their parents are from and any areas of importance to them to facilitate purposeful conversations that would bring more understanding of each other's experiences. The aim is to find connections with others and over conversations create a deeper understanding and they collaborate and work together in getting to know each other more.

The map shown for the mentees (Figure 4) included Aotearoa, New Zealand and other countries in the Pacific as the participants have mentioned in their introduction forms their families ethnicities.

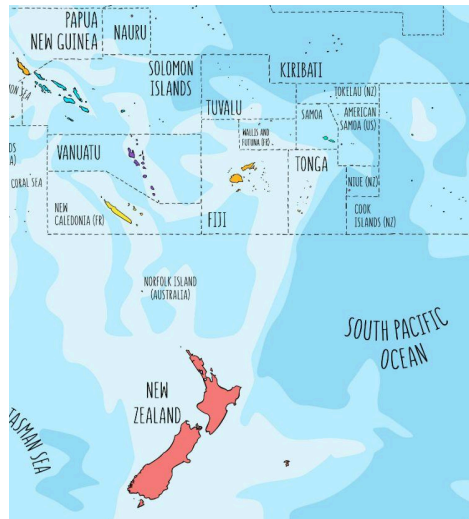


Figure 5. World Map of the Islands in the Pacific Ocean.

Questions that were asked to help the mentees thinking process:

- “Mark yourself based on where you are now.”
- “Mark where were you born.”
- “Where were your siblings born?”
- “Where were your parents born?”

Revised questions based on supervisor feedback:

- “Where are the food places you like to go to and eat at?”
- “Where are the places you like to go and actively play?”

Prior to the activity, observations were conducted to ascertain the cultural backgrounds of the participants. Based on these observations, a decision was made to incorporate elements from countries relevant to the participants. From the activity, the participants were engaged in finding places on the map based on the questions. However, it would be beneficial if the map was more clear for young people to understand. For example, the image given to the mentees was just a map with no images to show landmarks. For future iterations, ensure that there are images and instructions easy for the mentees to interact with and understand. Failure to make the instructions clear will mean that the mentees will possibly disengage as a result of not understanding the aim of the activity.

### 3.1.1.3 Dream home

From the 'Human Bingo' and 'My Favourite Spots' activity, this led to thinking about an activity that would provide insight into the mentees background without directly asking the mentee to speak about their personal information. The aim while designing your 'Dream Home' was to create a collaborative space where the participants were able to imagine a home that visually represents the mentees' environment giving insight into their background.

The design principles aimed in this activity were collaborative space, personal voice and collective reflection. As the 'Dream home' activity encouraged participants to collaboratively work together in sharing their personal opinions around their interest which had been reflected upon during the making of their 'Dream Home' and collectively with the other participant afterwards.

The 'Dream home' activity involved having the mentees cut and paste out items from magazines to represent their 'Dream Home'. While the mentees decide what items will go into their home the mentor would encourage them to provide a reason as to why they picked certain items. For example, if the mentee had a swimming pool cut out and put onto their 'Dream Home' pinterest board, they were asked about their choice. Taking into consideration as the aim of the activity was to keep it broad there were times when their answers were very surface levelled due to the nature of the activity. For example, questioning why they choose a swimming pool for their home, and they would reply with very brief answers with no in depth conversations following after.

From this activity, I learnt that having a broad scope of an imaginative space would bring very broad answers which would lead to surface level answers. The aim to create an activity that was very generalised to produce very open answers was achieved with this activity. This activity may be suitable for cases where mentors want to slowly integrate their personal voice in the activity while also gradually understanding who they are. For the next iteration of this activity, it would be ideal to incorporate what are some of the mentees' happiest moments or interests that could be further discussed in an activity.

### 3.1.1.4 Generative Themes

The 'Generative Themes' activity then came after the 'Dream Home' activity, as the final iteration during the trials of Phase 1: Icebreakers and introductory. The Generative Themes activity aims to evoke shared and connected experiences, fostering opportunities for meaningful conversations. The design principles encouraged in this activity was connectedness and also personal voice. Through the images the students shared their experiences and interpretations around what they think is happening in the photos shown. At first a small section of the photo will be shown before revealing the bigger picture as this would make it more challenging and it will open up a variety of interpretations. In total six images would be picked to represent the themes derived from the students' common responses to the question "I am most happiest when..." which was asked in advance before choosing the photos. The search for these images were guided by the themes of 'spending time with friends,' 'spending time with family,' and 'playing sports/being active'.

For this activity, the chances of having participants unable to relate to some images were accounted for and in order to increase the chances of engagement. Two images were chosen to showcase one of the three themes 'spending time with friends' (Figures 5 and 6), 'spending time with family' (Figures 7 and 8), and 'playing sports/being active' (Figures 9 and 10). In the case that both images still do not relate to any of the mentees' experiences, this can still be seen as an opportunity to create conversations leading from this.

The photos had to:

- Have bright colours
- Have people smiling
- Have group of people
- Be clear and not blurry

#### 'Spending time with friends'



Figure 6. *Generative Themes: 'Spending time with friends' playing volley.*

**'Spending time with friends'**



Figure 7. *Generative Themes: 'Spending time with friends' playing outdoors together.*

**'Spending time with family'**



Figure 8. *Generative Themes: 'Family Spending time together' during dinner.*

**'Spending time with family'**



Figure 9. *Generative Themes: 'Family spending time together' outdoors with their family dog*

### 'Playing sports/ Being active'



Figure 10. *Generative Themes: Being active playing on the playground*



Figure 11. *Generative Themes: 'Playing a sport/ being active' outdoors.*

From this activity, it was important to reflect that the images do not always relate to the majority of the environment or reality of the participants. For example, the two students from the Sunday School and so when the Sunday School teacher asked if they can share any similar experiences to the photo shown, they both struggled to engage or relate. It is important to reflect upon my personal upbringing and how it is very different to the students growing up in different generations there are a lot of development in things activities perceived as relatable to my time as the designer. In order to find images that would relate to the pacific participants I interact with. However, they were able to share their personal ideas and opinions and had created a connective conversation between the group. For the next iterations of these images, it should showcase activities that relate to the majority of the mentees rather than just choosing the images because they were one of the very first images found. The images need to be thoroughly researched and have some relation to the participants and the facilitators experiences.

### **3.1.2 Phase 2: Attempting activities of interest**

As previously mentioned, stage 2 within the mentoring journey is where the mentor and mentee work together in establishing and nurturing their mentoring relationship. As they complete the introduction stage, mentors and mentees would be more aware of each other's backgrounds. At this stage, it is ideal to introduce areas of interest or goals that the smentee wants to achieve in conjunction with activities they enjoy to establish the relationship. Activities are as listed below.

### **3.1.2.1 Hidden Art**

The activity 'Hidden Art' involves solving equations that would reveal an art piece. Over the years of mentoring and coordinating at MATES, I observed that many of the mentees enjoy this activity as it involves creativity and problem solving. An adjustment was made to the activity by incorporating a personalized element – having the art piece reveal a portrait of the participants. This modification aimed to enhance engagement but retained the original concept without contributing new value or knowledge to the outcomes. To introduce fresh outcomes, a technological aspect would be encouraged to be introduced to engage mentees with familiar gadgets and programs, providing a different experience from what they might have already encountered.

### **3.1.2.2 Coding Patterns**

The 'Coding Patterns' activity encourages participants to solve equations in order to cooperatively create patterns on a digital device. Using colouring pencils, the participants are given a lined out squared grid on paper to first plan out a pattern before plotting in the coordinates on the coding program called processing. The processing program has a code that shows the grid and a coloured square to help get the participants started. The facilitators help and guide the participants with adding another square and plotting in the coordinators to fulfil the pattern they aim to create.

From this activity, the students really enjoyed being able to cooperatively help one another working together in inputting the right code. The concept of this activity reminded me of the Connect Four game where two participants compete in trying to have four colours of the same coin in a line. How the Connect Four game differs is through the aspect of the participants competing against each other whereas for the 'Coding Patterns' activity, there is more of collaboration than competition. As noted in the 'Human Bingo' activity, mentees show greater engagement when faced with a challenge. Therefore, when experimenting with the 'Coding Patterns' activity, an element of challenge was incorporated to captivate the students interest. This was achieved by introducing a competitive aspect, wherein students engaged in a Connect Four game using the processing program.

### **3.1.2.3 Coding Connect Four**

From the 'Coding Patterns' activity, the initial iterative approach was to then implement a game of Connect 4 on Processing, however, to familiarise the students and sunday school teacher more with using the processing program, it was ideal to start off easy with a game of Naughts and Crosses. This was because it required fewer steps and the students were introduced to the coding concepts. Instead of coding a 'x' and 'o' for Naughts and Crosses, the two students with the support of the sunday school teacher programmed two different coloured circles for the two players to use since this was easier to program. The students became more familiar as they continued two games of Naughts and Crosses which then led to implementing Connect 4 as a challenge after being familiar with coding.

From observing the interactions within this activity it highlighted importance of introducing easy, medium and difficult levels as the participants progress in an activity. With this process in place, participants will feel more confident before moving onto more difficult levels, however, if they had given the difficult levels first this would have created more confusion and disengagement. For future activities, potentially adapting the levels starting from easy and slowly progressing to more difficult levels would help support the participants in engaging a lot more. In reflection of this activity there were more conversations around how to input code and work the processing program than actually establishing a mentoring relationship between the Sunday school teacher and students which was interesting. Since the digital device became the main focus in completing the activity, the relationship between the students and the Sunday school teacher was observed as a disconnected relationship during the session. Therefore, for the next iterative activity, it was important to explore creativity in a hands-on approach to create a physical outcome where the students were able to draw and design

#### **3.1.2.4 Tapa Cloth**

The decision to implement the 'Tapa Cloth' activity was a response to introducing a more hands-on approach after technology-based activities. In Pacific culture, patterns on tapa cloth often represent cultural and symbolic significance, symbolising various aspects of the community, individual identity, or historical narratives. The significance of tapa cloth varies across different Pacific communities, with interpretations differing based on specific cultures and regions. Often, these patterns in Pacific cultures represent ancestral narratives, cultural symbols, and elements inspired by the natural environment. In the context of this activity, the patterns and designs serve to communicate values and provide insight into the participants' journeys, creating a space for sharing and narrating their stories within the group.

The facilitator is encouraged to design their own Tapa Cloth design as well to contribute towards discussions. Participants would be given examples of patterns they could use, however, they must explain how the designs relate to values they hold to them. Resources such as paper, felt tip pens and paint in a variety of colours were given to use towards creating their designs.

From this activity, students were not fully engaged because they had finished a long day at their Sunday School class and wanted to go outside and play instead. It is difficult to engage students in activities when they have had many events happen during the day that has taken up much of their energy. The Sunday school teacher gave the students the space they needed and adapted accordingly. Another factor to consider is that not all students are interested in drawing or painting, and so being adaptable to how they would like to engage in the activity is important as well. For some, it could be researching into the tapa patterns, printing and cutting out the designs onto their Tapa Cloth, and so being adaptable in those situations to take into account how each mentee engages differently and being open and adaptable is an important approach for future activities.

### **3.1.3 Phase 3: Academic activities**

Phase 3 of trialling activities during the iterative process, included exploring academic focused activities in alignment with Stage 3 of a mentoring journey where it is important to develop individuality during the maturing stage of the mentoring relationship. Individuality can be encouraged by improving on the mentees personal academic goals and needs. To attain this goal, it's essential to consider interactive activities that assist mentees in connecting real-life situations with academic theories. Several MATES mentees found enjoyment in participating in STEAM (Science, Technology, Engineering, Arts, and Mathematics) activities during our sessions. Therefore, it was crucial to explore and design activities within this realm of expertise. For many of the students/mentees in this research, science is very limited due to accessibility to equipment and resources whether within their schools or homes.

#### **3.1.3.1 Finding the average speed**

'Finding the average speed' was a similar activity I had done in high school in my physics class, as a way to understand the law of gravity and speed. For the activity, participants would work together in creating a hypothesis of how fast the car would travel from the top of the ramp placed at different levels. The participants had three trials where the angle of the ramp was changed in order to observe how this might increase or decrease the speed of the cars. At the end of each trial, all participants are to write a reflective report stating whether their hypothesis was true and any notes for future experimentations. Objects from around the room can be used to create the ramps, and a phone can record the time it took for the car to travel.

This activity worked well with engaging the participants as they approached it in a competitive way where the students with the help of their Sunday school teacher each worked to improve the speed of their individual cars in every trial. Though they were not working together on coming up with ways they could approach the activity, being able to witness the students independently lead their experiments was just as important to see how involved they wanted to be in the activity. From this activity, I learnt that it is important to understand a successful trial is not one where the participants follow every rule but rather they are ones where the participants are all engaged in improving their knowledge and efficiency within an experiment. For future activities, it is important to allow room for change as a way to understand new knowledge and edits that can be adapted to improve the participants' engagement.

#### **3.1.3.2 Coke and Mentos experiment**

The Coke and Mentos experiment was an activity that was chosen by the MATES mentees as the majority of them have never done it before. The 'Coke and Mentos' experiment has been commonly used during our sessions as an interactive and engaging activity to introduce mentees towards science and academic focused activities. This activity draws from a renowned science experiment, essentially serving as an example, as demonstrated in Vanstone's (2023) work. However, while the core of the activity remains the same, its context is notably distinct in these scenarios. The students suggested a creative idea of painting the outside of the bottle as a volcano, enhancing the visual effect when the bottle explodes.

Both students were new to this experiment, providing an opportunity to introduce them to something novel and interesting.

For the activity, the participants need a coke bottle and one pack of mentos. The sunday school teacher instructed them to find a space to conduct the experiment outdoors due to the expected overflow of liquid that would stain the carpet. The pack of nine mentos will be dropped into the coke bottle and will create an explosion.

From this activity, I was able to observe how high the levels of engagement of the group were and analysed how to adapt for further on their experiments. Over the years of coordinating at the MATES programme as well, the Coke and Mentos challenge has been successful in creating a space for groups to collaboratively reflect upon their findings and also cooperatively work together for further improvement. This time however, the added creativity in designing the bottle sparked increased discussion and engagement seen through the observations and outcomes of the activity.

### **3.1.3.3 Egg Drop**

The 'Egg Drop' challenge was another recommended activity by the mentees at MATES, and so following the previous 'Coke and Mentos' experiment came another science based activity to be conducted with the students. For this activity, students would be given one egg they must not break when being dropped from a certain distance. Paper, tape and skewers were provided for the students to make a protective shield to lessen the impact of the egg when being dropped. Similar to the 'Coke and Mentos' experiment, the 'Egg Drop' challenge is well known and was influenced by the activity on the Science kids website (Science Kids, n.d.). However, while the core of the activity remains the same, its context is notably distinct in these scenarios. What differs from the original concept of the 'Egg Drop' challenge, explores the added challenge of the different levels of difficulty being that for every successful egg drop, students were then to move onto higher levels and this will continue for three rounds being a low, medium and high level.

It was interesting to observe how engaged the sunday school students and mentor were with working together on ensuring their egg did not break. Each had their own idea of how the shield should be formed but collectively they merged the design together. The challenge of the different heights added towards facilitating more discussion on how to better improve and adapt their contraptions. The design principles of support, collective reflection and collaboration was evidently seen in this activity and would be interesting to observe with the MATES mentoring mentees.

## 3.2 Evaluation of activities

### 3.2.1 Development based on reflection and feedback

Evaluation during the design process involved development based upon the reflective feedback on the outcomes of each trialled activity. Through the iterative process, this allowed room for improvement and for new ideas to be added towards the activity that would bring more engagement from the participants. Once every activity was designed, edited, trialled, observed and reflected upon, the design process continued as the activities were developed based on the observations and reflections taken from during the session. With the results from trialling the activities, whether the outcome was successful or not, unpacking the notes from the interaction brought about new themes and ideas that helped to develop and evolve onto other activities. From the reflective findings of these activities, the idea of adding in levels of difficulties and adapting the activity to suit the participants' engagement style was really important to take note of in the following activities.

After designing the activities during the 'Trialling Iterative Design' stage, the four 'Final Designs' activities that came from the three Phases were trialled with the MATES mentees. Taking into account that the aim is to support mentoring relationships as mentioned by Hay's (1995) mentoring life cycle, each of the pairs journey and stages can look different and so it will be interesting what outcomes come from the trialling of 'Final Designs' activities. The four final activities to trial with the MATES mentees were 'Generative Themes', 'Tapa Cloth', 'Coke and Mentos' experiment as well as the 'Egg Drop' activity. The results and further evaluation will be discussed in the following chapter.

## CHAPTER FOUR: GENERAL OBSERVATIONS AND REFLECTIONS

### OVERVIEW

This chapter delves into the final designs of the 'Generative Themes,' 'Tapa Cloth,' and 'Science Experiments' activities, showcasing the outcomes witnessed during their trial with MATES mentees in their mentoring sessions. Serving as both the researcher and designer of these activities, examining the mentor-mentee interactions within these engagements will offer critical insights into how well the design principles align with the activity goals. For a comprehensive understanding of each activity's execution, results, and the subsequent reflections and observations, the following chapter is dedicated to detailing the observations and reflections of the mentor and mentee engagements.

## 4.1 Design Framework of Activities

### 4.1.1 Generative Themes

The Generative Themes activity, rooted in the principles of encouraging personal voice and collaboration, involved mentees interpreting photos to build confidence in expressing opinions and engaging in conversations with their mentors. The goal was to create a space where both mentor and mentee felt encouraged to share chosen information, fostering familiarity with each other's interpretations and experiences. Emphasising the freedom to share ideas, right or wrong, the activity values the engagement of mentees and mentors in sharing experiences contributing to their individual identities.

The collection of answers were the same as used during trialling stage of the activity in the 'Design Process', the themes being:

The top three themes were: (*I am happiest when...*)

- Spending time with family, having food and playing music (At home, family activities)
- Spending time with friends (gaming and playing on the park)
- Playing sports and being active (Competing and being outdoors)

Trialling the 'Generative Themes' activity highlighted the importance of researching images relevant to the audience's environment for increased engagement. Reflections on Sunday School students daily activities aided in identifying relevant environments for MATES students as they were interested in and valued similar topics encompassing sports, friendships and family. Consequently, the criteria were broadened to refine the image selection process for interpretation during the activity.

The criteria for selection of the images followed a criteria:

- Photos must be clear, avoid low-quality and blurry photos
- It has to be colourful so preferably choose photos that are bright in colour, preferably a setting of a sunny day
- There has to be a group of people
- The faces are to be smiling in the photo
- Activities must be relevant to activities done on a daily basis
- The ethnicities of the group must be multicultural/ showcasing Pacific and Māori people (as the majority of the mentees in the mentoring program are Pacific and Māori)

The prompts that were used to research the images were:

- Group of kids having fun while playing together
- Children hanging out with friends
- Family gatherings

- Family enjoying themselves at a family gathering
- Friends playing sport
- Kids at family gatherings

Nine photos, sourced with a standard licence permitting personal, business, or commercial use within specified terms, were downloaded. Two images were shortlisted to represent one theme, resulting in a total of six images as shown in Figures 11-16. This approach enabled participants to elaborate on two images, offering flexibility beyond the constraint of relating to just one image or experience.

**'Spending time with friends'**



Figure 12. Title *From Generative themes 'Spending time with friends' playing video games.*

**'Spending time with friends'**



Figure 13. *Generative themes 'Spending time with friends' playing on the playground.*

**'Spending time with family'**



Figure 14. *Generative themes 'Spending time with family' having dinner.*

**'Spending time with family'**



Figure 15. *Generative themes 'Spending time with family' in the lounge.*

**'Playing sports and being active'**



Figure 16. *Generative themes 'Playing sports and being active' outside in the back yard.*

### 'Playing sports and being active'



Figure 17. *Generative themes 'Playing sports and being active' playing soccer on the public field.*

The last step in preparing photos for interpretation, involved selecting a small portion to present to participants. On one side of an A4 page and on the other side would show the full sized image that would be revealed at the end of the activity as shown in Figures 17, 18, and 19. This adds a challenging element to the activity, fostering diverse ideas and conversations before revealing the complete picture.

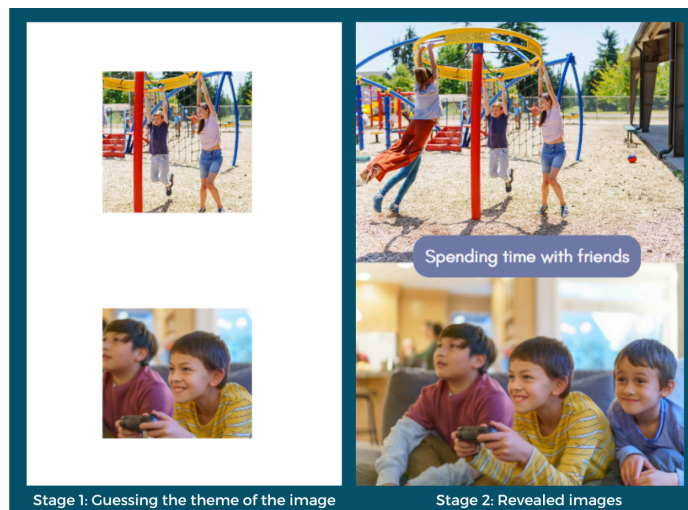


Figure 18. *'Spending time with Friends' example of activity.*



Figure 19. *'Spending time with family, having food or playing music'* example of activity.



Figure 20. *'Being active playing sports'* example of activity.

Mentors are provided with a question guide and reflection sheet to facilitate the activity (Figure 20, 21). The question guide prompts conversations during the activity, while the reflection sheet aids in unpacking the outcomes for the mentors. There is no particular order in how to conduct the 'Generative Themes' activity, however the guide is in support if the mentors need to refer to it for any guidance. During the activity, I closely observe their engagement. After the activity concludes, mentors discuss the results within their groups, and I reflect on their interactions. This continuous feedback loop allows for a comprehensive understanding of the dynamics and outcomes of the conducted activities. Although not formally documented, these steps ensure participants are in a positive state before moving on to other session plans.

## Generative Themes Activity - Question guide

### Questions for the students:

#### Activity with Friends

- What activities do you think are happening in the photos? What makes you say that?
- Are these some activities that you do with your friends?
- If you were to design these images yourself - what would it look like?



#### Playing Sports

- What activities do you think are happening in the photos? What makes you say that?
- Do you enjoy playing sports? Which one is your favourite and why?
- If you were to design these images yourself - what would it look like?



#### Spending time with family.

- What activities do you think are happening in the photos? What makes you say that?
- Are these some activities that you do with your friends?
- If you were to design these images yourself - what would it look like?



Figure 21. *Generative Themes Activity Mentor Question Guide.*

## Generative Themes Activity - Mentor Reflection

### Mentors Reflection

How did the student respond to the images shown? Did they share much from their personal experience?

How relevant do you think the images were to the student?

Was there a sense of shared opportunities to share personal opinions, connectedness between you and the mentee or collaboration? If so, how?

At which points did you feel the student was NOT engaged? Why do you think this could be?

At which points did you feel the student was MOST engaged? Why do you think this could be?

Do you feel that the aim of the activity was met?

Figure 22. *Generative Themes Activity Reflection for Mentors.*

### 4.1.2 Tapa Cloth

In line with the objectives outlined during the 'Tapa Cloth' trials in the 'Design Process' chapter, participants are tasked with creating patterns that symbolise the values in their lives. This activity builds on the design principles of a supportive group and connectedness through the narration of shared experiences and stories between the group. To familiarise mentees with the concepts, an example of tattoos on the Disney character Maui is provided (shown in Figure 22), drawing parallels to his journey, encompassing both positive and negative aspects. Participants are urged to share memorable stories, values, and anything that provides insight into their identity.

When deciding which of Maui's tattoo to use an example for this activity, the criteria was as follows:

- Must be clear and not blurry
- Must be retrieved from a royalty free website
- Best to use black and white outlines for patterns to enhance focus.



Figure 23. Tapa Cloth activity Disney Character Maui's Tattoo exemplar.

Materials for this activity, including paper, felt-tip pens, and a variety of paint colours, were made available. Participants received a guide to consult when deciding on patterns to draw. The tattoo patterns inspired by the Disney character Maui were familiar concepts, having been introduced in a previous session where we watched movies. This familiarity allows participants to refer to the concept of Maui's tattoo as they decide what to draw.

Much like the 'Generative Themes' activity, mentors receive a question guide and reflection sheet to guide the activity (Figure 23, 24). The question guide assists in prompting conversations, while the reflection sheet helps in analysing outcomes. The guide is a resource for mentors if they need guidance. During the activity, I closely observe their engagement. After the activity concludes, mentors discuss the results within their groups, and I reflect on their interactions. This continuous feedback loop allows for a comprehensive understanding of the dynamics and outcomes of the conducted activities. While not formally recorded, this process ensures participants conclude conversations and information sharing effectively.

An example: In the movie Moana, Maui's tattoos share stories of experiences (both his successes and trials)

You could draw:

- A meaningful place (your homeland, basketball court etc.)
- A special memory (an achievement, spending time with family etc.)
- An important value (kindness, support, friends, family etc.)



Figure 24. Tapa Cloth activity mentor guide.

## Tapa Design Activity - Mentor Reflection

### Mentors Reflection

How did the student respond to sharing their stories through the activity?

Was there a sense of support when sharing ideas and experiences?

At which points did you feel the student was NOT engaged? Why do you think this could be?

At which points did you feel the student was MOST engaged? Why do you think this could be?

Do you feel that the aim of the activity was met?

Any further comments?

Figure 25. Tapa Cloth activity mentor reflection.

### 4.1.3 Science Experiments:

The mentees at MATES strongly recommended conducting the 'Coke and Mentos' and 'Egg Drop' experiments over two separate sessions. While these activities draw inspiration from popular existing experiments, the context in which I implement them differs. Introducing varying difficulty levels to the 'Egg Drop' challenge and integrating creative elements into the 'Coke and Mentos' experiment aimed to achieve different processes and outcomes compared to the original way of executing the activities.

#### 4.1.3.1 Egg Drop

Aligned with the objectives defined during the trial of the 'Egg Drop' activity in the 'Design Process,' participants are tasked with dropping an egg from a given distance with the aim to not break. The primary goal of the entire activity is to witness participants applying design principles by collectively reflecting on the situation and collaborating within their groups. This can be fostered through the experimental aspect and discussions for improvement.

Participants are to create the contraptions using paper, skewers and tape to minimise the likelihood of the egg breaking upon impact with the ground. Successful trials allow mentees to progress to higher levels, introducing varied difficulties categorised as low, medium, and high. These difficulty levels can be done at the senior playground where the MATES sessions are held. The varying heights at each stage prompt mentees to adapt and analyse their designs more thoroughly.

Participants are to work through the Science Experiment worksheet (Figure 25), where they will be able to plan out how they would attempt the activity before designing their contraptions. After every trial, participants are encouraged to reflect before adopting any changes towards their experiments. The mentors will be given a reflection sheet (Figure 26) to help unpack the outcomes of the activity. During the activity, I closely observe their engagement. After the activity concludes, mentors discuss the results within their groups, and I reflect on their interactions. This continuous feedback loop allows for a comprehensive understanding of the dynamics and outcomes of the conducted activities. Although not formally documented, these steps ensure participants are in a positive state before moving on to other session plans.

Equipment needed for the entire group to share:

- x1 Tray of 12 eggs (Enough for 5 groups of pairs, to have an extra egg if needed)
- x1 Pack of skewers
- x1 Mini pots of paint in the four primary colours
- x4 Mini rolls of tape
- x1 A4 paper stack (500 pages)

The equipment will be arranged on a table for students to easily access whatever they may need. However, the eggs will be given to the mentors and provided to students as needed. There will be

sufficient supplies for each pair or group of mentees to have one egg each, with an extra available upon request.

Science Experiment	
Challenge	hypothesis
Experiment	
Materials	
Result	
Conclusion	

Figure 26. Science experiment worksheet.

## Science Experiment - Mentor Reflection

### **Mentors Reflection**

How did the student respond towards the activity?

Was there a sense of collaboration and collective reflection when sharing ideas and experiences?

At which points did you feel the student was NOT engaged? Why do you think this could be?

At which points did you feel the student was MOST engaged? Why do you think this could be?

Do you feel that the aim of the activity was met?

Figure 27. Science experiment 'Egg drop' Mentor Reflection.

#### 4.1.3.2 Coke and Mentos

Aligned with the objectives defined during the 'Coke and Mentos' trials in the 'Design Process' stage, participants experiment using a bottle of coke and pack of mentos to create an explosion. Much like the 'Egg Drop' challenge, the main aim of the entire activity is to observe participants applying design principles by collaborating within their groups. However, as this experiment allows only one attempt, there isn't an opportunity for collective reflection following the different trials of the activity. Therefore, the 'Coke and Mentos' experiment fosters creativity through the act of painting and decorating the exterior of the bottle. Allowing mentors and mentees to embellish their bottles creates opportunities for them to exchange the significance behind their drawings. This aligns with the design principle of establishing a supportive group environment, where everyone attentively listens to each other's ideas shared within the pair, irrespective of how challenging or unconventional they may appear.

Every mentor-mentee pair will receive one coke bottle and a mint roll. On a table, paint, brushes, A4 paper, and tape will be available for mentees to utilise.

Equipment accessible to each participant:

- x1 1.5L Coke bottle
- x1 Mint roll
- x1 Mini pots of paint in the three primary colours (green, yellow, red)
- x1 A4 paper
- x1 Roll of tape

During the activity, I closely observe their engagement. After the activity concludes, mentors discuss the results within their groups, and I reflect on their interactions. This continuous feedback loop allows for a comprehensive understanding of the dynamics and outcomes of the conducted activities. Similar to the 'Egg Drop' challenge, at the end of the activity mentors will be given a reflection sheet (Figure 27) to help unpack the outcomes of the activity. Although not formally documented, these steps ensure participants are in a positive state before moving on to other session plans.

## Science Experiment - Mentor Reflection

### **Mentors Reflection**

How did the student respond towards the activity?

Was there a sense of collaboration and collective reflection when sharing ideas and experiences?

At which points did you feel the student was NOT engaged? Why do you think this could be?

At which points did you feel the student was MOST engaged? Why do you think this could be?

Do you feel that the aim of the activity was met?

Any further comments?

Figure 28. Science experiment 'Coke and Mentos' Mentor Reflection.

## 4.2 Results and Observations

### 4.2.1 Essences of conducting the activities

The trial of activities with MATES mentees took place during the mentoring sessions from 3 - 5 pm after school. The four activities—'Tapa Cloth,' 'Generative Themes,' 'Egg Drop' and 'Coke and mentos—were spread across three sessions, dedicating each day to a specific activity. These sessions aligned with Hay's (1995) mentoring life cycle stages one, two and three as mentioned in the methodology chapter, focusing on getting to know one another and establishing individuality through a nurturing and maturing stage. Some activities were also trialled during the closing of the relationship stage 4 of the mentoring journey, depending on the participants' availability and external factors like sports trips or MATES activities that occasionally disrupted the schedule.

It's crucial to note that not all pairs were at the same stage in relation to their mentoring life cycle during when going through the engaging activities. Unforeseen changes in team members, beyond my control, led to mentors being at different points in their journey, emphasising the need for flexibility and understanding of the varying stages participants may find themselves in.

Each school had its designated day for mentoring sessions throughout the entire year. Sessions were conducted in either a classroom or library, and for the trialling of these activities were to remain in this familiar space for accessibility to necessary facilities. Before the session, mentors received an outline of the planned activities. The approach was to treat the activity like a regular session where mentors and mentees would engage in activities planned by the mentor. In this specific session, my role was mainly observational to avoid influencing the group's decision. This approach allowed me to understand the mentor and mentees' approach and comprehension of the activity. The leadership and interpretation of the activity were dependent on the group and their unique approach.

Considering the number of mentors in each group, the aim is to balance how many mentors and mentees would trial the activity. It's important to highlight that there is a specific number of mentors and mentees assigned to each school, and I don't have control over how many are in the program. The number of mentors who led the activities with the mentees depended on who was committed to attending the mentoring session and can be shown in the Table 1 in reference to the Generative Themes activity, Table 2 in reference of the 'Tapa Cloth' activity and Table 3 in reference for the 'Science Experiments'. For mentors and mentees assigned to a school, mentors had the flexibility to choose when to incorporate the activity, recognizing that they might have pre-established agendas or unforeseen urgent matters requiring priority attention before engaging in the learning and engaging activity.

## 4.2.2 Generative Themes

Participants	Aged 11 - 13	Aged 19 - 25	Pacific Ethnic Group	Other
Mentor	-	11	3	9
Mentee	16	-	13	3

Table 1. *Observations of participant's general age and ethnicity for Generative Themes*

### 4.2.2.1 Profile Group 1

#### 4.2.2.1.1 Observations

Group 1 had a one mentor to mentee ratio both from a Pacific background. During the activity, I observed that the mentee was eager to share their interpretations of the image, and at these moments I described their engagement level as 'very engaged'. It was interesting to observe how the mentor handled situations where the mentee became quiet and frustrated with not knowing how to respond to the activity, resulting in a gradual fade of both the conversation flow and the mentees engagement. When the conversation flowed smoothly, it was typically when the mentor expressed interest in the

mentees answers and they felt supported. Both the mentor and mentee displayed varying levels of engagement throughout the activity, with the most successful interactions occurring when they openly shared and listened to each other's opinions and lived experiences.

#### **4.2.2.1.2 Reflections**

Upon reflecting on my observations, the 'Generative Themes' activity emphasised the significance of allowing mentees to express opinions and share stories, fostering meaningful engagement in conversations. A notable moment occurred when mentees were asked about images representing 'spending time with friends.' The question, inquiring if they "spend morning tea with their friends sitting around a table outside," prompted a surprising response. The mentees mentioned not having tables on school premises, leaving the mentor taken aback. This made me realise that as a designer we can often overlook aspects of mentees everyday environments with our own personal judgement. The activity highlighted the importance, as a designer, of being more aware and familiar with mentees' environments and backgrounds in order to create more meaningful conversations that provide a space to encourage the participants in being able to connect and share upon their own experiences. In this instance, it prompts consideration of how to ensure that the activity, if not directly related to the mentees experiences, could possibly adapt to the unique and different stories they aim to share. Improving engagement levels in this scenario may involve mentees in selecting images or allowing them to draw out their interpretations in relation to their own experiences.

### **4.2.2.2 Profile Group 2**

#### **4.2.2.2.1 Observations**

Group 2 consisted of one mentor and two mentees, all belonging to the Pacific ethnic group. During the activity, the mentee and mentor introduced an additional challenge that significantly increased engagement within the group. The challenge given to the three members in the group was to list as many words as possible describing the image shown. As the mentor joined in, the group dynamic underwent a change, becoming highly competitive. However, due to the mentor's competitive stance against the mentees, the mentees tended to back down, feeling inferior to the mentor. Recognizing this, the mentor still participated in writing down their list of words, but decided to level the competition and allowed the two mentees to compete against each other while they shared what words were on their list if any different to the each others.

#### **4.2.2.2.2 Reflections**

Group 2 prompted me to consider the dynamics of a three-member setting during an activity. It can either support individual voices or lead to overcrowding, discouraging participation. Navigating such situations is crucial for maintaining engagement, considering diverse responses from mentees. Pairing two mentees to one mentor may encourage contributions from the group as they might feel more comfortable with having their friend with them. However, too many opinions might hinder conversation

flow as undermining the opinions of those in the group can be overlooked, compromising collaborative space for strong engagement.

While Group 2's approach to the activity deviated from the intended method, I believe they achieved the activity's aims in their unique way. This experience prompted considerations about striking a balance between competition and collaboration to encourage engagement without creating an overly competitive environment among the group. Introducing a challenge can enhance activities, but in this case, there were instances where it seemed to foster more of an individual focus rather than a collaborative environment. However, personal opinions were shared during discussions about the results, and as a group, they collaboratively found new vocabulary and enhanced their understanding of each other's level of engagement styles. Reflecting on this, I considered how activities designed to foster engagement continually evolve to align with the preferences and approaches of mentors and mentees.

### **4.2.2.3 Profile Group 3**

#### **4.2.2.3.1 Observations**

Group 3 consisted of one mentor and one mentee from the Pacific ethnic group. The mentee's engagement during the activity was challenging to assess, as their levels fluctuate. However, the mentor remained consistent in encouraging the mentee throughout. There were instances when the mentee disengaged, particularly when asked about personal situations like 'family.' To respect privacy, consider a similar situation where the mentee has to guess people at a theme park they've never visited or had negative experiences with that causes the mentees to disengage. In such cases, the mentor's willingness to listen, understand, and provide support proved beneficial towards the mentee's involvement throughout the activity. Ultimately, the activity created a space for both the mentee and mentor to contribute and enrich each other's experiences.

#### **4.2.2.3.2 Reflections**

From the observations of Group 3, it emphasised the consideration that while exploring core memories of childhood can contribute to collaborative discussions and support mentees in expressing their opinions, sensitive topics may arise, leading to confidential areas for the mentees. This group served as a reminder that the experiences in a child's life are real and cannot be altered to fit the desired outcomes of an activity. It underscored the importance of recognizing the diverse backgrounds of our mentees, with some having faced more challenging circumstances than others.

Engaging in conversations about upbringing and family may bring out both positive and challenging aspects, but it becomes crucial when the activity's aim is to support young people in connecting through the sharing of their stories. The mentor in this situation navigated it effectively by remaining open and aware of cultural differences, creating a safe space for both mentees and mentors to see each other

beyond colleagues, evolving into trusted partners. This experience is likely common for many mentors working in a space filled with diverse stories and backgrounds, each with its own narrative.

Through their conversations, it became evident that while it may not always manifest as a collaborative space, it still achieved that outcome, as both the mentee and mentor engaged in sharing parts of their stories. This taught me that collaborative spaces can take various forms, and there isn't a single criterion for judgement. What's crucial is that the mentee, mentor, and the observer remain open to interpreting the aims, design, and results in diverse ways.

#### **4.2.2.4 Profile Group 4**

##### **4.2.2.4.1 Observations**

Group 4 consisted of one mentor and one mentee from the Pacific ethnic group. While the group followed the activity guidelines step by step, they encountered challenges in providing open-ended answers to the questions. The mentee seemed content with brief responses, making it challenging to develop a deeper understanding when the answers lacked context. The mentor observed that the mentee often responded with simple "yes" or "no" answers, and when faced with questions requiring more explanation, they often replied with "I don't know." Recognizing the need for a more dynamic approach, the mentor decided to deviate from the activity's order and instead go with the flow of the conversation. They aimed to unpack comments shared by the mentee, sharing their own experiences—whether similar or different—to initiate a dialogue and conversation.

##### **4.2.2.4.2 Reflections**

Group 4 prompted me to reflect on the diverse levels of engagement among mentees, recognizing that each mentee may express engagement differently. Some mentees are confident in sharing extensive details about their experiences, while others may share minimal information as their way of contributing towards the activity. It's crucial to understand that the degree of engagement is not solely determined by the amount of information shared; rather, mentees exhibit varied ways of engaging, and it's essential to appreciate this diversity. As a designer, it's crucial to be familiar with how individual mentees engage in various activities during the session, with input from mentors who understand their mentees well. Understanding that the way the activity is structured may not always support the diverse styles of engagement, it is important to allow mentors who have more expertise with how they engage their mentees to take the lead in adapting the activities accordingly. The need to co-design with mentors to suit the needs of the group could be a possible avenue for future activities as designing an activity from one designer's point of view with the aim to suit every mentee is impossible. For this reason, the aims of the activity were somewhat met. The mentor took the lead in the conversations, resulting in more fluid discussions. The back-and-forth sharing of experiences also facilitated collaboration among the mentor and mentee.

## 4.2.2.5 Profile Group 5

### 4.2.2.5.1 Observations

Group 5 consisted of one mentor from other ethnic groups and two mentees who belong to the Pacific ethnic group. The mentees approached the activity from different perspectives—one relying on factual observations of the images, while the other crafted imaginative stories. This dynamic created a collaborative environment where both were eager to contribute to each other's interpretations. The mentee with a practical viewpoint, a mature mentee, and a leader in their school, took on a co-leading role with the mentor, facilitating discussions and viewpoints within the group. Meanwhile, the second mentee, reflecting the innocence of a curious mind, contributed imaginative stories to the activity.

### 4.2.2.5.2 Reflections

Group 5 prompted me to contemplate the potential of transforming this activity into a group setting, allowing not only mentors but also mentees to take leadership roles in leading conversations. I'm curious about the engagement levels that could arise when the leadership is shared between mentor and mentee, and what design principles might emerge from such collaboration. This group also drew parallels to the times we played the mafia activity during our sessions, observing how storytelling remained a common element that engaged both mentors and mentees.

## 4.2.2.6 Profile Group 6

### 4.2.2.6.1 Observations

Group 6 consisted of two mentees from the Pacific ethnic groups paired with a mentor from the other ethnic group. Since their original paired mentee or mentor was absent, they were matched with the available mentor and mentees. Although the mentor was willing to conduct the activity, the mentees had mixed responses. One mentee showed enthusiasm and shared thoughts, while the other seemed disinterested, providing mostly one-word responses.

When discussing the image and its relation to 'spending time with family,' the mentees questioned if it depicted kids playing outdoors, a valid interpretation. The topic of gaming, however, proved more engaging as the mentee realised the mentor shared an interest, facilitating better communication. Overall, the mentees displayed limited responsiveness to the activity.

### 4.2.2.6.2 Reflections

Reflecting on Group 6's interaction in this activity highlighted the challenge of sharing without having had prior time to develop a connection. Since these weren't the intended pairs of mentors and mentees, there was less connectedness and shared opportunities to discuss the events in the image, possibly because it felt daunting to share with someone they didn't know well. While one mentee contributed

answers to the activity, the other found it difficult to engage with someone who wasn't their mentor. Additionally, the mentee was tired from a long day of sports competition and did not actively contribute throughout the activity.

As a designer, this made me consider the suitability of activities when mentors or mentees are paired together due to the absence of their intended partners. The mentor, if unwell, might offer opportunities for mentees to be paired with other groups they've worked with before, but preferences and dynamics can vary. Hence, the primary reason for their disengagement might have been the lack of previous collaboration in earlier sessions.

Other factors, such as the events of the day, contribute to how well mentees engage in activities. The different responses of the mentees, influenced by their sports competition earlier, demonstrate that disengagement can manifest in various ways for different mentees.

### **4.2.2.7 Profile Group 7**

#### **4.2.2.7.1 Observations**

Group 7 consisted of two mentees from the Pacific ethnic groups with a mentor. Similar to Group 6, this group encountered a situation where their original pairings were disrupted due to the absence of their designated mentee or mentor. The available mentor facilitated the activity, and when asked about their interpretations of the image, the mentees initially offered surface-level answers. However, as the mentor posed additional follow-up questions, more meaningful contributions began to surface. There were instances when the mentor's attempts to redirect the conversation were met with disengagement, yet the mentees remained responsive when provided with the opportunity to discuss random topics amongst the mentees.

While the images didn't always directly resonate with the mentees, they discovered a connection in the sports-related activities, aligning with their shared interest in active pursuits. The mentees particularly enjoyed the challenge of deciphering the meaning of the activity and unveiling the bigger picture at the end.

#### **4.2.2.7.2 Reflections**

Upon reflecting on the interactions of Group 7, similar to Group 6, the lack of recent engagement in activities together impacted the mentees' willingness to discuss their experiences or take the activity seriously. Their prior engagement in active pursuits led to a lack of engagement and a preference for different activities. The mentor's attempt to engage the mentees and guide through the activity contrasted with their preference for casual conversations on random topics. This observation underscores the need for further refinement in the activity's design. The primary goal is to establish connections through shared experiences or conversations, resembling the concept of discussions that

encourages open dialogue without a specific focus on productivity. This interaction highlighted the importance of adaptability in activity design to accommodate diverse experiences while fostering a space for open discussions on topics of interest or common ground.

#### **4.2.2.8 Profile Group 8**

##### **4.2.2.8.1 Observations**

Group 8 consisted of one mentor and a mentee from the other ethnic groups. While presenting the activity, the mentor and mentee delved into shared experiences to establish a connection. Some experiences, like watching TV with their family, were recalled, while others didn't resonate as much. This led to discussions about the mentee's favourite activities, providing ideas for further conversations about her interests and other engaging session activities. The image of sports activities didn't evoke much response, as the mentee doesn't enjoy playing sports. However, spending time with friends was a point of connection, allowing them to share their experiences.

##### **4.2.2.8.2 Reflections**

Upon reflecting on Group 8, it was enriching to observe the interactions and engagement between the mentee and mentor as they shared conversations about their experiences. When asked about the mentee's involvement in sports, it became evident that the mentee, unlike the majority, does not enjoy sports, highlighting the importance of tailoring activities to diverse interests for greater inclusivity. In cases where the mentee doesn't connect with shared experiences, incorporating discussions about why certain activities may not be enjoyable could foster connectedness, especially if the mentor shares similar values. However, it was clear that connectedness was still evident in this context, as they were able to share experiences and connect despite differences.

During the mentee and mentors interactions, it became apparent that there were ample opportunities for the mentees to speak about their own experiences. I wonder if switching or sharing roles between the mentor and mentee could alter the dynamic and create more opportunities for engagement. Considering this, introducing a design element where the mentor and mentee take turns guessing the meaning of the image could ensure both perspectives are heard, potentially leading to more discussions and engagement. The image that resonated most with the mentee was spending time with friends, highlighting the significant role friendships play in shaping the overall experience of preteens in intermediate school.

In previous sessions, the mentee found benefits in watching YouTube tutorial videos on how to draw specific art pieces or styles before attempting them independently. Exploring the adaptation of this activity to a more technological platform could be a novel way to enhance mentee engagement, a consideration that hadn't been contemplated for this particular activity. Overall, this group

demonstrated the aim of creating a collaborative space and fostering connectedness through their willingness to engage and future alterations to be considered.

#### **4.2.2.9 Profile Group 9**

##### **4.2.2.9.1 Observations**

Group 9 consisted of a mentor and two mentees from the other ethnic groups. During the session, mentees actively discussed their interests, particularly focusing on sports and games. They willingly shared their preferences and recounted personal experiences related to these activities. While they exhibited enthusiasm in expressing their thoughts on sports, there was a noticeable contrast when it came to discussing their families. Despite not delving deeply into family-related topics, the mentees confidently voiced their opinions.

However, it was observed that the level of collaboration among the mentees was limited. Their responses remained on a surface level, primarily revolving around their individual experiences. The conversations lacked an extended exchange of ideas, with discussions predominantly centred on answering specific questions. In summary, although the mentees actively participated in sharing their thoughts, the depth of collaborative idea-sharing was somewhat constrained during the session.

##### **4.2.2.9.2 Reflections**

Upon reviewing the dynamics of Group 9, it becomes apparent that there is a recognized need for increased adaptability within the activity. There is a suggestion that incorporating more dynamic and interactive elements could better accommodate mentees who lean towards a preference for active engagement. Given their confidence in sharing experiences related to physical activity, leveraging this enthusiasm could be a means to integrate their input more effectively. This, in turn, could facilitate collaborative efforts among participants who share an interest in the more active aspects of the activity.

#### **4.2.2.10 Profile Group 10**

##### **4.2.2.10.1 Observations**

Group 10 consisted of one mentee belonging to the Pacific ethnic group and a mentor from the other ethnic groups. The mentee responded positively to the images, actively describing them and expressing preferences for various activities. Although they didn't delve deeply into personal experiences, they formed a clear connection to the images, particularly those illustrating sports and social interactions, such as playing sports and spending time with friends—the peak moments of the mentee's engagement. These high points occurred when discussing personal interests, such as the mentee's passion for rugby. Their increased engagement, evident in discussions like comparing rugby to soccer, allowed them to leverage the activity for more personal connections.

Furthermore, images depicting family time resonated with the mentee, leading to meaningful conversations about home life, family size, and shared activities with friends. These discussions deepened the understanding between the mentor and mentee. However, after each question or photo section, the mentee tended to disengage, requiring some encouragement to stay involved in the activity. Despite occasional discomfort during moments of personal reflection, the mentee persevered, contributing effectively to the conversation.

In summary, the activity served as an excellent platform for dialogue, fostering connections, and providing the mentee an opportunity for reflection on personal experiences, even if occasional prompting was required to maintain engagement.

#### **4.2.2.10.2 Reflections**

The mentee requires prompting to remain engaged in the activity, as it lacks interactive design for learners who benefit from more practical engagement methods. While discussions are valuable, consistently incorporating them throughout the activity can make it seem tedious and uninteresting. Many reflections highlight that generative themes lack adaptability for different engagement styles, although they prove successful for some pairs. Recognizing the diversity in engagement levels is crucial, prompting consideration of how to cater to various preferences.

Despite these challenges, this pair has cultivated a strong connection over the year and the activity provided additional insights into their personalities. This highlights the crucial need for careful consideration of the audience and anticipated outcomes when planning an activity, emphasising the importance of steering clear of discussions that could venture into uncomfortable territory or breach professional boundaries. Specifically, conversations about family have consistently led to the highest level of disengagement, understandably so, as they may evoke personal information that the mentee may not be comfortable sharing. As I reflect on group 10's interaction, there's a clear need for activities to be more inclusive and adaptable to different learning styles for optimal engagement.

#### **4.2.2.11 Profile Group 11**

##### **4.2.2.11.1 Observations**

Group 11 consisted of one mentee belonging to the Pacific ethnic group and a mentor from the other ethnic group. The mentee readily shared personal experiences related to playing sports and spending time with friends but hesitated when it came to discussing their family. They found the images depicting 'playing sports' most relevant to their experiences, attributing it to their competitive nature and the excitement they feel when engaging in sports with friends. The mentee was transparent about their feelings, elaborating on their interests in sports and providing insights into their friendships. This created an open space for the mentor to listen and offer support, fulfilling the mentee's need for acknowledgment and an attentive ear.

However, when it came to family discussions, the mentee was less forthcoming. They expressed discomfort in sharing personal information, fearing potential cultural differences and a differing perspective from the mentor. This reluctance to contribute to the conversation about family indicated a desire to avoid potential misunderstandings or misinterpretations related to cultural values.

#### 4.2.2.11.2 Reflections

Reflecting on the interactions in Group 11, there was a meaningful exchange of learning between the mentor and mentee, particularly given their diverse cultural backgrounds. Similar patterns emerged in other groups, where mentees, including those in Group 11, enthusiastically shared about enjoyable activities, leading to increased engagement. The mentor's genuine interest not only empowered them to share their expertise in these areas but also contributed to their overall engagement in the activity. However, like in other groups, discussions about family led to the mentee disengaging, highlighting the personal nature of such topics.

Despite the initial intention to spark discussions about joyful family moments, acknowledging that many mentees associate happiness with family time, it became evident that they tended to withdraw from these conversations. For future iterations of this activity, it is advisable to exclude images featuring families from the discussion prompts. This adjustment aims to cultivate a more comfortable and inclusive atmosphere, prioritising the comfort of all mentees during these interactions.

### 4.2.3 Tapa cloth

Participants	Aged 11 - 13	Aged 19 - 25	Pacific Ethnic Group	Other
Mentor	-	10	6	4
Mentee	16	-	14	2

Table 2. Observations of participant's general age and ethnicity for Tapa Cloth activity.

#### 4.2.3.1 Profile Group 1

##### 4.2.3.1.1 Observations

Group 1 consisted of one mentee who belonged to the Pacific ethnic group and one mentor from the other ethnic group. During my observations, I observed the mentor struggling to explain the activity's purpose. In response, she and the mentee chose to learn collaboratively by watching an online video for a better understanding. This improved clarity, inspiring the mentee to create designs based on cherished family memories like beach outings. Enthusiastically, she shared these memories and stories with her

mentor during the session. In the feedback, the mentee expressed a wish for the mentor's active participation. As a result, they planned to collaborate on designing together in the next session scheduled for the following weeks.

#### **4.2.3.1.2 Reflections**

What I found interesting about this pair was the exchange of ideas through storytelling. I observed that once the mentee created a pattern based on a core memory, they enthusiastically shared their enjoyment, expressing a desire for the mentor to reciprocate. This highlighted the importance of equal information sharing—when the mentee shared from their background, the mentor should also contribute or show some form of validation. This can often be built overtime as the mentor and mentee begin to develop their mentor and mentee relationship. Subsequently, for future activities it would be encouraged for mentors to create their own designs alongside mentees. This approach aimed to create a supportive and collaborative environment, ensuring that mentees did not feel isolated in sharing their stories but were accompanied by mentors sharing their experiences as well.

#### **4.2.3.2 Profile Group 2**

##### **4.2.3.2.1 Observation**

Group 2 consisted of one mentor and two mentees who belonged to the Pacific ethnic group. At the start of the session, the mentee required assistance with her subjects. After helping the mentee with her subject-related questions, they planned to delve into the 'Tapa Cloth' activity. After addressing those questions, the mentor proceeded to explain how the 'Tapa Cloth' activity would be conducted.

During the activity explanation, the mentees expressed disinterest, citing their familiarity with a similar task in a previous class and expressing a preference for a different, new activity. The activity they had done in their classes, involved the opportunity to carve a pattern representing their identity and values using wood and carving tools. Despite the mentor's encouragement to engage in the 'Tapa Cloth' activity, both mentees opted for a distinctly different pursuit. The mentor saw this as an opportunity to learn about the art pieces the mentees had created in a previous school activity and how closely these aligned with the 'Tapa Cloth'. The mentees' sharing of ideas about their identity and values added an intriguing dimension to the conversation.

##### **4.2.3.2.2 Reflections**

Although this was disappointing to observe, having prepared the activity only for it not to go through with, I believe that there was valuable feedback given to understand the perspective of the mentee. It is crucial to observe the mentees actions and mood, as they may either eagerly engage in activities and express enthusiasm, or they might show disinterest and desire engage in something different. This disparity in engagement could potentially lead to a disconnect. If not addressed appropriately, mentees may feel compelled to contribute to the activity, exacerbating the disconnect further. Bearing in mind

that these are mentees and they would have had a long day at school and spending most of their time in a classroom and are needing something different to help them create strong bonds with their mentor. This showed the need for their activities to have more tangible aspects, clearly seen in the interactions of Group 2, where the aim was met in forming connectedness and also a support group even though they did not engage in the activity in its fullest entirety. Conversations were shared during their explanation of a similar activity done at school and this showed some insight into their experiences. The mentor opened this dialogue and continued to support them in sharing their stories. Through this interaction, though it was not done by doing the activity, it was prompted by similar experience from the 'Tapa Cloth' activity, a completely different way of viewing a successful outcome, but similar in any situations, the mentor was adaptable in finding ways to still connect and support them regardless of whether they completed the activity or not.

### **4.2.3.3 Profile Group 3**

#### **4.2.3.3.1 Observation**

Group 3 consisted of one mentor and one mentee both from the Pacific ethnic group. While the mentor explained the activity, the mentee showed minimal interest in engaging. The mentor, in the hope of encouraging engagement, started their own drawing, but the mentee remained disinterested and unwilling to engage. Although the mentor was following through with the activity step by step, the mentee remained unresponsive. The mentee, known for their artistic skills, chose to paint an image of the sunset over rivers during our session—an image they particularly enjoy recreating. When the mentor inquired about the meaning behind this recurring image, the mentee revealed that they create this artwork as a gift for their parents. Each time the mentee has an opportunity to draw or paint, whether at school or home, the sunset image becomes significant because their parents particularly appreciate this theme in their artwork. This revelation deepened the mentor's understanding of the importance of family in the mentees life, giving rise to numerous meaningful conversations thereafter.

#### **4.2.3.3.2 Reflections**

This pair surpassed my expectations for the activity's outcomes. Despite the mentee not adhering to the specified tasks, they conveyed the meaning behind their drawing—a lake and nighttime sunset, creating a meaningful connection between the mentor and mentee. Although the activity wasn't completed as planned, the result showcased a connection formed through meaningful conversations and support for the mentees ideas, despite a delayed response.

This experience underscored the importance of supporting mentees in representing their values, even if it diverges from the intended activity. Discouraging them for approaching the activity differently would counteract its purpose. It prompted a reconsideration of the activity's approach, contemplating a restructuring that allows mentees to design anything representing their values, not solely limited to cultural patterns.

#### **4.2.3.4 Profile Group 4**

##### **4.2.3.4.1 Observation**

Group 4 consisted of one mentor and two mentees that all belong to the Pacific ethnic group. While explaining the activity, the mentees displayed disinterest and expressed a preference for more active pursuits. Despite the mentor's efforts to encourage engagement, it became evident that it wouldn't be effective. As a result, they chose to engage in more dynamic activities, taking the form of a questionnaire and utilising the basketball court outdoors. In this scenario, mentees are presented with questions, and if they answer correctly, they have the opportunity to throw and aim the ball into the hoop. This approach seamlessly combines physical activity with the expansion of their knowledge and facts in an engaging manner.

##### **4.2.3.4.2 Reflections**

The mentee's deviation from assigned tasks captured my attention, prompting considerations of potential resistance arising from the activity's design lacking diverse engagement methods aligning with the mentees preferences. While the mentor-mentee relationship usually deepens over the year, my limited interaction as a designer poses challenges in fully understanding their specific interests or interaction styles.

This potential gap in understanding may stem from designing activities centred on broad interests, like drawing, without accommodating those with different preferences, such as gaming or physical activities. Emphasising the need for adaptable activities for each mentee, it's acknowledged that not every activity suits every mentee. The challenge lies in finding ways to ensure flexibility without compromising value, ensuring that activities still achieve their intended outcomes. Certainly, there is an opportunity for the mentee and mentor to engage in a similar active activity as they did during the session. Instead of random fun facts, the questions could be specifically tailored towards interesting facts about the mentor and mentee. To facilitate this, increased engagement with the mentors is necessary to explore additional opportunities for co-leading the design of activities. The mentors, having invested more time in establishing relationships with the mentees, possess a deeper understanding compared to me as a supervisor who in comparison may have less engagement and knowledge, given that the mentor and mentee spend the majority of their time together at the mentoring sessions.

#### **4.2.3.5 Profile Group 5**

##### **4.2.3.5.1 Observations**

Group 5 consisted of one mentor and two mentees all belonging to the Pacific ethnic group. Much like the observations in Group 3 during the 'Tapa Cloth' activity, the mentees in Group 5 opted to draw images unrelated to cultural patterns, focusing on areas of personal interest. Their drawings featured

characters from favourite comic books and movies. What caught my attention was the difference in the mentees' engagement levels when the mentor explained the cultural patterns for the Tapa compared to when they delved into discussions about the different characters from the mentees favourite movies. The mentor established a stronger connection and provided better support through conversations about the mentees favourite movies and books, rather than emphasising the intended elements of the activity.

#### **4.2.3.5.2 Reflections**

What intrigued me about Group 5 participants was their enthusiasm for drawing without constraints. It became evident that there were no predefined guidelines dictating how the mentees should create their patterns. Each individual expressed themselves uniquely, emphasising that there's no singular correct way of drawing. However, the interactions indicated that while the intended aims of the activity could be assessed based on whether they demonstrated the design principles or goals, there were no right or wrong ways of drawing something that's of value to them. These interactions served as tangible criteria since each mentee engaged differently.

Even if the activity didn't unfold as I had envisioned, the mentors were supportive of the mentees expressions. They strived to understand why certain activities might not resonate and found ways to connect and support the mentees regardless of the initial activity plan.

#### **4.2.3.6 Profile Group 6**

##### **4.2.3.6.1 Observations**

Group 6 consisted of one mentor and one mentee both from other ethnic groups. After the mentor introduced the activity, the mentee initially struggled to grasp the concept, indicating a diminishing enthusiasm. However, once they delved into the creation of the Tapa cloth, a notable shift occurred. The mentee's enthusiasm surged as the artistic aspect resonated with their passion for drawing and art. Throughout the design phase, their involvement deepened significantly. The duo became immersed in exploring the mentee's concepts, actively collaborating and integrating diverse designs. This was the peak of the mentee's engagement, as they got more and more into it with every new idea added to the design.

The mentee readily contributed ideas for the activity, preferring to talk about their favourite activities rather than delving into personal stories. Their focus appeared to be more on discussing things they enjoyed rather than diving deep into storytelling. Any stories they did share tended to be on the broader side. Nevertheless, the mentor consistently supported all of the mentee's ideas, ensuring a strong encouragement for their creative process during the Tapa cloth design.

#### **4.2.3.6.2 Reflections**

The activity effectively reached its objective, with the mentee enthusiastically embracing creativity to craft a meaningful design, fostering substantial discussions between the mentor and mentee. Given the mentees' strong inclination toward the artistic aspect, their emphasis on drawing took precedence over delving into potential deeper meanings behind the patterns. Notably, in both Group 3 and Group 6 in the Tapa Cloth, where artistic mentees took the lead, a similar trend emerged. Both mentees employed a creative approach, drawing designs that personally resonated with them, steering away from creating patterns resembling design aspects seen in the Disney character Maui's tattoo.

The strength lies in allowing the mentees to freely express themselves and share their interests with their mentors. The outcome of this activity is further seen in the active engagement of mentees in Groups 3 and 6. They not only engaged enthusiastically but also took the initiative to explain the process alongside their mentors. What's particularly intriguing is the dynamic created by activities aligning with mentees' interests, fostering an environment where they feel comfortable sharing their ideas and opinions, and leveraging their expertise in the given area. In this supportive setting, mentors play a pivotal role in bringing these creative visions to life.

Both design principles, support, and connectedness were clearly evident in the engagement observed in Group 6. The alignment of the mentees interests with the activity, along with a strong connection with their mentor, resulted in significant engagement, empowering and supporting their ideas.

#### **4.2.3.7 Profile Group 7**

##### **4.2.3.7.1 Observations**

Group 7 consisted of a mentor and two mentees sharing the same Pacific ethnic background. The mentees were enthusiastic about incorporating their culture into the design, a concept that resonated well since they all shared a Pacific background. Initially, they faced a challenge in engagement, grappling with multiple approaches to the activity and feeling unsure of where to begin. The mentor played a crucial role in helping them break down the task, preventing it from becoming overly complex. Once they started drawing their designs, their engagement level noticeably increased.

During the planning stage, the mentees found joy in discussing what they intended to draw. This collaborative process allowed them to share ideas, with both the mentees and mentors contributing insights that enriched each other's art pieces. Unfortunately, the mentees had to leave early due to a netball tournament, preventing them from completing the activity. Despite this, the overall engagement was remarkable, evident in the supportive environment where ideas were encouraged and a sense of connectedness prevailed, fostering a cooperative space for sharing creative concepts.

#### **4.2.3.7.2 Reflections**

Group 7 demonstrated excellent interaction among all mentees and mentors, their strong pre-existing connection fostering heightened engagement. The shared passion for their respective cultures further enriched the experience for Group 7, enabling them to exchange values and emphasise the importance of identity within their cultural backgrounds. Although the necessity to leave early prevented the closure of the activity, the mentees and mentor collaborated effectively but planned to revisit the activity in the following week's session. There was evident potential for even greater engagement if they had been able to complete the activity, showcasing the positive dynamics established during their involvement.

#### **4.2.3.8 Profile Group 8**

##### **4.2.3.8.1 Observations**

In Group 8, there was a mentee representing the Pacific ethnic group, accompanied by their mentor from the other ethnic group. Another mentor joined the group in place of the absent mentee, also from the other ethnic group. The mentees entered the activity with a positive outlook, displaying enthusiasm and a passion for sharing their stories. The session evolved into a highly supportive sharing environment, marked by genuine curiosity and interest in each other's ideas and experiences, keeping the mentee thoroughly engaged. Conversations often veered into diverse topics such as star signs, and it was particularly important to observe the mentees heightened engagement when given the opportunity to share. Towards the end, the group decided to connect their distinct Tapa designs, delving into the cultural differences that sparked more meaningful conversations.

##### **4.2.3.8.2 Reflections**

Group 8 demonstrated another successful activity, emphasising the sharing of stories and the connections formed around the exploration of cultural values. The mentee actively engaged with others in the group, displaying a keen interest in their stories. The overall engagement level was high, evident in the rich contributions of ideas, openness, and a mutual willingness to learn from each other. The mentee's confidence in openly sharing ideas was strengthened by their strong artistic skills, developed in regular sessions with their mentor, where they were familiar with expressing themselves in their area of expertise. The support within the group was evident as they collaboratively learned from one another. The results were impressive, with engagement heightened through discussions stemming from both activity prompts and off-topic conversations, offering valuable insights into individual personalities.

#### **4.2.3.9 Profile Group 9**

##### **4.2.3.9.1 Observations**

Group 9 consisted of one mentor and two mentees with one mentee belonging to the Pacific group. What intrigued me about Group 9 was the diverse dynamics within the group and the expectations regarding how a mentee should express themselves. There seemed to be a tendency for mockery if

someone deviated from those expectations. In this group, the mentees were peers but not close friends. One mentee, influenced by their social circle, actively engaged with mentees of higher popularity in their school year. The other mentee, however, had a distinctive way of interacting with the group, not as a close friend but as someone who followed and engaged in minimal activities with them.

This activity delves into the personal stories of young individuals, making it challenging for them to express themselves fully, fearing judgement from their peers. Peer circles play a vital role in the lives of preteens, influencing their identity and impacting their social and educational journey. If their shared thoughts are perceived as uncool or don't resonate with their friend group's traits, they might encounter mockery for being different. Frustration stemming from a lack of drawing skills added an extra layer of difficulty, influencing their engagement in the tasks.

This group emphasised the importance of diverse expertise, where weaknesses in one area are complemented by strengths in another. For instance, if one mentee struggles with drawing while another excels, collaborative learning becomes possible. Successful engagement, however, relies on the mentees' willingness to collaborate, a trait evident as they evolved their designs with the support from their mentor.

Group 9 achieved the design principle of expressing a personal voice, although not through the most supportive process. Although it took longer than expected for these design principles to emerge, they began to cooperate more as they got deeper into the activity and designed something personally valuable. Adapting activities to suit each group's dynamics is crucial, a step overlooked in the current 'Tapa Cloth activity.'

#### **4.2.3.9.2 Reflections**

What intrigued me about Group 9 was the diverse dynamics within the group and the expectations regarding how a mentee should express themselves. There seemed to be a tendency for mockery if someone deviated from those expectations. In this group, the mentees were peers but not close friends. One mentee, influenced by their social circle, actively engaged with mentees of higher popularity in their school year. The other mentee, however, had a distinctive way of interacting with the group, not as a close friend but as someone who followed and engaged in minimal activities with them.

This activity delves into the personal stories of young individuals, making it challenging for them to express themselves fully, fearing judgement from their peers. Peer circles play a vital role in the lives of preteens, influencing their identity and impacting their social and educational journey. If their shared thoughts are perceived as uncool or don't resonate with their friend group's traits, they might encounter mockery for being different. Frustration stemming from a lack of drawing skills added an extra layer of difficulty, influencing their engagement in the tasks.

This group highlighted the importance of recognizing that not everyone shares the same expertise. Weaknesses in one area can be offset by the strengths of another. For example, if one mentee lacks confidence in drawing while another excels in it, there's an opportunity for collaborative learning. However, the success of engagement hinges on the mentees' willingness to cooperate, making it a case-by-case scenario. It's crucial to tailor activities to fit the distinct dynamics of each group, a step that the current 'Tapa Cloth activity' lacks in taking.

#### **4.2.3.10 Profile Group 10**

##### **4.2.3.10.1 Observations**

In this group, a mentor and two mentees, representing the Pacific ethnic groups, were present. Initially, one mentee eagerly shared various aspects of their story, embracing family, pets, school, and culture, while the other took some time to get started. As the latter gradually engaged in group conversations, they openly expressed their passion for Pacific culture and maintained interest in the others' stories, despite facing initial challenges in contributing to the activity and not being paired with their intended mentor. Nevertheless, the group enjoyed vibrant discussions and creative expression through painting.

Throughout the activity, there were moments of exploration and story-sharing at the table. However, the final step of connecting each other's 'Tapa Cloth' fell short of effectively stimulating discussions on design similarities.

##### **4.2.3.10.2 10 Reflections**

This group exhibits diverse interactions between the mentor and the initially paired mentee, with the addition of another mentee. The pre-planned activities for the absent mentor facilitated a seamless transition into the session, aiding the mentee's adaptation to the environment. The mentees' active engagement, even in the mentor's absence, underscores their commitment to building the relationship, allowing them to contribute and engage in the activity. Time is pivotal in fostering the mentees' comfort to contribute, particularly in navigating the dynamics of the original mentoring relationship. Previous collaboration enabled the mentor to effectively manage the space, ensuring each mentee felt at ease during the activity. Despite the delayed start for the additional mentee who joined the initial pair, they eventually connected by sharing experiences, successfully achieving the activity's goals.

## 4.2.4 Science Experiments

Participants	Aged 11 - 13	Aged 19 - 25	Pacific Ethnic group	Other
Mentor	-	10	5	5
Mentee	12	-	11	1

Table 3. Observations of participant's general age and ethnicity for Science Experiments activity.

### 4.2.4.1 Egg Drop: Profile Group 1

#### 4.2.4.1.1 Observations

Group 1 consisted of one mentor and two mentees all belonged to the Pacific ethnic group. This group exhibited high engagement throughout the entire activity. At the outset, the mentor assigned them the task of designing a contraption that could prevent an egg from breaking when dropped from a distance. The mentees not only constructed their contraptions but also painted and creatively designed the egg, affectionately naming it "eggio" and painting it entirely black. Through various iterations of the design, the mentees conducted tests to check if their egg had survived the drop from a specific distance. The mentees thoroughly enjoyed showcasing their creativity and assessing the effectiveness of their ideas.

After several trials, when their egg eventually cracked, one of the mentees proposed a unique solution—using the remaining parts of the cracked egg to fertilise their avocado garden at their school. This suggestion was made even before the mentor had the chance to discuss food waste. Subsequently, the mentors and mentees explored their garden, with the mentees sharing insights into how they cultivated their plants. It was impressive to witness how engaged and environmentally conscious the mentees were regarding food waste.

#### 4.2.4.1.2 Reflections

This group left a strong impression on me with their collective approach to design, iteration, and resource reuse in the egg challenge. Their personalised approach to equipment seemed to significantly boost mentee engagement. Additionally, their environmental consciousness was striking, possibly influenced by workshops and programs offered at school. The mentees' awareness of composting food scraps for their plants not only reflects their knowledge but also inspires hope for a positive impact. It's encouraging to see them potentially influencing classmates and mentors to adopt similar practices.

## **4.2.4.2 Egg Drop: Profile Group 2**

### **4.2.4.2.1 Observations**

Group 2 consisted of one mentor and two mentees who belonged to the Pacific ethnic group. Following the mentor's activity explanation, one mentee was uncertain about creating their contraption, while the other, a quick problem solver, had an immediate plan. They faced struggles individually—the unsure mentee struggled with their design, and the fast problem solver needed assistance with taping and holding their contraptions. Eventually, they discovered that collaborating yielded greater results than working separately. Their collaboration was clear; one held components in place while the other taped down the sides. Together, they critically evaluated what worked and what didn't in each trial of their egg drop. This collaboration led to humour, treating the egg as their "child". Despite the eventual breakage of the egg, their collaborative efforts showcased achievement in the aims of the activity—collaboration and collective reflection.

### **4.2.4.2.2 Reflections**

Group 2 prompted me to ponder the effectiveness of peer collaboration within the program. It seemed that when they partnered with someone they felt comfortable making mistakes with, the engagement and enthusiasm toward the experiment increased. Working together allowed for mistakes and provided an opportunity for joint reflection on how to improve their designs. In contrast, when working independently, mentee face more pressure to produce results, and the absence of a peer to share the experience with might hinder reflection. While the mentor was there to guide them, the dynamics of having a peer with similar age and humour level could further contribute towards engagement and eagerness within the activity.

## **4.2.4.3 Egg Drop: Profile Group 3**

### **4.2.4.3.1 Observations**

Group 3 consisted of a mentor and mentee, both belonging to the Pacific ethnic group. Following the activity explanation from the mentor, the mentee displayed eagerness to commence the experiment. Taking great interest in the activity, the mentee enjoyed the chance to express creativity through painting and designing. Similar to the experience in Group 1, the mentee particularly enjoyed the artistic aspect of painting the egg, given their fondness for arts and crafts, immediately connecting them with the experiment. During the trials of dropping the egg from various heights at the school park, the mentee actively engaged, proceeding through each successful trial with enthusiasm.

### **4.2.4.3.2 Reflections**

Group 3 demonstrated remarkable engagement from the initiation of the activity to its conclusion. In the initial stages of painting and designing contraptions for the egg before the drop, the mentee took the

lead, with the mentor providing support in their artistic ideas. Numerous instances of collaboration and collective reflection occurred as they pondered their designs and collaborated to enhance their contraption for their egg. The opportunity to personalise their designs granted the mentee creative freedom, ensuring continuous engagement. Sharing ideas with the support of their mentor empowered the mentees, fostering a sense of being heard and supported.

#### **4.2.4.4 Egg Drop: Profile Group 4**

##### **4.2.4.4.1 Observations**

Group 4 consisted of a mentor and mentee, both belonging to the Pacific ethnic group. The mentee thoroughly enjoyed engaging in this activity, appreciating the opportunity to work at their own pace with the mentor's guidance. Despite the mentee's initial shyness, they gradually warmed up to the idea of designing and creating a contraption for their egg drop challenge, supported by their mentor. There were moments when the mentee hesitated to contribute due to shyness, and the mentor provided space for them to navigate these feelings while guiding them through each step of the activity.

Despite uncertainties about the contraption's success, the mentor supported the mentee by facilitating connections with possible ideas. They involved the mentee in the decision-making process, encouraging input and explaining the rationale behind each choice. While the mentee's responses were initially brief, it was evident that as they faced challenges in sharing ideas and opinions, they progressively worked through the activity, constructing something that would withstand the fall.

The subsequent phase involved dropping the egg from varying heights. Considering the mentee's fear of heights, they adopted a collaborative approach, with the mentor climbing different levels while the mentee waited for the egg to drop and checked the results. This approach provided comfort to the mentee but also left them feeling excluded as they were unable to ascend to the next level like the other mentees. The first trial of dropping their egg was a success and as they progressed to the next level, although the egg cracked, the mentee found enjoyment in the process. There was an increase in the mentees' engagement levels and a willingness to open a conversation reflecting upon the results and progress.

##### **4.2.4.4.2 Reflections**

From the observations in Group 4, various factors contributed to the success of collaboration and collective engagement between the mentee and mentor. An important lesson learned from this group was considering factors such as the possibility of mentees being afraid of heights and how to address such situations in the activity. Group 4 handled this by providing the mentee with an alternative method, allowing them to still engage in the experiment. Although not the ideal scenario, the mentee felt more comfortable and contributed to the activity.

Throughout the activity, the mentee expressed uncertainty about how to contribute. In response, the mentor took the lead while still involving the mentee in decision-making, asking for their input on ideas that would help the egg survive the fall. The mentee, though initially hesitant, became more engaged through brief comments. This approach, where the mentor guided the mentee step by step and involved them in every aspect, revealed a unique form of engagement that I hadn't considered.

As a designer, I initially expected a uniform outcome from all interactions between mentees and mentors. However, this experience highlighted the diversity in how mentees engage, emphasising the importance of being open to various potential outcomes and understanding that engagement is highly dependent on each mentee's unique approach.

#### **4.2.4.5 Coke and Mentos challenge: Profile Group 1**

For this activity, there were six groups of one mentee and mentor grouped in with another pair who sat on the same table and so they worked collaboratively together on the designs of their experiment.

##### **4.2.4.5.1 Observations**

In Group 1, two mentors and two mentees, all from Pacific ethnicities except for one mentor, engaged. After the explanation of the activity, the mentees, proud Pacific islanders, were eager to showcase their creativity. They planned to paint their country's flag on the bottle, symbolising their rocket's origin. Despite one mentor being from a different ethnic group and unfamiliar with her mentee's cultural background, this did not impede engagement. Despite the presence of two different ethnic groups in the design, the group was open to mutual cultural exchange, enhancing the dynamics within the group. The group embraced the creative process, collaborating and collectively reflecting on the cultural significance of their designs.

During the experiment involving dropping Mentos into a Coke bottle, they chose to drop one Mentos at a time rather than several for a greater impact. This approach did not diminish engagement, and the mentees remained actively involved in the activity although the explosion did not immediately happen.

##### **4.2.4.5.2 Reflections**

Upon reflecting on the interaction within Group 1 during the Coke and Mentos activity, it was evident that each member was eager to share and learn more about each other. This created a space where mentees felt comfortable collectively reflecting on their individual cultures. The mentors played a supportive role, boosting the mentees' confidence and involvement in the activity. The inclusion of two mentors and mentees in one group facilitated many conversations around ideas and their diverse cultures.

This group effectively fostered a collaborative environment by engaging in collective reflection on the sharing of their diverse cultures and supporting each other's designs. As the designer, I initially didn't

anticipate the potential for collective reflection during the design phase of the activities. However, this group made me realise that collective reflection isn't limited to experimenting and seeking improvements afterward. It can also be observed during the design phase, where members reflect on the purpose of their designs together. The unexpected emergence of collective reflection during the design stage added an interesting dimension to the activity.

Further collective reflection occurred during the experiment trials as anticipated. When the initial approach of adding one mentos didn't yield the desired results, the group experimented with adding more. The mentors and mentees learned together that their approach could have been different, providing insights for future engagement in science experiment activities during the sessions.

#### **4.2.4.6 Coke and Mentos challenge: Profile Group 2**

For this activity, there were six groups of one mentee and mentor grouped in with another pair who sat on the same table and so they worked collaboratively together on the designs of their experiment.

##### **4.2.4.6.1 Observations**

Group 2 consisted of two mentees from the Pacific ethnic group and two mentors from another ethnic group. From start to finish, this group remained engaged in the collaborative process of crafting a story behind their designs. Inspired by a movie they all enjoyed, the mentees brainstormed ideas, eventually finding common ground with one of their favourite series. The mentees enthusiastically created characters and storylines, actively bouncing ideas off each other to shape their narrative. There was a sense of excitement in sharing their story and designs with other groups. The mentors played a crucial role in fostering conversations around the mentees designs and ideas, working collaboratively.

During the experiment, the mentees were impressed with the results of the Mentos and Coke reaction, enjoying the challenge. Although there wasn't much immediate collective reflection after the experiment, the mentees found joy in contributing to the Coke and Mentos challenge.

##### **4.2.4.6.2 Reflections**

Upon reflecting on Group 2's engagement in the Coke and Mentos activity, the mentors and mentees fostered an engaging environment by identifying shared interests and hobbies. This collective exploration of interests allowed mentors to steer conversations in a way that incorporated everyone's input. The mentees openly shared their creative stories with the entire team, and it was evident that the group benefited from collaboration as they supported each other's ideas. Although there wasn't much collective reflection during the trialling of explosive interaction between the mentos and coke, incorporating different trials such as having different flavoured drinks could contribute towards the collective reflection through discussions of potential explosion and results. However, with only one trial available for the mentees to test, there wasn't an opportunity to collectively reflect on the results and explore possible outcomes for subsequent trials. Nevertheless, the primary focus was on their

engagement, achieved through another design principle of personal voice which wasn't considered for the aims of this activity but was evenly seen as the core principles collective reflection as they continued to share ideas and opinions together.

#### **4.2.4.7 Coke and Mentos challenge: Profile Group 3**

For this activity, there were six groups of one mentee and mentor grouped in with another pair who sat on the same table and so they worked collaboratively together on the designs of their experiment.

##### **4.2.4.7.1 Observations**

Group 3 comprised two mentors paired with two mentees, one of whom belonged to the Pacific ethnic group. Following the activity explanation, the mentees eagerly collaborated to create their interpretation of the galaxy on their Coke bottles. The mentees creatively used paint brushes to depict splashes representing different stars and Milky Ways. Additionally, they utilised school equipment—salt—onto the wet-painted bottles to depict stars and painted various planets and solar systems. Given the shared preference for activities involving drawing and painting art pieces, both mentees were highly engaged and actively contributed ideas to craft their galaxy scene.

During the explosion phase, the group enjoyed the process and overall outcome, while there wasn't extensive collective reflection observed, the mentees expressed delight in the creative aspects and collaborative efforts. Despite the limited collective reflection, the activity successfully engaged the group through the design principle of collaboration, making it a learning success.

##### **4.2.4.7.2 Reflections**

From the interactions of Group 3, a significant level of collaboration was observed in the creative process of designing their bottles. Both mentees displayed strong artistic abilities, taking the lead in the design, showcasing their enthusiasm for the activity. Although only one design principle was evident, I believe restructuring the activities to create opportunities for reflection would have addressed this. Like the other two groups, once the activity was completed, it concluded. However, providing the opportunity for reflection could be achieved by incorporating additional trials to test their theories. In summary, this activity successfully promoted engagement through the design principle of collaboration, although the limited emphasis on collective reflection stemmed from a lack of consideration in the activity's design. Despite this, the group thoroughly enjoyed the activity and engaged effectively.

## CHAPTER FIVE: DISCUSSION AND CONCLUSION

This chapter encompasses my overall findings and what this has meant towards the design of the activities and my mentoring practices. The research and experimentation with the activities has revealed new themes and ideas, expanding my understanding of diverse engagement methods.

Recognizing that as the designer of these activities, there are situations where I may have overlooked aspects of the mentees' daily environments due to my own biased perspectives and experiences. Through the outcomes of the activities, it emphasised the importance of being more aware of how the mentees' environments play into how they would respond to the activities. This awareness is essential for creating meaningful conversations that encourage participants to connect and share experiences. The reflection on trialling the activities prompts considerations on adapting activities to unique mentees stories. It addresses a potential gap in understanding stemming from designing activities focused on broad interests, for example choosing drawing and neglecting preferences for gaming or physical activities. It's important to acknowledge the need for adaptable activities, it's crucial to understand not every activity suits every mentee. Balancing flexibility without compromising value is the challenge to ensure activities meet their intended outcomes. An important lesson learned involves considering factors like physical or emotional limitations of mentees in activity design. Instances, such as mentees being afraid of heights, highlight the necessity to fully understand each child for them to engage successfully in activities. This insight emphasises the importance of tailoring activities to the diverse needs and comfort levels of participants.

The intriguing dynamic created by aligning activities with mentees' interests fosters an environment where they feel comfortable sharing ideas and leveraging their expertise. Recognizing that not everyone shares the same expertise, it's crucial to tailor activities to fit the distinct dynamics of each group—an

aspect lacking in the trialled activities 'Tapa cloth', 'Generative Themes' and also the science experiments. Observing interactions revealed insights into tailoring activities to diverse interests. For instance, when observing a discussion about the mentees' involvement in sports, it became clear that not everyone enjoys sports. This emphasises the need for inclusivity and suggests that discussing why certain activities may not be enjoyable for some can foster connectedness, especially when mentors share similar values or show genuine interest in their responses. Despite differences, connectedness was evident, highlighting the importance of being open to different outcomes, even if they deviate from activity guidelines.

Another valuable insight I gained was in how the sharing of stories and connections around cultural exploration showcased high engagement in the mentees. In one session, the mentee actively engaged with other mentees, displaying a keen interest in their stories. The rich contributions, openness, and mutual willingness to learn emphasised the significance of identity within their cultural backgrounds. This experience highlighted the enriching potential when shared passions for respective cultures are incorporated into activities.

The trial of these activities also prompted consideration of group dynamics, comparing one mentor to one mentee with one mentor and two mentees. Navigating these situations is crucial for maintaining engagement. Pairing two mentees with one mentor may encourage contributions, but too many opinions can compromise collaborative space, hindering strong engagement. Reflecting as a designer, I considered the suitability of activities when mentors or mentees are paired due to the absence of intended partners. Pre-planned activities for an absent mentor facilitated a seamless transition, aiding the mentee's adaptation. The mentees active engagement in the mentor's absence underscores their commitment, allowing them to contribute and engage. Establishing a connection with mentees requires time; some may not even develop a bond until the very end of the mentoring journey. Therefore, fostering this relationship is crucial, and prior collaboration provides an effective environment for learning. Despite a delayed start for the additional mentee who joined the initial pair, they eventually connected, successfully achieving the activity's goals. The effectiveness of peer collaboration within the program is evident when mentees and mentors partner with someone they trust, increasing engagement and enthusiasm. Working together with trusted peers allows room for mistakes and joint reflection on improving designs. In contrast, working independently may pressure mentees to produce results, hindering reflection. The dynamics of having a peer with a similar age and humour level could further contribute to engagement and eagerness in the activity.

The mentees responded positively to the idea of reshaping activities to involve mentors, fostering a collaborative atmosphere. This shift allowed for a more balanced engagement, where mentors and mentees actively engaged in discussions and activities, departing from the traditional teaching approach. The allure of this method lies in uncovering heightened engagement levels that arise when leadership roles are shared, leading to the formation of unique design principles. Expanding on this concept, an

implemented strategy witnessed during activity interactions involved mentors not just guiding but also co-creating designs with the mentees. What adds depth is the evolving dynamic, cultivating an environment where ideas are openly exchanged, and collective expertise is utilised. Within this supportive environment, mentors take on a central role, crucial in bringing the mentees' creative visions to life. This collaborative synergy serves as fertile ground for innovation and mutual growth.

When delving into childhood core memories in collaborative discussions, it's crucial to approach sensitive topics with special consideration. This approach not only helps mentees express their opinions but also recognizes the potential emergence of confidential areas. A child's genuine life experiences cannot be shaped to align with the predetermined outcomes of an activity. The primary focus should be on ensuring the safety of the mentees current situation. If needed, the activity may need to be adjusted or paused, and it becomes the mentor's responsibility to navigate any unexpected turns that may arise. This realisation underscores the importance of acknowledging the diverse backgrounds of mentees, some having faced more challenging circumstances than others.

Conversations about upbringing and family, while bringing forth both positive and challenging aspects, become particularly crucial when the activity aims to foster connections among young people through the sharing of their stories. Notably, discussions about family consistently resulted in the highest level of disengagement, understandably so, as they may reveal personal information that mentees may not be comfortable sharing. In these situations, mentors play a pivotal role in navigating conversations, ensuring mentees feel heard and safe. If expert help is required, the coordinator is informed to provide assistance and keep the school informed. Through my observations, participants often exhibit openness and cultural awareness, creating a safe space that transcends a professional relationship to evolve into one of trusted partnership. This experience likely resonates with many mentors working in spaces filled with diverse stories and backgrounds, each carrying its unique narrative. Reflecting on this experience emphasises the clear need for activities to be more inclusive and adaptable to diverse outcomes. This includes understanding how to navigate situations where mentors and mentees may require guidance within the confines of confidentiality. This ensures the safety of both the mentor and mentee while encouraging optimal engagement.

In the exchange between mentors and mentees, enriched by diverse cultural backgrounds, a pattern emerged. Mentees, fueled by enthusiasm, shared insights about enjoyable activities, heightening engagement. The mentor's genuine interest not only empowered mentees to share their expertise but also significantly contributed to overall engagement. Continuing this exchange, mentees expressed a desire for reciprocity, highlighting the importance of equal information sharing. The mentor's contribution and validation became crucial in this dynamic. This varied among participants, creating a space where mentees collectively reflected on their individual cultures, eager to share and learn from each other. Throughout this process, mentors played a vital role, offering support, boosting mentees' confidence, and fostering increased involvement in the activity. The inclusive presence of two mentors

and mentees in one group further facilitated rich conversations about ideas and the diverse cultures. This interconnectedness showcases a holistic and collaborative learning environment.

Within this diverse spectrum of observed mentee engagement, each individual expresses involvement uniquely. It's evident that some confidently share extensive details about their experiences, while others contribute minimally. The crucial recognition here is that the degree of engagement isn't solely determined by the amount of information shared; rather, mentees exhibit varied ways of engaging, emphasising the importance of appreciating this diversity.

Mentors often aim to guide mentees through activities, but this can clash with the mentee's preference, especially for informal chats that stem from these conversations. This highlights the need for refining activity design, aiming to foster connections through shared experiences or casual conversations and promoting open dialogue without a focus on productivity. The interaction underscores the value of adaptability in activity design, accommodating diverse experiences while nurturing spaces for open discussions. Despite deviations from the original plan, adaptability resulted in successful outcomes, enabling connections and support for mentees, regardless of task completion. The importance of honouring mentees values is crucially important to encourage their engagement, even if they diverge from the planned activity.

As a designer, acknowledging that the structured nature of activities may not always align with diverse engagement styles is crucial. For instance, many mentees, skilled in painting and drawing, often took the lead in activities, creating something valuable to them, even if it didn't perfectly fit the intended scope. The key emphasis here is on the mentees engagement, not whether they completed the activity as initially planned.

Initially, I anticipated a standardised outcome from all mentee-mentor interactions, imposing my expectations on the outcomes of the activities. However, this experience highlighted the need to embrace diversity in mentee engagement, revealing limitations in my design thinking and the importance of being open to varied potential outcomes. It underscored that engagement is highly dependent on each mentees unique approach. This realisation prompted a reassessment of the activity's approach, considering a restructuring that allows mentees to freely design representations of their values, unrestricted by outlined activity limitations. Recognizing and adapting to this diversity becomes crucial for the success of future activities.

Several elements emerged from the outcomes of trialling activities, including the introduction of a competitive aspect, incorporation of an active component, and the integration of technology. The competitive aspect surfaced as mentees perceived the activities as challenges, resulting in high engagement levels. However, the challenge is to strike a balance without fostering an overly competitive environment, which could hinder collaboration and create division. While competition aligns with design principles, caution is advised to maintain the supportive environment these activities aim to foster.

Incorporating more active and interactive elements could cater to mentees who prefer hands-on engagement. Leveraging their enthusiasm for physical activity could enhance their engagement. Introducing interactive elements is essential, as some mentees may find continuous discussions uninteresting. Engaging mentees through practical activities, in addition to conversations, could foster collaborative efforts among those interested in the more active aspects of the activity.

Personalising activities proved effective in empowering mentee engagement. Instances where mentees deviated from predefined outcomes and expressed themselves uniquely, such as in drawing without constraints, showcased high engagement. This highlights that while the intended aims of the activity can be assessed against design principles, there's no singular correct way to engage, emphasising the subjective nature of artistic expression.

Additionally, a technological approach proved beneficial for some mentees, such as watching YouTube tutorial videos before attempting art pieces. Exploring the adaptation of a technological platform for activities could enhance mentee engagement and support mentors, especially in areas beyond their expertise, like cultural differences. This approach ensures accessibility and knowledge support for all participants.

The outcomes of the activities demonstrated success in achieving the aims outlined by the design principles of connectedness, collaboration, support group, personal voice, and collective reflection. However, it's essential to note that a few of these principles were not applicable due to factors beyond my control. However, assessing the success was highly contingent on the group dynamics, making a standardised measurement less applicable in this context. The diverse interpretations of the design principles became evident, highlighting the complexity of achieving the activities with no linear answer. This realisation was valuable for me as the designer, emphasising the need for flexibility and adaptability in addressing the varied perspectives and outcomes that may arise.

## 5.1 Limitations of the Research

A significant limitation arises from the potential for absences and disengagement due to daily events, significantly influencing the mentees' level of engagement. This challenge is particularly evident in unfamiliar spaces, where sudden, unforeseen absences of mentors or mentees hinder spontaneous group pairings, limiting engagement compared to situations where they are with their assigned pairs. The shortage of participants becomes apparent when unforeseen events prevent them from actively engaging.

Moreover, the likelihood of disengagement linked to daily events underscores the importance of considering whether the activity should be paused and resumed when the mentee feels ready. Careful

observation of the mentees actions and mood is crucial, as they may either be eager to engage in any activities or disinterested, seeking engagement in something different. Mismanaging this situation, especially by pressuring the mentee to contribute to the activity, can worsen the disconnect. Recognizing the limitations and understanding that providing mentees with the space to start when they are ready is vital, as pushing them prematurely may only intensify the disconnect.

## 5.2 Contribution Towards Other Research

This research significantly contributes to both my personal iterations of activity methods and the guidance of providing ideas on how to engage with mentees through the different design principles. This study has enabled me to examine my mentoring practices, leading to the discovery of diverse and rewarding ways in which mentees engage in activities. Additionally, my research extends its impact by enhancing the overall comprehension of education dynamics in lower decile schools and the unique challenges that participants in these environments are likely to encounter in relation to the activity.

## 5.3 Possible avenues for future work

The possible avenues for future work, involves determining the design of the activities based on the outcomes of this thesis. The new knowledge gained from this research is especially beneficial for future mentoring sessions and the iterative process is endless. The opportunity to network with the mentors and mentees in this research has been valuable in discussing many ways of improvement during the design research process. The results of this research are unique and have deepened my understanding of my practice. The results of this research are unique and have deepened my understanding of my own mentoring practice without shifting my core mentoring beliefs. They have provided insights into how I can further develop my activities to be more engaging, particularly in my work with young people in various mentoring spaces such as MATES, my church, and even at home. These insights highlight the principles that make activities effective and engaging, allowing me to enhance my approach across all mentoring environments.

In conclusion, the activities 'Generative Themes,' 'Tapa Cloth,' and science experiments, 'Egg Drop' and 'Coke and Mentos' activities, effectively embody the design principles of connectedness, collaboration, support groups, collective reflection, and personal voice. Despite instances where certain groups exhibited less engagement, the overall outcomes showcased a crucial level of enthusiasm and active engagement. As a designer, these activities and mentoring practices have provided valuable insights, leading to the emergence of new themes and ideas for further development. The positive outcomes not only validate the success of the activities in aligning with the intended design principles but also underscore their role in fostering a shared eagerness among the mentor and mentees to actively engage in their learning. These insights aim to be a tangible resource for others and guide my future endeavours in the coming years.

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