



**Ako**

Shared peer learning and teaching tool  
for students

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# Abstract

This project investigates students' problems in the effects of post-covid lockdowns, which have affected student learning and mental wellbeing. Students experience feelings of distress with academics have a lack of social support. These negative experiences have always been prevalent in uni life, but encountering this all the time affects students' mental wellbeing and motivations for academic success. The project aims to solve the problem with the question: How can design be used as a tool to improve students' social support and academic success?

I use user-centred design methodologies to understand needs, define user needs, and ideate and develop a solution that can give students social support and motivation for their studies. I explore the ambiguous side of peer mentoring services to find opportunities to utilise this service. I then conduct interviews to find insights into user needs and form a design solution for user needs.

The design approach incorporates Maori world view concepts that provide meaningful design solutions of model buddy systems and forming reciprocal relationships. This design is then further innovated with sensor-based technologies to enhance user experiences and touch on possibilities for future development for this concept.



# Introduction

COVID-19 has affected the entire world and disrupted our daily lives. The government and health officials implemented social distancing and restricted social gatherings, resulting in tertiary institutions moving to online learning. The limit of in-person interaction brought a sense of detachment that can stunt their academic motivation and lack of support. (Marler et al., 2021) With domestic students feeling detached from their university post-lockdown, there is also an unheard demographic of international students on their experiences. Being far from their home country can be challenging in a different environment. Findings show that 70% of international students wanted more New Zealand friends. Social connections brought positive effects in terms of social life, academics and psychological needs. (Counts, 2004) Therefore this brings an opportunity to find a solution to improve students' social support and academic success. Throughout this document, I will outline the trajectory of this project and come up with possible solutions for this problem.

Key terms: COVID-19, Academic, Social support

# Positioning the Researcher

I envision that the ideal situation and solution would be where university students can make connections with fellow peers that can not only learn and give guidance to their studies but also create a social support system throughout their time in university and post-graduation. I found how post-lockdown brought a sense of disconnect and lack of support in domestic students' studies. And thought about how would international students feel when entering a new environment lack of connections.

Students starting university can be a daunting new chapter into their life. A life that gains a form of independence and new responsibilities. Yet at times feel stuck and lack direction with the lack of motivation. As a student myself, it can feel overwhelming handling workloads of study.

I aim to provide a service that enhances students' university experience by focusing on social support and academic success. Not only would they be gaining efficient tactics for their study but gain a connection to the industry of their study. Gaining I hope to bring an enjoyable and fun experience to students as their time in university is a crucial opportunity to connect with people from all walks of life.

My personal goal for this project is to develop my skills in user research and UI design for my future projects. It is a personal challenge for me to research and write and so by doing this exegesis, will develop my research and writing skills to make meaningful insights into my designs and for my future projects.

# Research Questions

How can design be used as a tool to improve students' social support and academic success?

## Sub-questions

- What are the problems that university students face?
- how has covid impacted students on their wellbeing and study?
- what are the current solutions to improve student life?
- What are the maori views in education?
- How will the User experience improve the student university experience?
- how can I integrate sensor-based technology into a service for education?
- how can students be able to connect with peers on a platform?
- What elements are needed in peer mentorship?

# Review of contextual knowledge

## Education in New Zealand

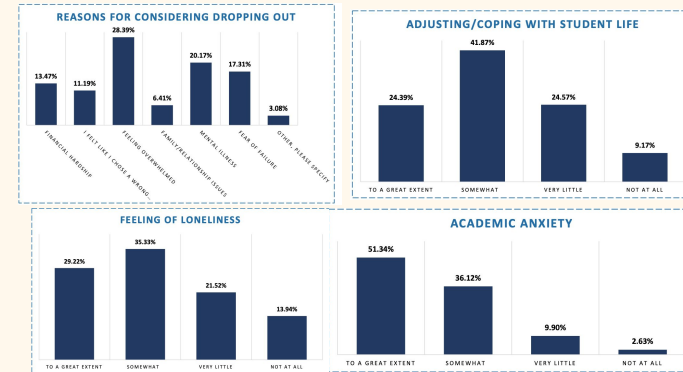
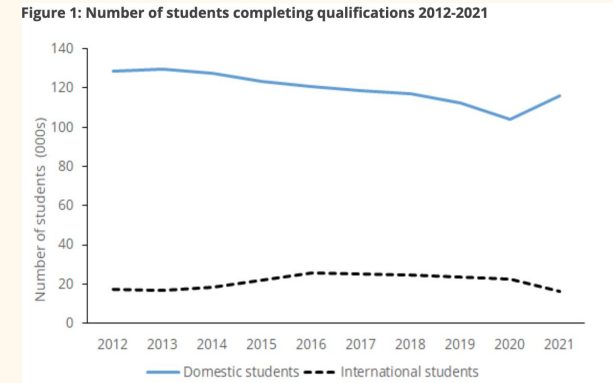
Attaining Tertiary achievement among students is an important aspect of university life. In New Zealand, the structure of university education is to have more responsibility and independence in the students' studies, this means it's expected to manage your studies, workload, preparing for assessments and assignments turning up to lectures, classes and tutorials. (NauMai NZ, n.d.) Over the years the number of students completing their qualifications have been steadily decreasing but from 2020, completion rates have increased by 4.3% (Ministry of Education - Education Counts, 2021) in domestic students. Studies have shown that a student's quality of life is a predictor of dropping out or withdrawing from their studies. (Li et al., 2018)

## Students' mental wellbeing

As of 2022, students still frequently experience moderate levels of distress and showed not much change from 2018 survey. Higher scores of distress are shown amongst students who have considered dropping out of their studies. The common reasons of dropping out of their studies are due to feeling overwhelmed, fear of failing and mental illness. (New Zealand Union of Students' Associations, 2022)

Outside of academics, financial situations, family or relationship issues among students also play a factor in psychological distress, those who work more than 10 hours show more stress than those who feel secure in their financial situation. Feelings of loneliness, lifestyle habits, academic anxiety and overall coping with university life were some of the main factors that trigger stress, anxiety and depression in students.

Figure 1: Students completing qualifications



Figures 2-5: Survey with students' experiences in university (2018)

# Review of contextual knowledge

## Impact of COVID-19 in Education

With the impact of COVID-19, Education institutions had to follow the limit of social gatherings and close schools and universities during lockdown. Institutions had shifted learning online learning as. It's been encouraged by public health officials for people to stay at home and limit in-person interaction. This resulted in social isolation can amplify psychological distress in students. Students feel detached to their university and affect motivation in learning. (Marler et al., 2021) In New Zealand, 43% of tertiary students felt disconnected from society with little to no social interaction from lockdown. (New Zealand Union of Students' Associations, 2022) When students don't feel they belong to academia, they more are likely to have less motivation to succeed or engage in classes.. 69% of people felt a decline in mental wellbeing during the pandemic and negatively impacted their studies. In particularly, 46% of people felt more stressed and 41% felt more anxious during lockdown. The impact of covid left students feeling more lonely, difficulty of of concentrating and motivation less access to care and support and stress of balancing work, life and study commitments.

## International students

Being in a new environment, International students have to adjust to life in New Zealand as well as their university life. It is found that 70% of international students wanted more new zealand friends and by having these connections brought positive effects in terms of social life, academics and psychological needs. (Ministry of Education - Education Counts, 2004) Out of the demographic of students, International students find that developing friendships with domestic students (New Zealanders in this case) were sources of concern as 1 in 4 student said they had no interactions with New Zealanders in a social setting.



# Review of contextual knowledge

## Social support

Social support refers to having someone who there for a person, having the feeling of being cared for and assisted during times of crisis or difficult times. Social support can be family members, friends, work peers or anyone that is willing to help. It is an important factor to health and wellbeing to maintain resilience to stress and to improve mental wellbeing. (Ozbay et al., 2007) Social support also helps improve one's' self-esteem and in effect promote academic achievement and relieve emotional exhaustion (Li et al., 2018)

## Peer mentorship

Peer mentoring is described as ““is the relationship in which an individual with more expertise provides knowledge and information to a less experienced individual” (Hagen-Hall & Verhaart, n.d.) Peer mentoring aims to enhance supporting relationships by exchanging knowledge. Long term effects of peer Mentorship has been found to to be beneficial to students.

### Benefits of a learner

- Helps students have direction and study efficiently
- Adjust to university life and improvement to home life due to management skills
- Collaborative teamwork and communication skills

### Benefits of a Mentor

- Leadership skills
- Organisational skills
- Sharing knowledge and experiences - reciprocal learning activity

(IDP - International Education Specialist, n.d.)

# Review of contextual knowledge

## Maori World View in Education

In Maori culture, these concepts of teaching and learning are valued in the term 'Ako' means to both teach and learn. It recognises the way new learnings and understandings can grow out of shared learning experiences (Ministry of Education, 2003) The Ako relationship affirms the value of pair and group learning and teachers are not expected to know everything by incorporating ako allows the relationship to be a caring and inclusive environment where contribution is valued.

Maori also has the concept of Tuakana - Teina, which is a traditional philosophy and practice of teaching and learning. The term 'Tuakana' meaning an older sibling assuming the role of the mentor or more experienced whereas 'Teina' means the younger sibling or the less experienced in the relationship, typically learned within the same family and gender. In a contemporary setting, this concept has been redefined into a learning model for personalised learning and buddy systems.

With this peer relationship, whanautanga is the concept of relationships and family connection, this can be through shared experiences and working together and not necessarily just family. It extends to friends and reciprocated relationships. This idea of shared experiences can be applied to peer - mentor relationship to develop a sense of belonging in students.

Figure 6 Ako framework (2018)



The diagram above shows Ako Akonga (teacher) and kaiako (student) – leading to reciprocal framework in a form of a triangle, where all sides are all benefited (SMITH, 2018)

# Current solutions

There are peer mentorship programs offered in Universities.

AUT offers peer mentors to students who are in need of a mentor for their chosen subject or help with academic skills. Peer mentors are senior students who volunteered for the role. Peer are available in person or online and are available on weeks 2-12 during the semester, not including mid semester breaks.

Yet depending on the area of your study may be scarce of volunteers to help in your study. The lack of peer mentors made me think what do the mentors benefit from this teaching experience? This was my assumption until I have conducted an interview with a peer mentor (see page 19) Peer mentors are benefitted by getting paid and connecting with other peers and students

Here's how the peer mentor program works at AUT:

- Peer mentors are found from being scouted and are trained
- Students are able to book via the AUT app, drop in or be referred by a teacher.
- Each session is 30 minutes long and students can book more sessions
- For new students, they spend 5-10 minutes to introduce themselves and getting to know the student. What the students need help for varies on the subject.
- Mentoring is available online and in person, usually in a set location

Prior to my interview very little information is known about how peer mentoring works at AUT. The AUT app only offers to make bookings for sessions but nothing more. Peer mentors can be an opportunity to find a way for students and mentors to benefit from this learning and teaching experience.

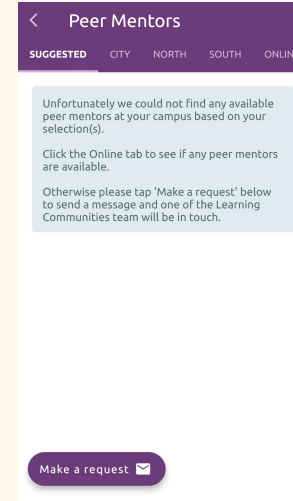


Figure 7 - unavailable mentors

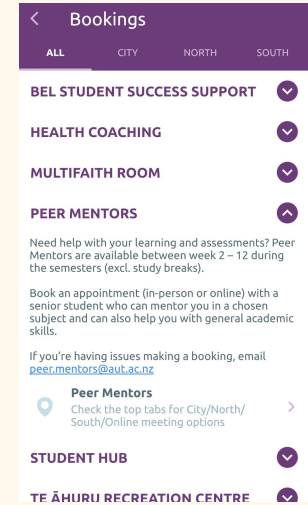


Figure 8 - Peer mentor bookings available in the AUT app

# Technologies

There are some emerging technologies relating to Artificial intelligence in the education discipline.

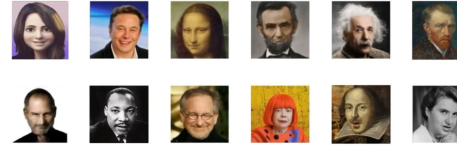
Researchers have created an open source character generated pipeline. This combines facial gestures, movement and voice to an AI character to life. (figure 4) These uses of AI generated characters can be used to support personalised learning (Maes & Ham, 2021)

This allows for creative expression to use important figures like Albert Einstein to teach physics and bring an immersive experience to learning to the individuals area of study.

There have been potential ethical challenges toward this use of AI as shown in figure 5

Concerns of using AI mentions concerns of privacy, misinterpretation of characters or one's personality, promote harm to users and overdependence on the AI.

## AI Generated Characters for Supporting Personalized Learning and Wellbeing

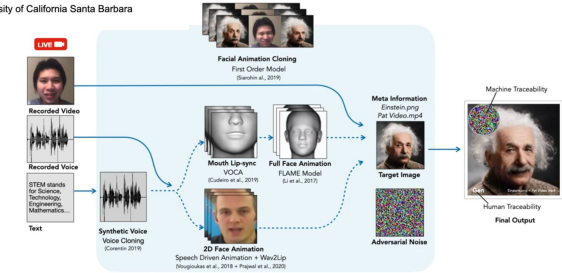


Pat Pataranutaporn<sup>1</sup>, Valdemar Danry<sup>1</sup>, Joanne Leong<sup>1</sup>, Parinya Punpongsonon<sup>2</sup>, Dan Novy<sup>1</sup>, Pattie Maes<sup>1</sup>, Misha Sra<sup>3</sup>

<sup>1</sup>Massachusetts Institute of Technology, <sup>2</sup>Osaka University, <sup>3</sup>University of California Santa Barbara

Figure 11 Characters for personalised learning

## Figure 12 How it works



With our unified pipeline, you can generate your own AI generated characters. For safety, the output is marked to be detectable by both humans and machines.



Figure 13 concerns for using AI models in personalised learning

# Sensor based technology

Sensors are devices that detect or measure physical objects and respond to a type of input from the physical environment, commonly. For my application, I've looked options for sensors that detect nearby devices, receive location information. I also Artificial intelligence that can engage in a conversation with users for assistance..

**GPS** - Global positioning sensor is a radio navigation system that uses radio waves between satellites to determine the location of the device in use. In this case for phone sensors, the phone acts as a receiver and collects time and location information from multiple satellites to provide for the software in use. (Hildenbrand, 2018) The phone does not send any data but only receives to 4 or more of the 28 satellites that's dedicated to geolocation. GPS can be used anywhere regardless of phone service.

## **Wifi based indoor positioning system (WIPS)/Wifi Positioning system (WPS) -**

WPS is a geolocation system that uses existing wifi access points or wifi-enabled sensors to detect and locate transmitting wifi devices. Examples of devices include smartphones and tracking tags. WIPS also works well with indoor navigation whereas GPS devices are unable to navigate indoors. Wi-Fi-based positioning systems use various methods to determine the location of devices. Using WPS via access points relies on the existing infrastructure installed in indoor areas to locate devices. The accuracy of the location of the device depends on the number of access points. Using multilateration of access points will enable the device to calculate based on the received signal strength indicator (RSSI). (Inpixon - Indoor Intelligence, n.d.)

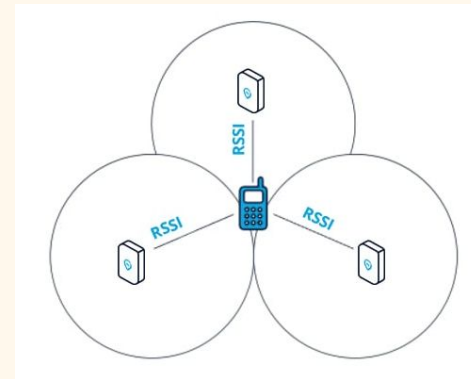


Figure 15: Indoor position system

# Sensor based technology

**Bluetooth** - Bluetooth is a wireless technology that uses radio frequencies to share data over a short distance. Bluetooth can be used to share information with another device. Both devices need to be Bluetooth enabled and paired to securely transfer information. Devices that are Bluetooth compatible can detect other Bluetooth-enabled devices nearby yet to find and connect, devices need to be within 9 metres for this function to work. (John, 2020)

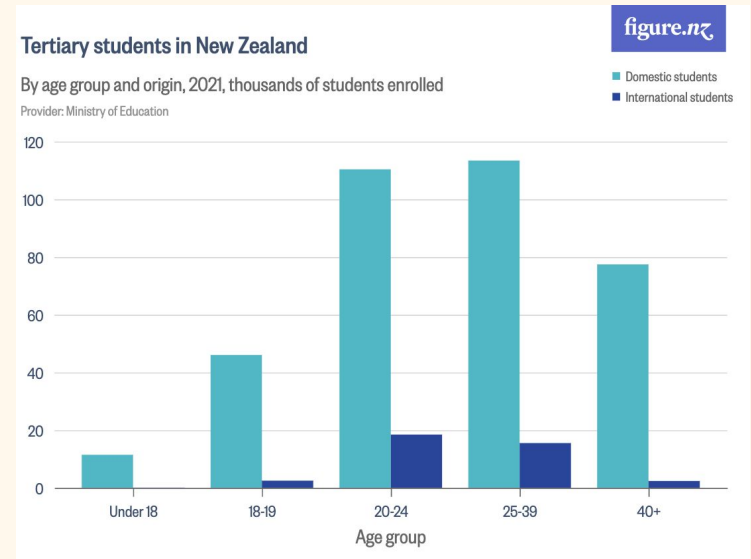
**Artificial Intelligence (AI)** - AI are systems that simulate human intelligence processes by machines and computer systems. The system iteratively improves based on the information they collect. One of the ways AI is implemented is through chatbots. Chatbots are conversational applications that aid the user in service and guidance by replacing or augmenting human support agents with artificial intelligence. (BasuMallick, 2022) Chatbots employ AI and natural language processing (NLP) to analyse sentence structure, decipher knowledge and improve the ability to answer questions.

There are different types of AI chatbots, but to focus on one that could be useful for my design project, I focused on AI-powered contextual chatbots. This chatbot can understand the chat's context and determine the inquiry's correct meaning. Furthermore, if the chatbot is used repeatedly, it can recall previous interactions relevant to the user's context. Contextual bots can also gather data from linked platforms and databases of the application that handles customer data platforms and match the context of the conversation to the needs of the user. Utilising data with users helps build a connection and gives the user a consistent experience.

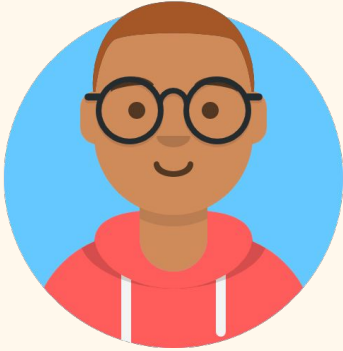
# Target Audience

My primary target audience would be university students; most students are young adults ages 18 to late 30s. I'm focusing on domestic and international students who experience social support issues and academic stress. International students find developing friendships with domestic students a source of concern. 1 in 4 international students said they had no interactions with New Zealanders in a social setting. (Ministry of Education - Education Counts, 2004) Bridging connections between international and domestic students can positively affect social life, academics and psychological needs. The secondary audience is university students struggling with academics and constantly stressed. Compared to international students, domestic students experience significantly more distress (New Zealand Union of Students' Associations & Gharibi, 2018) placing priorities on students who struggle socially and academically.

**Figure 10: demographic of students age 2021**



# Persona 1



**Tyler, Age 20**

A 1st year Business student at Auckland University of Technology

## Description:

Tyler is a 1st year Business student at AUT. He is an international student from Malaysia and recently moved to New Zealand to study. He likes to experience new cultures and create more opportunities for himself. At a glance, people may see him as introverted but as he gets to know someone, he's extroverted with the people he is comfortable with.

## Goals:

- Life: Tyler wants to make new friends, people who he can learn from and share experiences
- Experience: Tyler wants to feel confident and less stressed in his classes
- End: improve his study ethic and improve his grades

## Scenario:

Being in a new environment, and adjusting to uni life, he has a hard time adjusting to uni life and making friends due to the piling amount of workload he has to do for his classes. He has a hard time understanding the course material, but is reluctant to approach tertiary provided services due to his shyness. He feels that he is falling behind on his classes and it stresses him even more. He wishes there was a service where he can easily talk to someone for guidance.



# Persona 2



**Maria, Age 23**

A 3rd year business student at Auckland University of Technology

## Description:

Maria is a 3rd year Business student at AUT. She finds helping others is a rewarding experience and is always looking to improve herself. She can relate and is a bubbly person to be around.

## Goals:

- Life: She wants to see her peers and herself succeed feeling motivated
- Experience: She wants to build and develop transferable skills such as leadership communication skills to build her resume
- End: Make connections with peers to feel motivated

## Scenario:

Maria is looking for experience that can build her communicative and teaching skills in order to build her resume that can build up once she graduates. She hasn't got the time looking for part time jobs as her studies take up most of her time. It's tough for Maria to stay motivated when she only keeps her head down into her work. She wishes to have a service where she can easily communicate to peers and manage schedules when handling commitments.

# Solutions

My possible solutions for this problem would be a service platform that could be:

- A) An app platform that connects with senior students or alumni within the same discipline that could give guidance and support to the student in need.

This idea would resemble of a social networking platform like linkedin in terms of connecting to other peers that focuses on the social aspect and gaining connections.

- B) A platform that gives personalised learning with the aid of Artificial intelligence to help students academically succeed.

As for this idea, this is more of an aid tool for learning but lacks the social connectedness with peers or humans,

Im interested in exploring ways that both parties of mentor and student can benefit from this teaching and learning experience and find the perfect middle ground of social and a learning focused platform, To make this innovative this service to use sensor based technologies and gather students learning habits to effectively be motivated with the assistance of artificial intelligence. I can also include sensors for detecting locations of peer mentors to be able to easily reachable to students if needed.

# Methodology

## User Centred Design

My project will require understanding about the needs of my target audience in each phase of the design process to design a solution around their needs.

User Centred design is an iterative process that gets designers to involve users throughout this process from field research to usability testing in order to create an accessible and useful product. (Babich, 2019)

To Carry out the processes of User Centred design to achieve a solution, I will need to:

- I will need to gain a deep understanding of user's needs and its context of use
- Define the user requirements
- Ideate and produce design solutions
- Evaluate designs against the requirements



**Figure 14 - UCD design process**

# Interviews - Peer mentor

To understand the needs of the users, I reached out to a current AUT peer mentor about their experiences. The peer mentor is 3rd year student with a conjoint degree in design and business, receives business and design students in the peer mentorship program.

The summary of insights from this interview found that:

- Time management is crucial for peer mentors something that could organise schedules
- Peer mentors benefit from earning money and get and feel rewarded when helping students
- At times peer mentors don't know all the answers to the questions that students ask
- Some students are difficult to work with, it depends on their effort to learn

1.) How does the peer mentor program at Aut work?

1) Potential peer mentors are scouted and then go through an interviewing process then a day of training. Then we set our hours depending on our schedule but each mentor is required to tutor for 4 hours a week. Students can either book a mentor via the app, drop in or teachers can refer them.

2.) What typically happens during the session with the person you're booked with?

2) Each session is 30 minutes long but students can book more than 1 session. When we get new students, we usually spend 5-10 minutes introducing ourselves and getting to know them a bit more. Typically, I get business students and with that, I'll be helping with APA referencing or a specific assignment with specific course content. With design students, I'll be helping them navigate Adobe programs and giving feedback on their work. Also some sessions are online and we use Microsoft Teams for that but sometimes the audio functions can be ass and don't work so we have to restart it.

3.) What are there any problems you face as a mentor?

3) Time management is so crucial when being a mentor and I sometimes fails at it so that's definitely a challenge. Also sometimes I won't be able to answer a students question which can be frustrating and sometimes I encounter very interesting students who can be difficult to deal with.

4.) What motivates you to do peer mentoring? are there any benefits?

4) I would say the pros outweigh the cons for sure! I know what it was like struggling with uni assignments and how difficult it could be, so knowing that I could help a student or listen to their stories is a massive moment of fulfillment. I also love meeting other peer mentors bc they're so like-minded and motivated which is refreshing. And I mean, well I get paid so can't complain there right

# Interviews - students

I've also reached out to a student on their experiences with workload and stress throughout their time in university. They are 2nd year industrial design student and have no experience with peer mentors

The summary of insights from this interview found that:

- Some students don't feel supported with their studies, this is due to responsibility of their workload which is expected in university but feel that they're on their own, leading to student feeling lonely and lack support
- Time management and organisational is crucial to students, as handling work can easily get overwhelming
- Students are more likely to reach out to people they're comfortable with

Do you reach out to anyone?

I reach out to my table mates who I'm comfortable with for help.

Lecturers get busy at the end of the semester so it's hard to get help from them

What kind of issues do you face?

Coping with different classes at once and their deadlines. It gets overwhelming so I would need to be well organised and stop myself from procrastinating from time to time

Being overwhelmed can take a toll on me, it often leaves me feeling burnt out and unmotivated by the end of the semester

How is your experience with workload at uni?

I don't have any issues with the workload until end of semester, The workload gets overwhelming and having to organise my time around deadlines is challenging and I need of support

Have you considered a peer mentor? why or why not?

I have considered getting a peer mentor but I feel shy and I'm not really comfortable with strangers

Do you feel supported from your experience?

No, not really there's a lot of responsibility when it comes to uni work and it feels i'm all by myself in this. It's also hard to stay in contact with friends during these times when im feeling so stressed

# Applying methods in context to this project

## Methods

### Understanding needs

Applying user-centred design, I have to understand the needs of university students. Therefore, I conducted interviews with students and peer mentors to gather insights. From my findings, most students have concerns about time management and some lack social support, which could lead to stress

### Defining user requirements

- Time and schedule management
- Finding peers easier and making them easily accesable
- Buddy support system model
- Ask and answer questions to the cohort

### Ideate and Evaluate

In the following pages, I generated wireframes of possible solutions incorporating features that can be useful to students needs. By testing, I evaluate the designs against the requirements of user needs to assess if my design solves the problem.

# Design Solution

This app is a tool to connect students to mentors and enable social support and improve academic success and motivation. The highlight of both student and peer mentor issues was the importance of time management for their class schedules. By including the feature of daily planners, all students can organise their time and feel less overwhelmed and stressed. In addition, based on my interviews, the peer mentor raised an issue with being unable to answer students' questions. In response to this issue, I added a Questions and answer board that reaches all the users for help.

My design approach integrates Maori concepts of tuakana - teina into the service. Students can have the role of the mentor (experienced) or the student (less experienced) in their respective papers. Students can easily find peers in the app by scanning the area for any nearby peer mentors for quick help on campus. The app allows students to connect easily to peer mentors using WPS. WPS detects within campus wifi networks to determine if a peer mentor is in range. If both parties agree to meet, the GPS is enabled to navigate the user to their destination. To ensure peer mentors are capable of mentoring papers, they must pass the course paper with at least an average B.

Academic progress is measured by your profile linked to the user's tertiary login. The AI Chatbot is an additional feature when no help is available. Chatbots can respond with advice, theories and possible solutions to the user's query. AI retrieves data from databases and online sources to generate an appropriate response.

This service would allow my target audience more opportunities to bridge connections with peers with the accessibility of finding and connecting to social support. In addition, the functions help them manage their workload and feel confident and less academically distressed.



# Logo design and colour

I want to convey the idea of connecting people through shared experiences and improving themselves. and purpose of my app; to develop social support between peers and to learn and grow and develop a sense of belonging.

Because I'm applying concepts I learned from Maori world view, I would like to reflect that in my design that convey a meaningful design in the visuals to get first impressions to new users,

Colour Palette:



Monotones of green with light orange and off white

I based my design around the colour green as green represents growth, life, health but also inexperience at the same time.



Pikorua represents the strong bond between a relationship where the arms of the twist have no end like lifelong relationships



Koru resembles a an unfurling fern which represents new beginnings, strength and growth.

Logo Design:



Combing these meaningful symbols to create a new meaning of the logo of my app. The logo represents meaningful connections, a sense of belonging through shared experiences of learning





# User Journey

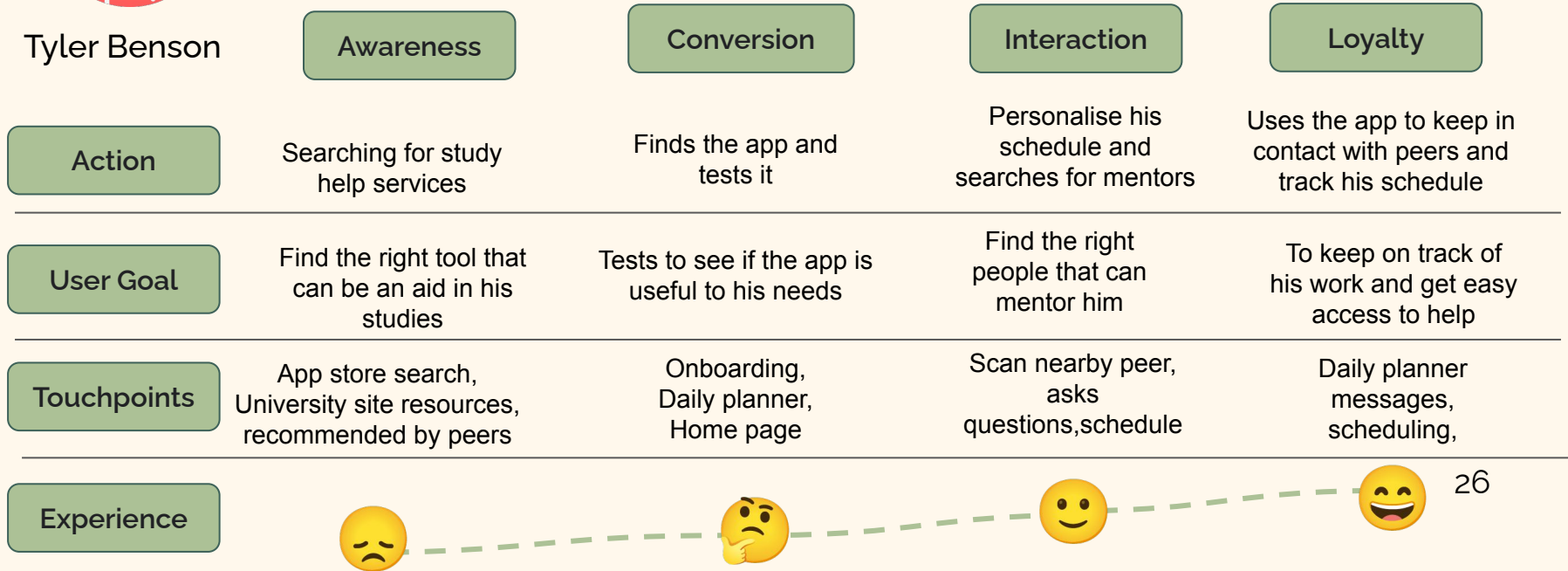


Tyler Benson

Being in a new environment, and adjusting to uni life, he has a hard time adjusting to uni life and making friends due to the piling amount of workload he has to do for his classes. He feels that he is falling behind on his classes and it stresses him even more. He wishes there was a service where he can easily talk to someone for guidance.

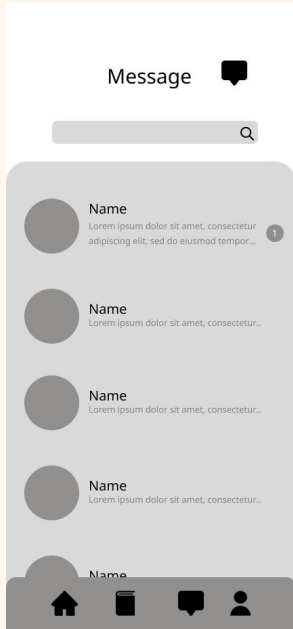
Goals:

- Life: Tyler wants to make new friends, people who he can learn from and share experiences with
- Experience: Tyler wants to feel confident and less stressed in his classes
- End: improve his study ethic and improve his grades



# Wireframes

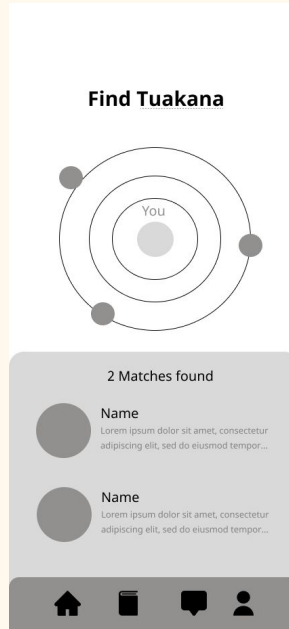
## Message



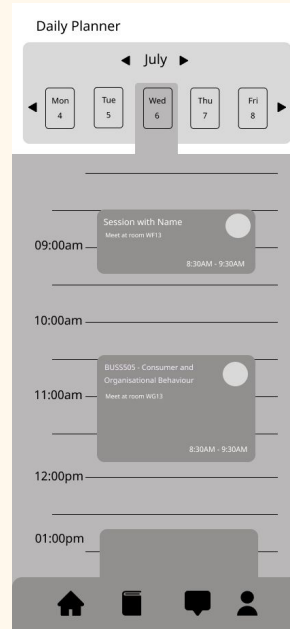
## Chat



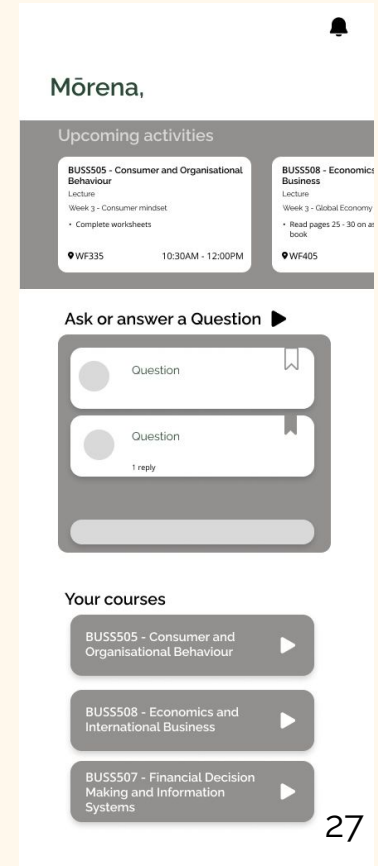
## Scan area for peer mentors



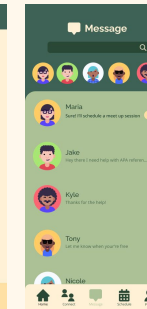
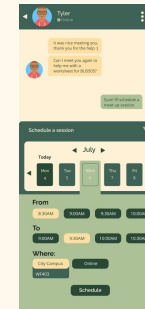
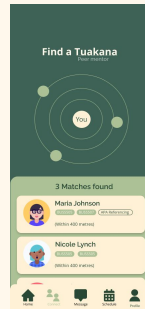
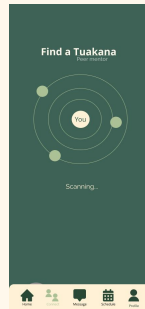
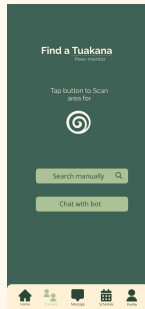
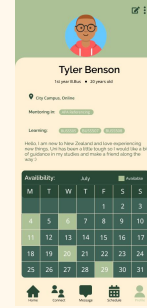
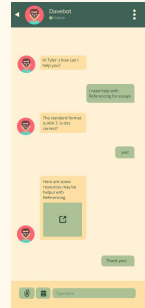
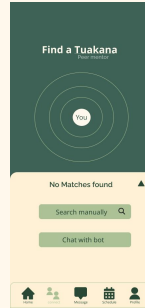
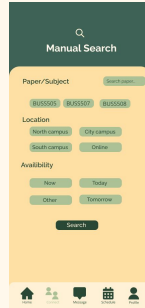
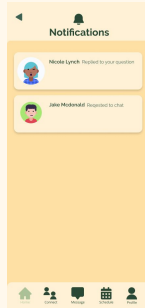
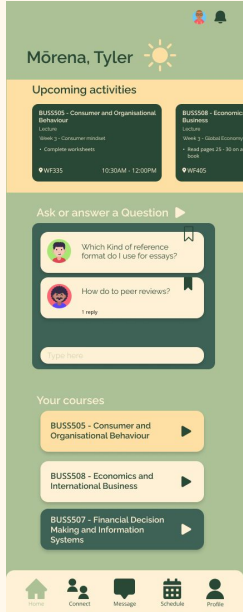
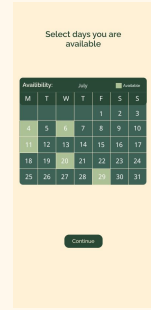
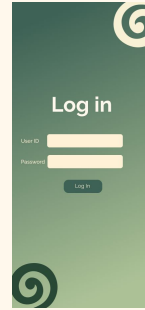
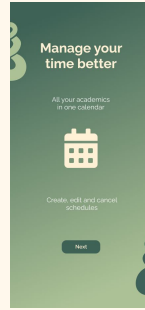
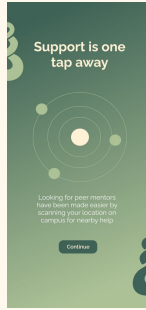
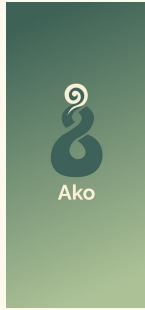
## Day to day schedule



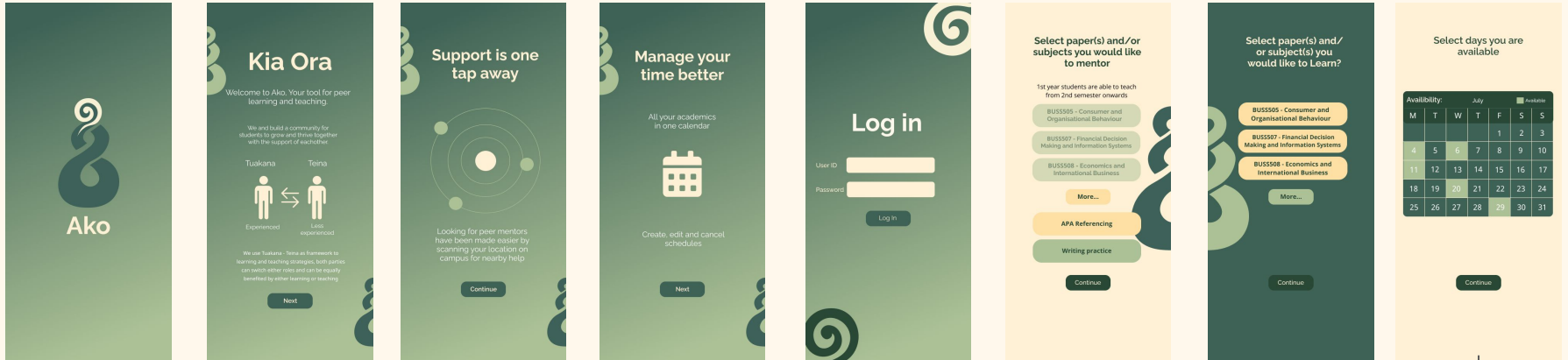
## Home page



# Prototype



# Prototype - Onboarding



The onboarding screens introduces the user to the peer learning and teaching approach of tuakana - teina and explains its capabilities and how it can benefit the user.

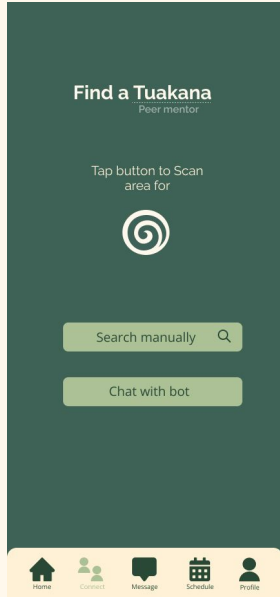
You can use you tertiary login so the app can sync with your current courses

You can use you tertiary login so the app can sync with your current courses

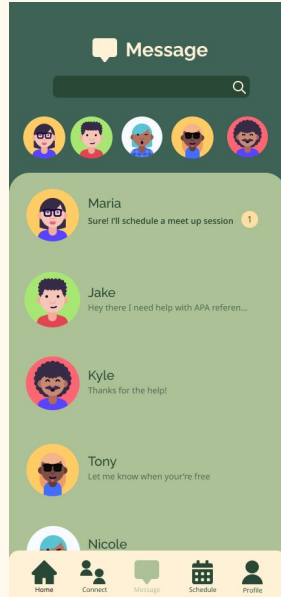
Set your available days

# Prototype - main pages

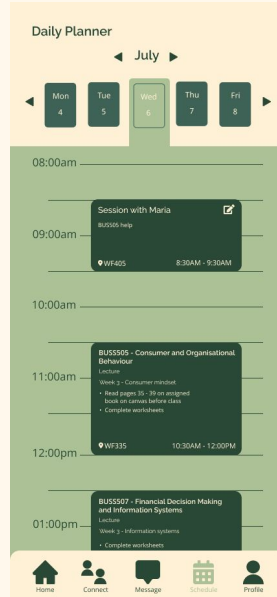
The main features of the app. Keeps track of your academic schedule and



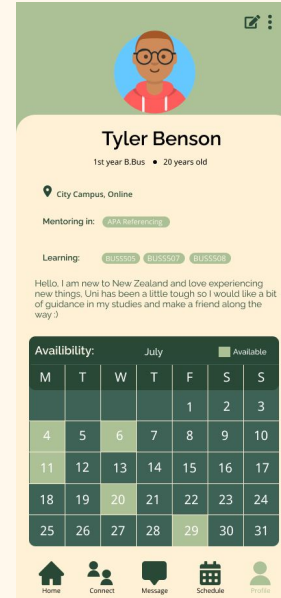
Message peers



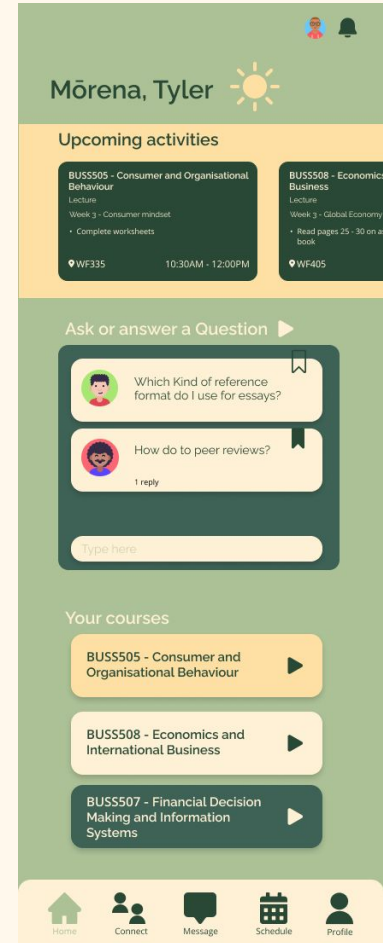
Message peers



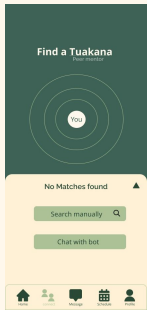
Look at your schedule



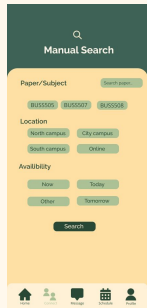
Edit your availability and preferences on your profile



# Prototype - connecting to students



Using WPS, the app scans for nearby devices that has peer mentors available on campus to help.



Students can request to meet mentors if they are nearby, mentors can accept or decline the request. If accepted, mentors can set a location where to meet at. This feature uses GPS to navigate to your destination

Create schedules for meeting peers according to their next available time. The other party can accept or decline the schedule

If there are no peer mentors available students can manually search or chat with a bot for help.

# Future design development

In the future, I would like to add sensors that could track the academic activity on the phone. Adding this tracking would help to measure users' movement and evaluate their performance on what to improve next time.

This tracking would collect data over time on the user's activity and results to build data that students can share with peer mentors on improving efficient study habits. This information can be helpful to enhance personalised learning and for new peer mentors to familiarise themselves quickly with the student.

Activity tracking can also be applied to AI chatbots to develop them into more than just answering based on the user's question. Activity tracking could be an opportunity for AI to gather information to form solutions for users' and suggest advice on better study habits.



# Conclusion and Reflection

In summary, the direction of my project centres around the question: How can design be used as a tool to support students' social support and academic success? The design problem focuses on the student's academic distress and mental wellbeing that affects students' motivation and academic success. Using researcher positioning and contextual research gave a solid foundation for this design problem. Furthermore, my research shows that social support positively benefits students' wellbeing. Therefore, I incorporate peer mentoring to help students cope with the university workload and social support for motivation. To develop this idea, I used UCD methods to understand, define and evaluate to form a successful design solution.

I learned valuable information from interviews I conducted with my target audience. For example, I found time management and organisational skills crucial factors that would help students cope with their workload. This finding gave me good direction in defining what is needed to form a design solution.

My solutions page discussed how I could implement AI chatbots into my app as my initial idea for peer mentorship. But following the user-centred design methods, I had to evaluate whether AI solves the user's needs. Looking back at my research positioning helped me return to my original direction, enabling students to find more accessible connections for social support. I prioritised this focus rather than AI to be the main focus because it would defeat the purpose of peer social support. From this experience, UCD helped redirect ideas into more valuable solutions for my target audience.

Learning Maori concepts inspired me in my design approach to this project. In addition, I learned the concept of 'Ako' which reframes my views on education and peer mentoring into a model for support buddy systems. Furthermore, I learned relationship concepts that gave insightful ways to incorporate a sense of belonging through mutual social support to support wellbeing.

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# Appendix

Figure 1: Number of students completing qualifications 2012-2021

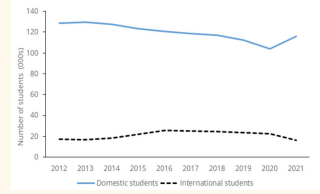


Figure 1 Students completing qualifications

Source: <https://www.educationcounts.govt.nz/statistics/achievement-and-attainment>

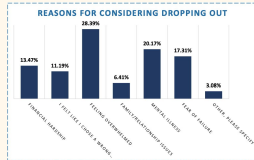


Figure 2

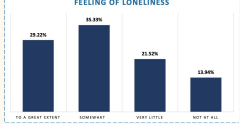


Figure 4

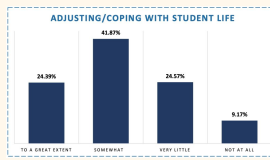


Figure 3

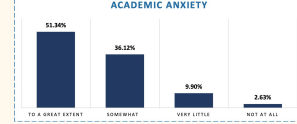


Figure 5

Figure 2-5

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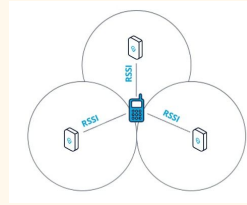
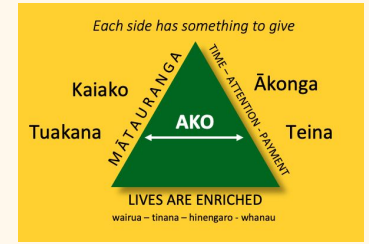


Figure 15

Source: <https://www.inpixo.com/technology/standards/wifi>

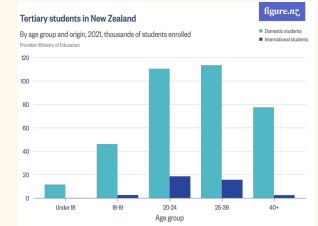
Source: <https://thisisgraeme.me/2018/09/22/what-is-ako-a-maori-view/>

Figure 6



Source: <https://figure.nz/chart/7mBpC5LpuoBoQA8P>

Figure 10



Source: <https://www.usability.gov/what-and-why/user-centered-design.html>

Figure 14

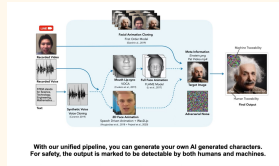
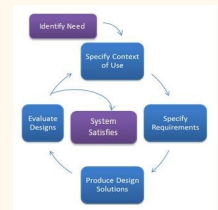


Figure 11

Figure 12

Figure 11-13

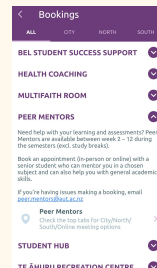
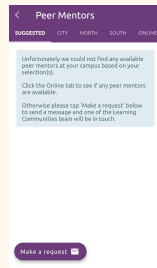
Source: <https://www.media.mit.edu/articles/characters-for-good-created-by-artificial-intelligence/>



Figure 13

Figure 7

Figure 9



Source: AUT application screenshots