

Te Pūkenga Libraries

A transdisciplinary design of the library of the future - an insider approach

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Abstract

This TDR inquiry examines the future of ITP libraries in Aotearoa as it joins the national network known as Te Pūkenga. The questions were asked ‘What will ITP libraries look like in ten years with the introduction of 4.0 technologies’ and ‘what makes a distinctly Aotearoa-based library service’? The inquiry was conducted over the first two years of Te Pūkenga creation. It evolved and moved with the disruptive and unpredictable waves that creating a new network produces. It was also conducted during the two years of the pandemic, COVID-19.

It examines the possibility of a new and innovative library system that fits seamlessly into the structure developed by Te Pūkenga, incorporating Te Tiriti o Waitangi principles, decolonisation practices and equity of service models into the very makeup of the structure. It examines the complex nature of academic library service within its parent institution.

Incorporating evidence from secondary information, surveys, interviews, and personal professional reflections. This inquiry demonstrates a TDR framework by incorporating as many voices as possible from many different stakeholder groups. The surveys and interviews asked questions of the library kaimahi within and external to Te Pūkenga to see what was important in academic library services and what is needed in the next ten years. It also asked the ākongā and general Te Pūkenga kaimahi their thoughts on library services and what they would like to see. The inquiry proposes a national library structure and service that will keep up to date with changing trends, 4.0 technology and disruptions that will arise over the next ten years and how an academic library service can remain relevant in the life of ākongā. It also discusses the need to have a foundation of Te Tiriti o Waitangi and a focus on equity of service to support ākongā success.

Keywords: Academic Libraries, Academic Librarians, Te Pūkenga, ITP Libraries, Industry 4.0 Technology, Decolonising Libraries, Te Tiriti o Waitangi, Treaty Partnership, Equity of Service, Centralisation.

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1 Introduction

Introduction

The library world is in a state of flux, and this is the time we need to seriously look at what we do and how we can do it better. New technologies are coming that will make many of the tasks that libraries perform, redundant. “The step of technological change is quick and new library technologies are available while many more are looming” (Moruf & Dangani, 2020, p. 13). In this inquiry, I have explored what a future academic library service could look like in Aotearoa with the introduction of these technologies. Alongside this, I have incorporated new, improved or changed understandings of concepts from the library world and beyond, such as decolonisation, the Treaty of Waitangi, librarians as teachers and the renaissance of library spaces due to the impact of changes in how people work.

To do this inquiry justice I decided that it should be done in a transdisciplinary framework (TDR). TDR goes beyond a single discipline, gathers as many voices from as many stakeholders as possible and can look at all the angles of complex systems to come up with an innovative solution. The future is going to be very different, so an academic library service needs to change and evolve to fit seamlessly into this future. “Transdisciplinary concerns that which is at once between the disciplines, across the different disciplines, and beyond all disciplines. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge” (Nicolescu, 2010, p. 20).

The Industry 4.0 movement is an umbrella term for the new technologies that are emerging into everyday life. It is also called the fourth industrial revolution (IBM, n.d.). The third industrial revolution was the introduction of factories and industry. The fourth includes robots, automation, mobile platforms, the internet of things, big data, authentication, 3D printing, smart sensors, human-machine interfaces, augmented reality, wearables, virtual reality, meta-universe, and cloud computing. These are all technologies that are beginning to emerge into everyday life, homes and work (IBM, n.d.).

Constant Change

I believe those that know the value of libraries will know that the type of resource is irrelevant. Throughout history library resources have included scrolls, books and now electronic resources. Information continually progresses.

The real purpose and essence of libraries and why they stayed relevant throughout the millennia is that libraries connect people to information. Chaudhari (2017) states libraries and librarians are the connection between people and the right information. It is what sits in that ambiguous space that is hard to define. It does not matter what format the information is in. It could be scrolls, books, or holographic crystals - but there will still need to be that connection between people and the exact information they are looking for. Sometimes they may need some guidance, encouragement and support to find it, which is where librarians fit in the system. Again, it is the experts, the people, who are important in the process. I feel that people always will be important because we are human, and the connection is what makes us human: we are “inherently social beings” (Cacioppo & Patrick, 2008, p. 5).

Institute of Technology and Polytechnics (ITP) Libraries

This is an exciting time for the ITP libraries in Aotearoa. With the merger of the sixteen ITPs and the nine transition industry training organisations (TITO) in April 2020 under the new name Te Pūkenga, this new network will become one of the largest academic library systems in the southern hemisphere.

This network was gifted the name Te Pūkenga to reflect its commitment to the heritage of Aotearoa and its relationship with tangata whenua (People of the land). “Te Pūkenga is inspired by the base of the harakeke (the flax bush) – the strongest part, from where all threads meet and grow. The ‘rito’ is the inner shoot of the harakeke. In the same way, our ākonga (student/learner) and their whānau (family) must be at the centre of what we do across Te Pūkenga and vocational learning” (Te Pūkenga, 2021b, p. 2). Pūkenga means to become skilled or an expert in an area (Te Pūkenga, 2020a). Stephen Town (2020, as cited in Te Pūkenga, 2020a), Te Pūkenga’s first CEO commented, “we consulted on a wide range of possible name suggestions and Te Pūkenga was chosen because it was

the best fit for who we are – a skills-based institute with a strong commitment to ākonga and Aotearoa,” (para. 10).

The new direction was outlined by the Minister of Education, The Right Honorable Chris Hipkins, in his letter of expectation. This meant that ITP libraries also have a chance to reinvent themselves into a modern, vibrant, future-proof library system and become a world leader in the industry. Hipkins (n.d.) outlines five expectations for Te Pūkenga to follow. Te Pūkenga libraries need to follow these too. They are Te Tiriti o Waitangi and the responsibilities of partnership, protection, participation, and equity to all ākonga. In all decision-making, ākonga will be at the centre. Kaimahi (staff) will work collaboratively, collectively, and inclusively through partnerships. Kaimahi will create a quality international education system and will strike a balance between transformative change and core business (Hipkins, n.d.).

Cox (2018) gives some expectations for directions for academic libraries to go in. He believes libraries should always re-align how they see their value to best meet the changing priorities of any institution, as the institution catches up to government expectations, advancements in technology, scholarly communication, and research weightings. I believe this is what Te Pūkenga Libraries need to do. Te Pūkenga libraries should start thinking about how they can pivot so that they can meet the ever-changing needs of their institution and stakeholders. They need to re-evaluate the library structure, job descriptions, and flexible staffing models. These are all important to future-proof Te Pūkenga libraries to ensure they continue to be relevant for the next 50 years. This inquiry will give some evidence-based predictions and guidelines to support the next 10 years of academic library services so that Te Pūkenga can meet the changing expectations of our governing bodies and our stakeholders.

I believe that it is time for subject librarians to stop thinking of themselves as separate from ITP, kaiako (teaching staff), and support kaimahi, but see themselves as part of the wider team. Identifying their working team as the kaiako in their allotted centres, enrolment, student support services, kaiāwhina (pastoral) teams, and the other members of the greater library team, exploring and redefining the worldview of their place in the institution.

This new worldview will change the libraries' position in their institution. Corral (2014, as cited in Cox, 2018) terms this new embedded participation in the life of the institution as “boundary-

spanning activities” (p. 24). This is one way to describe how librarians work within their institutions. It can be a little scary to venture out of the comfort of the library walls, but this change will have an incredible impact on completion and retention in programmes. Librarians should work in conjunction with all the support systems to create a holistic support system at an institution.

The Innovation

My goal is to develop a potential roadmap that could be a guiding document for the future of the newly formed Te Pūkenga libraries. I have completed an extensive literature review, carried out surveys of ITP libraries’ stakeholders, including ākongā and kaimahi, conducted interviews with library professionals, and examined case studies of other libraries that have made similar moves to create a national network by combining small rohe (regional) libraries into one national, state or mega-city library service. All these avenues of information should produce a starting point for the future of libraries, the future of work in academia, and what our stakeholders are looking for in a library service to enhance their studies and research.

As part of this inquiry, I have created a scenario of what Te Pūkenga libraries could look like as informed by the following research. Attached in [Appendix E](#) are two Gantt charts showing a hypothetical timeline of pivotal change, and future research projects. All these tools can be used as guiding documents. These are research-driven and aimed at future decision-making.

The research will be completed in a TDR framework and using Constructive Grounded Theory, as an underpinning methodology so that the data will be rich, unique, and go beyond a single discipline to create a tapestry of original findings on the many facets of library services.

I hope that this inquiry will help shape Te Pūkenga libraries into a distinct identity and follows the principles of Te Tiriti o Waitangi. My hope is also that it helps to create an equitable learning environment and delivers quality resources and information literacy skills to the ākongā of tomorrow.

Industry Partners

My industry partners are the ITP library managers and my mentors are the ITP subject librarians. These two groups are very invested in the future of Te Pūkenga libraries and are already working

towards making it a reality. The research will align as much as possible with their goals and expectations. For many years “the ITP library managers have maintained a very strong community of practice, and work collaboratively where they can to provide a range of library and learning services to meet the needs of their students and staff” (Arlidge, 2018, p. 63).

Treaty of Waitangi/Tiriti o Waitangi

As a New Zealander, I believe that any kaimahi working in Aotearoa needs to uphold Te Tiriti o Waitangi principles in their everyday work. Therefore, part of my research and outcomes will reflect the provisions of Te Tiriti o Waitangi with the acknowledgement that I am a product of my culture and upbringing so the only thing I can truly recommend is that we learn to listen to the Māori community and open our hearts with humility to the culture, heritage, and the history of Aotearoa. The library manager at the Toi Ohomai ITP explains in the Library and Information Association of Aotearoa (LIANZA) Journal, *'Library Life'*:

Our library systems and structures in Aotearoa are still euro-centric and based on settler colonist principles and values, which are inherently racist. Although things are changing, there's still a great deal of work to be done to dismantle these systems and structures. There is discomfort in acknowledging the impact of colonisation and racism, my role in it, and that I still have blind spots. However, any discomfort I feel pales in comparison to the harm caused to Māori, as well as to Pasifika and Asian New Zealanders. (Rowe, 2022, p. 34)

New Zealand academic libraries' culture has historically been very eurocentric and shaped according to a western paradigm. This paradigm does not reflect the culture of Aotearoa, now and in the future, and Te Tiriti o Waitangi that was signed in good faith in 1840. It is a unique mixture of the two that will be what makes a library in Aotearoa different from any other library system in the world. To do this well, Te Pūkenga libraries need to be in partnership and learn to listen to the iwi, hapū, tangata whenua and nation on which each library dwells, and uphold the four provisions of Te Tiriti o Waitangi. This project will suggest ways in which libraries can begin to do that, to deliver equitable outcomes to our learners.

Position Statement

I have had the privilege to work in both public and academic libraries for over twenty-three years. One way to describe me is that I am an idealist and that is why I am drawn to this project. I love libraries and am passionate that library professionals have a lot to offer academic study, private study, and leisure in the world of tomorrow.

2 Literature Review

Libraries of the future will need to incorporate many different concepts, themes and ideas to have a place in the world of tomorrow. Some of these themes are decolonisation, Industry 4.0 technology developments, access to information, librarians as teachers and the evolving nature of the library space. All these topics need to be addressed when thinking of the whole complex nature of a library service.

It is likely that in the future, artificial intelligence, augmented reality and robotics will take over much of the functionality of libraries. “The AI technology allows computers to do things, which, if done by humans, would be said to require intelligence” (Echedom & Okuonghae, 2021, p. 244). One day if they acquire the intelligence of a human then they will be able to take over some of the tasks and roles of librarians and library kaimahi. That day is still a way off but eventually, technology will progress to a point where the need to evaluate and critically analyse different information will be performed by a computer (Bell, 2016).

The role of academic libraries in their parent institution is evolving and expanding as they are finding their place in the success of the lives of ākongā and other key stakeholders. Academic libraries fill the gap in the knowledge needs of incoming ākongā or digital natives knowledge on how to use databases and find good quality information (Biddle, 2021). Libraries are no longer just a place to find information or to study quietly but are now an online base for electronic 24-hour research and help. The library kaimahi are found all over campus, from classrooms to events to ākongā forums. “Librarians’ instructional work has also expanded to a wider range of activities and roles” (Baer, 2021, p. 26).

Libraries have faced many disruptive innovations over the years. In the 1980s, the internet and the world wide web were a disruption, but libraries pivoted and began digitising their resources and uploaded them on the internet, mostly open access, free for anyone to use. One example of this was when the Dublin University library digitise the oldest New Testament in the world and put it on the web. It took many years to complete because it was in Greek, broken into four parts, and located in various parts of the world. Therefore, they had to be located, translated and then digitised (Codex Sinaiticus, n.d.).

Libraries already advocate the use of eBooks and databases. Libraries around the world are working tirelessly to promote their resources and services to meet the diverse needs of their clientele. They enhance quick and easy access to good quality information and they do that so even the most remote places in the world can get access (Burton, 2017; Rajan et al., 2022).

Research support, copyright, digital scholarship, scholarly communication, and user education are other roles that libraries play in their parent institution (Bishop et al. 2021). Duas et al. (2020) survey also obtained similar results to Bishop et al. (2021). "...research support, teaching and learning, digital scholarship, user experience, and scholarly communication" (Duas et al., 2020, p. 43). "Today digital libraries play a key role in making knowledge publically available on large-scale repositories" (Kroll et al., 2022, p. 1).

2.1 Decolonising Libraries

Over the last two years, there has been a call to action in higher education to decolonise (Crilly, 2019; Marsh, 2022). Crilly (2019) states that especially in colonial heritage places such as Canada and Australia there is a growing need to recognise indigenous worldviews, knowledge, and research methodologies in higher education. Marsh (2022) talks about the library as an important component for decolonising a whole institution. "Universities are frequently characterised as neoliberal institutions, primarily concerned with the marketisation of education" (Crilly, 2019, p. 7). These criticisms can also apply to the academic library. According to Weissinger (2003), libraries have been sorely lacking in cultural diversity and this is seen very clearly in the recruitment of librarians and stereotypes about librarians that have developed over the years. This is rooted in its beginning in the enlightenment era. The library has been embedded in these thoughts and worldviews for years and it has been detrimental to the indigenous voice. This can also be seen in libraries in Aotearoa. "Since the 1980s, New Zealand has been experiencing a nationwide cultural awakening and coming to terms with its history of settler colonialism and subjugation of the indigenous Māori population" (Alsabbagh, 2021, p. 1).

According to Marsh (2022), ākonga are demanding that their institutions decolonise. They are questioning the eurocentric way higher education is conducted, the western way of knowing, and the lack of diversity and imperial infrastructure. Libraries need to work on this at the same time as their

parent institution. They need to start diversifying their collections, reading lists, teaching, and access to resources (Crilly, 2019; Marsh, 2022).

2.2 Information literacy Skills

Ākonga of today are surrounded by information. They hold it in their hand on their mobile phones. Technology is now considered ubiquitous in everyday life (Shire & McKinney, 2021; Rajan et al., 2022). Critical information literacy skills and well-curated information is increasingly needed to help combat the use of opinion-based information and that is where libraries will find their place in the future. The Association of College and Research Libraries (ACRL) in their framework for *Information literacy for Higher Education* defines information literacy as “is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning” (ACRL, 2015, p. 8).

In pushing these skills, librarians need to be aware of the racial, colonial, and socio-political dynamics that are at play when we give information hierarchy (Marsh, 2022). A prime example of this is the value given to peer-reviewed journals as opposed to indigenous oral knowledge. That is why it is important to focus instead on the ethical use of information and understand that information can come in many different forms. It is also important to know when and how to use information. A video of an indigenous leader talking about their experiences and knowledge on a topic is just as valid as a peer-reviewed journal article depending on the context and use of the material. “When we only use exclusive, western indicators such as peer review, academic qualifications and scholarly publications, we are complicit in perpetuating a hegemonic concept of authority that only recognizes ... one system of knowing” (Marsh, 2022, p. 6).

Information is everywhere in our world. We hold the world's knowledge in the palm of our hands and are so used to getting instant information when we want it. They usually never search past the first page. The intention and biases of this information for the most part are harmless but more stories are coming out that some of this information can cause a great deal of harm to the user. Such as stolen identities and bank details. “This is no surprise considering recent findings that although young people are adept at using the Internet for site navigation, they struggle to evaluate the veracity of

the online content they encounter and are “easily duped” (Wineburg et al., 2016 as cited in Rosenbaum et al., 2021, p. 155). Learning how to critically analyse information is an essential skill in the world today. Librarians as teachers play a crucial role in this. More information about information literacy can be found in [Appendix H](#).

2.3 Librarians as Kaiako (Teachers)

Over the last ten years, librarians have moved out of the library space and in with faculty they support to provide knowledge and education. At most academic institutions you will find your professional kaiako librarians in classrooms teaching information literacy skills, critical thinking and how to find the best and most suitable information for their assignments. This will become more important in an Industry 4.0 world as ākongā will need information literacy skills to navigate the enormous amount of information and data being generated every day (Delancy and Bates, 2012).

When libraries partner with faculty to help support their goals and outcomes, they become indispensable to the teaching of a topic. Faculty embed the teaching of information literacy into papers and librarians become kaiako. Rosenbaum et. al (2021) talks about how they completely embedded information literacy into a media paper, so it became part of the learning outcomes and curriculum. They collaborated and networked with media studies kaiako to achieve this.

Librarian as kaiako has become an especially vital role in academic libraries. They are the ones that go out into the wider higher education community and teach, show, advocate, promote and be involved in the academic life of ākongā in their assigned schools and programmes. “The evolution of library instruction and information literacy education has reflected an overall movement away from skills-based instruction towards more holistic and conceptual models of learning, and away from librarian as service provider towards librarian as teacher and teaching partner” (Baer, 2021, p. 27). Information literacy is a significant role in an Industry 4.0 world. Library kaimahi need to partner with kaiako to make sure ākongā are being taught information literacy skills in the classroom. Kaiako need to develop a relationship with their library kaimahi so that they know what is being taught is relevant and works in with the curriculum (Delancy and Bates, 2012).

Hess' (2020) research discusses academic librarians' teaching abilities and how they see themselves as educators or even if they are seen as educators at all. Academic librarians need to develop a teaching persona. Baer (2021) also discusses the importance of creating a teaching identity. For librarians to embrace their teaching roles it makes sense they begin establishing practices of reflection and continual improvement and mentorship from more experienced teachers. This will develop their teaching identities as teachers of adults (Baer, 2021; Hess, 2020). If librarians do this they will solidify their place in their parent institution (Delancy and Bates, 2012).

Baer (2021) points out that despite adult teaching of information literacy skills, which has become a core library service, there is still a lack in this area of the education of librarians. Most development is limited and done on the job. Lewitsky (2020) recommends that institutions need to give academic librarians greater professional development to upskill their teaching practices and to update job descriptions to adequately reflect the new nature of the job.

The difficulty that most academic librarians find is that most of their teaching is ad hoc. A class here and a class there over numerous different disciplines, so it is very difficult for them to establish a stable teaching practice, since they may never see the same group of ākonga twice (Baer, 2021; Lewitsky, 2020). Another difficulty is that to acquire tenure in many institutions librarians need to show their teaching expertise but research has shown that most librarians have no teaching experience when they begin working as an academic librarian. The main way academic librarians acquire the skills that are needed is through critique from fellow librarians and on-the-job training, trial, and error (Lewitsky, 2020).

According to Steele (2021), the major challenge to global academic learning and education has been distance learning. Since the beginning of COVID-19 in 2020 the number of students studying online has increased and it provides more flexibility to students, challenges which meant that academic librarians were more in need to support for these students online. More information about COVID-19 and libraries can be found in [Appendix I](#).

In conclusion, Lewitsky (2020) recommends that there need to be significant changes in the way subject librarians are educated and how they are supported throughout their careers. Librarians

need practice-based evidence, reviewing, reflective practices, ongoing teaching courses to develop their teaching practices, mentorship, a community of practice and identities as educators.

2.4 Industry 4.0 Technologies in Libraries

Future generations will change the face of librarianship because their expectations have become grounded in Industry 4.0 technologies. The children born today will be born into a world surrounded by technology and devices (Black, 2019; Rajan et al., 2022).

Industry on the other hand wants to know that the information their employees have found is correct. Information from social media or opinion based is beginning to be questioned for accuracy. This is why academic libraries are needed in the world of tomorrow. They teach the valuable skills of information literacy and critical thinking when it comes to information. “Since the beginnings of academic library instruction, librarians’ views of and approaches to teaching and learning have evolved in response to technological, societal, and cultural changes and shifts in people’s educational and information needs” (Baer, 2021, p. 26).

Mobile and Industry 4.0 technology has taken off in many libraries around the world. These technologies connect remote library users with their library services (Rajan et al.,2022). The IBM (n.d.) website defines Industry 4.0 technology as the automation technology that comes with the fourth industrial revolution. These technologies are things like virtual reality, augmented reality, a network of things, big data, cloud technology and robots. The University of Pretoria library in South Africa has a robot called Libby that works in the library space (Rajan et al.,2022). At the moment this robot is used for greeting customers but as technology improves its tasks may expand.

Many libraries also have ‘Maker Spaces’ that allow users to use these new technologies. Patrons can experience augmented reality, artificial intelligence, virtual reality, 3D printing, and robotics at their local library. You can also borrow kits such as brewing, or equipment such as telescopes (Ngā Whare Pukapuka Tūmatanui ki Aotearoa, n.d.).

Russia opened one of the first virtual libraries in 1994. It contained Russian classical literature, and kiosks were set up around Moscow in metro stations, to allow commuters to read while travelling.

“Nearly 2.5 million annual passengers have free access to a selection of novels by authors such as Pushkin, Chekhov and Tolstoy” (Arup, 2015, p. 31).

Another example is that libraries have begun to use AI (artificial intelligence) to help patrons get the information they need. As well as AI and machine learning, libraries are incorporating the technologies of sound and image recognition to analyse their digital collections and add metadata to help patrons search more effectively (Rajan et al.,2022).

Despite ubiquitous technology in everyday life and the library’s delivery of services, people still want a human-centred service (Arup, 2015). “Fewer physical items are being issued each year from New Zealand libraries” (Black, 2019, para. 18), but the visitor numbers are increasing. “As the third-millennium dawns, technology has profoundly changed at such a rapid pace that what is trending once may not continue the next hour and one needs to keep up to date on any changes that reflect on their respective profession or within the scope of their duties” (Rajan et al.,2022, p. 1).

Society is also beginning to use libraries for their spaces and events. Since COVID-19 people also want to use the library as a third space. A place to work aside from the office or their home. Demographic, urban, migration and technology will significantly change the role of libraries (Arup, 2015).

If libraries can adopt these technologies in their spaces and services, they will match users' expectations for future use (Arup, 2015). Johnson (2018) describes potential roles that libraries can adopt to benefit an Industry 4.0 world. One of these was information literacy skills. This is one big benefit of academic librarians, they can help ākonga and society in the world of tomorrow.

2.5 Library as Space

According to Black (2019), issues of physical items in libraries are down but there has been an increase in the use of library spaces over the last few years. This has been due to changes in nomadic work arrangements and mobile lifestyles to do with climate change and environmental concerns (Arup, 2015). Arup is an architectural design company that specialises in building libraries.

This new generation finds the idea of borrowing books and the use of a communal place appealing. People are also looking for functional co-working spaces when they work away from the office. This enables those companies to have a smaller environmental footprint. “These spaces commonly referred to as co-working spaces are collaborative environments which are found to feed innovation and creativity” (Bebegal-Mirabent et al., 2021, p. 1).

According to Bell (2022), library space is beginning to be looked at again as an important commodity. Ākonga are wanting to use library spaces to enhance their educational experience at their institution. Modern libraries are being built or refurbished with this in mind. Having quiet places in new Library buildings is important as there are not many places left in the world where you can study and think (Ngā Whare Pukapuka Tūmatanui ki Aotearoa, n.d; Arup, 2015).

The concept of a ‘*sticky campus*’ is also being used in universities around Aotearoa. A sticky campus is where ākonga go to meet up with their friends and classmates and do collaborative work (Warren and Mahoney, 2017). Ākonga no longer want to just go to their campus to attend lectures. They want a holistic experience at their campus. “To attract and retain the best students, a campus environment needs to deliver both the social as well as the academic ambitions of the students” (Warren and Mahoney, 2017, para. 3).

Libraries that are being built today, are much more than a house of books and knowledge. They are coffee shops, co-working spaces, digital studios, meeting places, study rooms, meeting rooms, maker spaces, quiet places and so much more (Arup, 2015; Pierce 2021; Rosenbaum et al.,2021,). There are also indoor gardens. They incorporate a lot of glass in the buildings and plan indoor courtyards. Therefore new buildings have a lot of natural light and greenery (Pierce, 2021).

Industry 4.0 technology will be available and seamlessly integrated into the libraries of tomorrow. “The integration of these technologies in library spaces and services will determine their ability to be part of a global conversation and to respond to users’ expectations” (ARUP, 2015, P. 30). Automation, robotics and augmented reality can be used as efficient ways to store and access physical items (Arup, 2015).

If COVID-19 has taught us anything it is that libraries can adapt to virtual delivery very quickly (Connaway et al., 2021). It has also taught us that ākonga, research kaimahi and vulnerable

populations want to be able to go to the library and have access to their physical resources and get help with technology that is only found in the library or they do not have access to at home (Connaway et al., 2021).

Libraries support the digital world as it advances. Library buildings are places patrons can find a quiet place away from the busy world or meet up with friends. A library has become a community hub regardless of what type of library it is (Arup, 2015). According to Pierce (2021), it is a communities living room. A comfortable place to relax and connect with information whether it be digital or physical. It is a place that enables the ability to use the latest technology. “Networks of connected devices, embedded in building components, will create a greater level of automation and enable more efficient interaction with the environment” (Arup, 2015, p. 22).

2.6 Library Kaimahi

Library kaimahi are also very important in the library space. Patrons want to see library kaimahi around the library space. It is also important that they are not tethered behind a library desk and are visible to patrons (Pierce, 2021). They also want to see kaimahi that reflect the multicultural makeup of their society and have two languages. Having more Māori and Pacific kaimahi and more kaimahi-speaking te reo Māori in the library space will help with this (Arup, 2015; Ngā Whare Pukapuka Tūmatanui ki Aotearoa, n.d.). For library kaimahi in Aotearoa they need to be familiar with Te Tiriti o Waitangi, cultural safety, tikanga, iwi kawa and re reo Māori (Ngā Whare Pukapuka Tūmatanui ki Aotearoa, n.d.).

Decolonising libraries, information literacy skills, librarians as teachers, Industry 4.0 technology usage, library as space and library kaimahi are all important topics when thinking of a holistic library service that will cater for the ākongā of tomorrow. Focusing and enhancing all these topics will ensure academic libraries have a practical relevant role in their parent institution. This is why each of these topics will be fundamental to the proposed library service in this inquiry.

Transdisciplinary Research

TDR is the overarching methodology used in this inquiry. TDR aims to help untangle complex social problems or wicked problems that exist in the world. A classic example of a wicked problem with all

its complexities is poverty. The researcher needs a holistic view of an issue and how it fits into every aspect of life. “Rather than following the fixed trajectories of pre-existing research pathways, addressing wicked problems involves the inquirer and decision-maker in exploring the full range of investigative avenues” (Brown, 2010, p. 4).

TDR recognises there is not always a single solution, but the solution could take years to address and numerous innovations to pull back all the layers to understand all the social constructs that make up the need for change. It also looks at how it affects people and all the different stakeholders involved. TDR does not just focus on the data-driven, answers angle to solve a problem. It demands the researcher to have a holistic understanding of all levels of reality. A researcher cannot answer all the levels of reality in one inquiry. Klein and Newell (as cited in Klein, 2004), explains that this type of inquiry is a process of solving a problem, or addressing a major topic in society that is too complex to be looked at by a single discipline. Nicolescu (2010), who many call the father of modern TDR also talks about the need to go beyond a single discipline to answer complex issues.

Each time a wicked problem is looked at, it is seen from a different angle and view. The new researcher produces new perspectives and insights that were not seen before. The researcher hopes that another researcher will take up the topic after them and discover another insight or way of knowing that the first researcher may not have thought about and unwind the problem a little more so that over time and with many minds the problem will be completely resolved (Klein, 2004).

The Three Axioms of Research

TDR has three axioms of research. They are ontological, logical, and complex axioms (Nicolescu, 2010). These three axioms are the controlling ideas that shape the TDR framework and help describe the ideologies of the methodology.

The Ontological Axiom

The first axiom, the ontological axiom talks about the reality of the subject and the object. It outlines the social-environmental aspects of reality, including our knowledge of that aspect and the different levels of reality about the subject or problem and the object. A researcher acknowledges all the parts

of the subject and object and how they work simultaneously together but also how they work separately at the same time. This is the included third in a TRD framework (Nicolescu, 2010).

The subject in this inquiry are the stakeholders affected and the object is the future of ITP libraries in Aotearoa with the disruptions of Industry 4.0 technology and the formation of Te Pūkenga network and the levels of realities that surround the subject and the object. One of the hidden thirds is me as the researcher and my twenty- three years of library experience. Mills, (as cited in Brown, 2010), realises that society requires a framework that allows the researcher a methodology and methods that use their expert knowledge and experiences as part of the research process. “...the fusion of personal and intellectual life” (p. 8). This is critical because even though it is not always encouraged, researchers always add themselves into their inquiry. TDR understands this and uses this knowledge to inspire direction and understandings that cannot be seen in other methodologies. Shaped in such a way that provides the foundation for solid, rigorous intellectual understanding.

Somerville, (as stated in Brown, 2010), describes the shared foundations and understandings that bring the relevant disciplines together with social knowledge. It allows sitting and talking about the issues that society is facing. Somerville, (as stated in Brown, 2010) writes this to mean “the ethical imagination” (p. 9). This catchphrase embraces the understanding of the interconnectedness of the phenomenal as well as the scientific, and moral parts of a problem. It looks at all the different angles from all the different perspectives. It tries to get this by listening to all the different voices before producing a new solution.

The Logical Axiom

The second axiom, the logical axiom involves the included middle. In any object or subject, there are ‘A and non-A.’ In the TDR framework the researcher works in the included middle. In any wicked problem there is ‘A and then there is non-A’. There is also a place in the middle of both those states of being, the included middle and that is where TDR sits (Nicolescu, 2010). The included middle considers two opposing viewpoints with rational explanations, thoughts, and research to back up each one. The included middle is the viewpoint in the middle of the two opposing viewpoints that may not have been perceived before. One of the opposing viewpoints in this inquiry is the belief that centralisation could be a cheaper opportunity for better access to resources, while on the other hand centralisation would lose the local needs and resources unique to each individual community

and in the long run could be more expensive because publishers would hike up the price to reflect the larger number of full-time equivalent ākongā.

TDR is all about community. It is the collective understanding of an issue or social problem (Brown, 2010, p. 4). It reflects on all the different disciplines that are around an issue but also any social, local, strategic, and personal knowledge that could add new understanding and with a bit of imagination to any insolvable problem that the world is experiencing today. It takes an everyday researcher who is working in that space and gathers around them a community that can help find implementable solutions that can be one more step in the interconnected journey of solving the problem completely. Through ontological discussions, joint Te Pūkenga meetings, workshops and developments, my colleagues' thoughts and expertise and many discussions with kaimahi around Wintec and Te Pūkenga have subconsciously formed part of this inquiry.

The Complexity Axiom

The final axiom is the complexity axiom, this axiom holds that every issue is universally interwoven. This universal principle of dependency and interdependency in all dimensions of reality "...this simply cannot be captured by mathematical language but only by symbolic language" (Nicolescu, 2010, p. 31). Simply stated one state of existence cannot exist without the others.

The complexity axiom seen in this inquiry is the interconnectedness of all the sub-themes that play a part in creating a complex library service. From equity of service to technology to resources, to access, to geography, to kaimahi, to library management, to customer service, to teaching, to the creation of electronic resources, to copyright. All these topics play a big part in a library service and how a library serves its larger community. They are all connected and yet they can be independent as well. This is seen in how a library system sits in the wider world and then internally how library kaimahi work in them.

The library is a complex system. TDR forces you to look at the problem from all angles. This helps you to see the problem in all its complexities, hear the different voices, and follow new lines of inquiry to the problem, all in the hope of seeing all sides to it. "From a transdisciplinary point of view, complexity is a modern form of the very ancient principle of universal interdependence" (Nicolescu, 2010, p. 27). The future of the new Te Pūkenga libraries service is one such complex issue that has

many levels of the interdependency of many different factors that need to be considered to see the whole picture. This is why there were 60 questions in the library managers ' survey and 33 in the library kaimahi survey to cover the complexity of the topic.

An example of a similar organisation that has made a similar move to Te Pūkenga is the Auckland City libraries. The library managers had already formed a consortium before the merger of the councils, but the move enabled them to be able to do the things they were unable to do before the merger because of the competing economic policies of each individual council. Geoff Chamberlain was the manager of the Auckland Central library in 2012. At that time there was a population of 1.5 million and they needed a library service that could cater for that size of population and meet the needs of all those 1.5 million residents. Section 3 highlights how Geoff Chamberlain moved all the Auckland libraries into one mega network.

3 Case Study: Auckland City Libraries

Auckland City in 2010 became a supercity. All the councils joined together to become a giant megacity. The libraries also stopped being small library systems and join to become a large library system (Chamberline, 2012). I chose them as a case study because they are a New Zealand library that made a similar move to what Te Pūkenga libraries could do if they choose to centralise. Te Pūkenga libraries could learn from their journey.

Chamberlain (2012) remembers that in 2002 a group of Auckland regional library managers formed a consortium to better serve the geographical region they catered for. It was one of the first steps in moving Auckland into a supercity. In doing so they began the creation of the largest public library system in the Southern Hemisphere.

Like the ITP libraries, Auckland City was made up of small councils fighting among themselves to get the best deals. The Auckland councils realised that this was not good for business and meant that they were unable to grow and make the changes a modern futuristic city needed. So, in 2010 they joined forces and became one large super library (Chamberline, 2012). Before that, in 2002 the library managers decided to combine their library management systems and the libraries for the greater Auckland region were created. They chose the LMS Millennium software (Chamberline, 2012). At this stage, each library remained a separate entity. It was a great first step to developing patterns of working together. Then in October 2010, the city became one and that meant that Auckland City libraries could continue their already successful working partnership and they were able to rebrand as one (Chamberline, 2012). Compared to Te Pūkenga libraries, Auckland City libraries is contained geographically. Te Pūkenga libraries will be different in that they will have to cater to the country, so larger geographically but smaller in numbers of patrons.

To help maintain the uniqueness of the distinct parts of the Super City that is Auckland, Chamberlin (2012) describes the setup of local boards so that each community is represented and that they do not lose what originally distinctly set them apart from the wider city. The board is made up of local people so that they can plan activities and buildings that represent the people they serve. Chamberlin (2012) believes this will make stronger communities.

In the initial stages of the Auckland City libraries merger, Chamberlin (2012) stated that they needed staff buy-in. So, they established a few internal cross-functional teams. This was to ensure cohesion across the city. The two main groups were ALMs (Auckland Libraries Managers) and ALL (Auckland Libraries leader Forum) (Chamberline, 2012). These two groups aimed to make sure the changeover to the one library system went as smoothly as possible. This meant no loss in service to the public.

Chamberlin (2012) outlined ten key areas that needed to be addressed for the merger to happen successfully:

1. Organizational values - common understandings, values, philosophies, and practices,
2. Getting to know each other - The need for staff to know each other and work together as a large team
3. Library council / leadership formed – subcommittees formed
4. Policy alignment - common business roles
5. Job evaluation process - the need to establish a common job banding and remuneration framework
6. Combined LMS (Library Management System)
7. Best customer service experience working group - to deliver a consistently high standard of service everywhere
8. The collections rEvolution program - one library
9. One card unified collections - floating collections
10. A new work culture - building a new organization and culture, vision, and strategic direction, establishing new political and other stakeholder relationships, redesigning processes, creating one website, and getting logistics into perspective
11. Professional development - strong commitment was made to training and development

These eleven areas are a comprehensive blueprint on the areas that Te Pūkenga should follow to become a successful network. Many of these areas listed helped form the proposed library system in Section 6. I would also recommend that many of these areas are adopted by the auaha (innovation) groups that are mentioned in Section 6: Manawa Roa: Design Thinking Organisation.

Also, around the time of the merger, March 2013, Auckland City Libraries (2013) produced *Te Kauroa: Future Directions 2013-2023*, its strategic plan following Auckland Council's vision, the *Auckland Plan 2013*. One major alignment is the responsibility they as an organisation have to Te Tiriti o Waitangi and its legal obligations to Māori (Auckland City Council, 2012, p. 12). This has in a sense been superseded and built on in their new plan, *Auckland Plan 2050*. Within *Te Kauroa: Future Directions 2013-2023* are Māori strategies that relate to the library's customer service, heritage,

research and community connection goals. “It will provide a clear strategic and implementation plan for the successful delivery of library services to Māori in the Auckland region and incorporate some of the guiding principles articulated by its predecessor documents” (Barnett, 2018, pp. 19 &20).

These directions outlined in the Auckland Plan and the Auckland City libraries *Future Directions* document mirror the strategic directions of Te Pūkenga. Even though Auckland City libraries is a public library service, it is a good library network to look to, to see how they changed from a group of individual libraries to a large library network.

The literature review in the TDR process is the collection of expert voices from around the world and Aotearoa. The next section is how the inquiry collected the voices of the key stakeholders invested in this inquiry: The ākonga, library kaimahi, Te Pūkenga kaimahi as well as key library experts from around Aotearoa.

4 Methodology and Methods

This research inquiry explores the potential of the Te Pūkenga libraries over the next ten years. The overarching methodologies used in this study are transdisciplinary and Constructivist Grounded Theory. Both philosophies and theories provide a rich background that allows the researcher to go beyond an individual discipline to create a tapestry of data that will create unique answers to age-old questions. It also allows a researcher to research some subjective predictions of a particular topic and research questions.

One main aspect of TDR is to gather many voices around a topic. The literature review was the voice of international industry experts discussing the topics academic libraries are thinking about. To support the six topics (decolonising libraries, information literacy skills, librarians as teachers, Industry 4.0 technologies in libraries, library as space and library kaimahi) that were mentioned in the literature review, surveys, interviews and a workshop were also conducted to hear the voices of the different stakeholders and experts in Aotearoa. This gives this inquiry the breath of thought needed to handle such a complex subject that is a futuristic academic library service in Aotearoa.

A library system is a very complex network of roles, services and responsibilities in an academic institution, and it overlaps all disciplines. “Librarianship is inherently a transdisciplinary vocation” (Filbert, 2016, p. 199). Therefore, any library project fits nicely into a transdisciplinary framework.

This has meant that a large quantity of data was collected to try and cover all aspects of a library system and to hear all the voices involved. A library system is a complex network of roles, services and responsibilities in an academic institution and overlaps all disciplines.

4.1 Challenges to TDR

Chiesa et al (2009) in their library TDR project, highlighted one challenge, they faced in choosing to do their research in a TDR framework. The TDR framework talks about a ‘cultural difference’ in acceptance, support, and active involvement in the inquiry (p. 18). To transition from a very traditional discipline to the challenging world of TDR with its whole different terminology is difficult

for many researchers. The three axioms of TDR (levels of reality, the included middle, and the hidden third) are major jumps in personal understanding.

This research paper explores the potential of the Te Pūkenga libraries in the next ten years. The overarching methodologies used in this study are transdisciplinary and Constructivist Grounded Theory.

4.2 TDR Problems Facing Libraries

In his article Filbert (2016) states that the real TDR problem facing libraries in the next ten years is that technology's capabilities are growing and will eventually be able to replace librarians and library kaimahi in their expertise of access to good quality information, organisation of information, storage and retrievability of information and referencing of information. So eventually when technology advances enough there will be no need for librarians or libraries.

On the other hand, Darnell (2017) addresses in her blog article that the “lack of diversity within the library profession; a lack of scholarly communication and publishing models; issues related to copyright, intellectual property, and piracy; technology vs. humanist approaches to libraries; and western-centric approaches to information, knowledge, and learning” are the TDR problems that libraries are facing (para. 5).

This inquiry has endeavoured to address both Darnell (2017) and Filbert's (2016) findings through a transdisciplinary lens. This can be seen in questions in the surveys and interviews and the topics in the literature review. The proposed diverse library system could be used across the whole of Aotearoa for ITP libraries. A design thinking organisation would be prepared for any technological disruptions and would be able to pivot quickly to accommodate.

4.3 Ethics

This inquiry naturally involved collecting data from people. This has meant that there are ethical considerations around the use and anonymity of the information gathered. Several ethical steps were taken at the beginning of this inquiry to address these concerns. The participants in my

research are self-selected, self-identifying, and completely anonymous. They were also made aware of the scope and purpose of the inquiry and how the data they provided would be used.

There were four individual surveys covering five different stakeholder groups. Altogether there was a total of 62 survey participants. The four different stakeholder groups were library managers, library kaimahi, a long ākonga survey taken by the spatial design and architectural design ākonga at Wintec, a short ākonga survey and a general Te Pūkenga kaimahi survey. These can be seen in [Appendix C](#). The survey questions were written to make sure anonymity was ensured. After the survey, any information that might identify a person was removed from the final data. All data was stored on a secure one-drive account. This research received ethical approval from the *Wintec Ethics Committee* in 2020. Refer to [Appendix S](#).

I then conducted three interviews with library professionals from around New Zealand. The first interview was with a library consultant. The second and third interviews were group interviews with the members of the *Tertiary Educational Library Special Interest Group* (TELSIG). TELSIG is a group that was created by the *Library Association of New Zealand* (LIANZA). There were four participants in the first interview and three in the second. The interviews were ten open-ended questions that gave the interviewee control over the direction and subtopics of the question asked. They talked from their own experience and expertise. The ten questions were emailed to each participant a week before the interview so they could gather their thoughts and start to ponder what they wanted to say. The audio can be found in [Appendix C](#).

As well as obtaining the ethics approval (see [Appendix S](#)) I thought it would be wise to read Linda Tuhiwai Smith's *Decolonising Methodologies*. This is because I am conducting research in Aotearoa and some of my research candidates would be of indigenous descent. I wanted to make sure I was respectful and understanding of all my research participants.

I also investigated the findings of Chris Szekely (1997) in his research *Te Ara Tika: Guiding Voices: Māori Opinions on Libraries and Informational Needs*. The thoughts and findings from that research would underpin the findings of this inquiry. The findings from that research by Szekely match the findings in this inquiry. Two examples are, that more Māori and Pacific kaimahi are needed in libraries and the need to protect indigenous knowledge under Te Tiriti o Waitangi principles.

4.4 Many Stakeholder Voices

The TDR goal is to gather data from as many different stakeholder groups as possible to produce a solution to a problem. It is very closely aligned with consultation (Bergmann et al., 2012, p. 32). This is the ideal approach for the issue of the future of libraries in an Industry 4.0 world, the formation of Te Pūkenga and what it means for ITP libraries. In this inquiry, I have tried to reach as many stakeholder groups as possible with my five surveys and three interviews. The five surveys covered the groups of library managers, library kaimahi, general Te Pūkenga kaimahi, and two ākonga surveys. The interviews covered eight library professionals from around Aotearoa in all types of libraries such as public, university and ITPs. Altogether there were 70 voices from around Aotearoa feeding into this inquiry.

4.5 Constructivist Grounded Theory

Constructivist Grounded Theory is a contemporary form of traditional Grounded Theory methods. Grounded Theory has shaped the qualitative method of this inquiry. Analysing the gathered data by coding. This is done at the beginning of the analysing stage where you code each answer to each question and from there create your themes. Grounded Theory is a systematic approach to inquiry using different strategies for conducting an inquiry. “This research strategy is based on repeated field contracts and allows returning to the field to collect more data and to adapt data collection to the needs and questions resulting from the analysis of the data so far” (Flick, 2018, p. 452). Therefore, this research started with a survey conducted with just library managers from Te Pūkenga and then moved on to library kaimahi, then ākonga and general kaimahi from Te Pūkenga and finally interviews with library professionals from around Aotearoa. Each filled a gap or elaborated on the previous data-gathering information. This process built the inquiry over the two years.

The well-known grounded theorist Kathy Charmaz (2014) stated that “Grounded Theory as theory contains both positivist and interpretivist elements because it relies on empirical observations and depends on the researcher's constructions of them” (p. 232). The reason I chose this method is that I wanted to focus on theory construction, producing new concepts rather than focusing on theories that already exist, and thinking up new processes rather than relying on the processes that already exist in libraries. I have iteratively and comparatively done this from the beginning of my studies

when I started my post-graduate certificate in Innovation in 2019 and then over the years with new data have reinvented my theory and key concepts and codes over this time.

Grounded Theory was used because it provided a conceptual understanding of the data I had collected or read in my literature review. Figure 1 is a visual representation of the research journey for this inquiry. The journey was to come up with a Grounded Theory on what ITP libraries under the name of Te Pūkenga libraries could look like in the future. As seen below it was an iterative process as the landscape was evolving.

During the two years of this inquiry, Te Pūkenga was being developed, starting with the then Minister of Education Chris Hipkin's letter of expectation to the ITPs of Aotearoa. Then there were the disruptions to normal everyday service of COVID-19 and the Wintec's development of the Toia Mai programme to meet the expectations outlined in Hipkin's letter. More information about the Wintec Toia Mai project can be seen in [Appendix G](#). This inquiry needed a process that would be flexible and adaptable to change as new information emerged.

4.6 Reflexivity

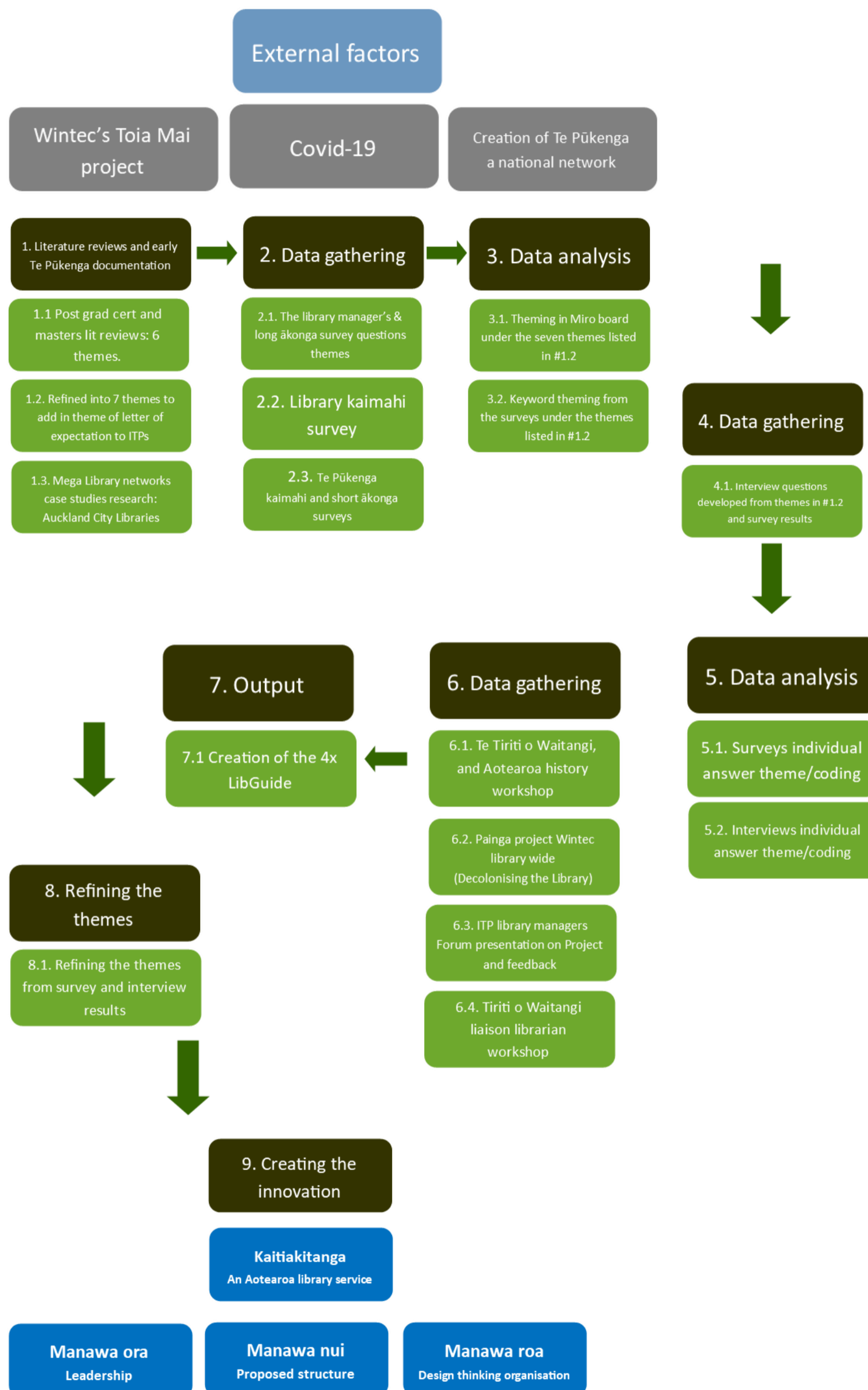
The process that Pearce et al. (2022) explain further insight into the process I followed under the overall TDR umbrella, and through the Grounded Theory process. According to Pearce et al., (2022), there are three phases in this process and this inquiry followed that pattern. First, the inquiry starts with the researcher's original state of knowing. The state of their knowledge on the topic at the beginning of their research. Then along the process of reading and discovering more and at the right time, they have an insight and this rearranges and reshapes the knowledge of the inquiry. This process is to challenge all the researchers preconceived assumptions (Pearce et al., 2022). This stage is called reframing.

This enhances phase two which Pearce et al. (2022) refers to as “Liminal space” (p. 5). This phase is where the researcher spends most of their time. It is an iteration approach and requires time to continually question what the inquirer already knows and how this new information fits into that framework. Does it contradict what the researcher already knows or is it complementary information? This is where Grounded Theory comes into play as well.

The third phase in the TDR process is the formation of insights. “Once an individual has formed an insight, they cannot go back to seeing the problem space from their old mental model and will make use of a new adapted mental model to think about a problem or situation” (Pearce et al., 2022, p. 5). It is when the ideas and concepts that sprang out of their research over time solidify in their minds and become solid ideas and thoughts and change their way of thinking. It brings clarity to their whole research.

Figure 1

Visual Representation of Iterative Research Journey



(Chart created by Author)

The starting point for the Constructivist Grounded Theory processes was the literature review from the postgraduate certificate. The literature review was written to answer the following question: ‘What will libraries look like in an Industry 4.0 world?’ From this question, I produced six themes. These are listed below in Figure2.

Figure 2

Step One on the Research Journey



(Chart created by author)

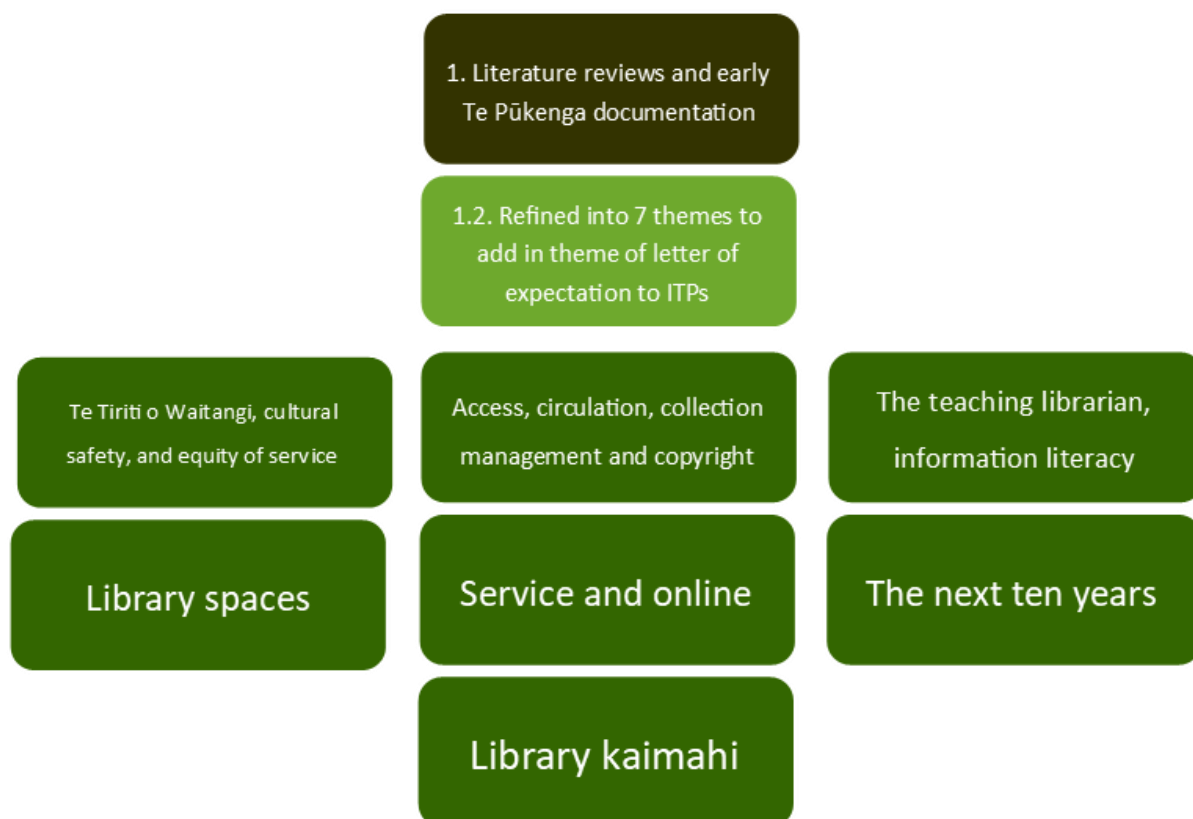
These six themes were a good starting point and represented my standing point and understanding of the topic at that time (Gibbs, 2015). Grounded Theory research should be constructed by both the starting point of the researcher and the views and ideas of the participants in both surveys and interviews as well as the literature review. They were shaped by the literature review but also by my worldviews, my position as a liaison librarian, my background in both academic and public libraries, and my upbringing. To be a good researcher one must move beyond this starting point and begin to incorporate new understandings and knowledge to be able to form innovative ideas.

At this point, I wrote the literature review for this inquiry. In this literature review, I used three of the original themes from the previous report and added decolonising libraries and librarians as teachers as these two topics came out of the original literature review. From here I refined the six topics and made them seven. The seven topics were developed over time by the foundational documents being created by Te Pūkenga over the last two years and both literature reviews. These seven redefined topics are seen in Figure 3.

Then I did some research on some mega library networks that have merged recently. I chose Auckland City Libraries because it was recent and in Aotearoa. Below are the seven redefined topics.

Figure 3

Redefined Topics

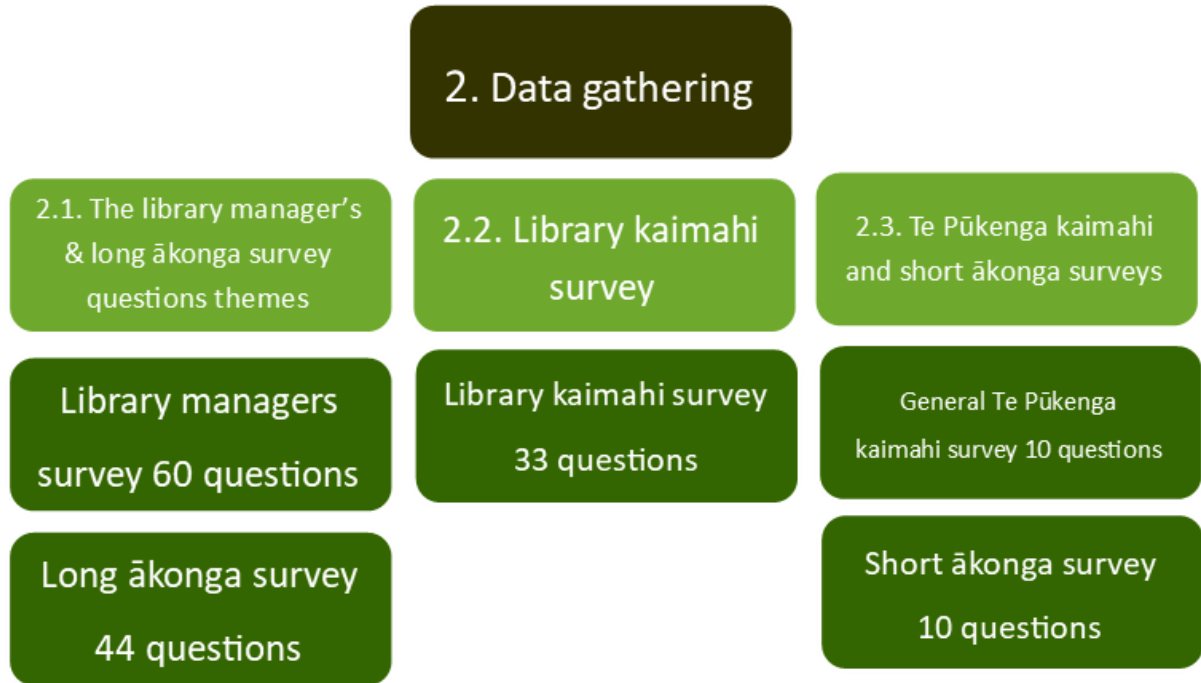


(Figure created by Author)

Once these were decided I began the data-gathering process. Again, this was an iterative and comparative process. It was my first experience creating surveys. In hindsight, I had too many questions as I was so eager to get a clear understanding of what the library managers wanted now that there was the opportunity of Te Pūkenga. As seen in Figure 4 the number of questions dropped as I realised that it was a deterrent to participants, having too many questions as it could feel overwhelming. Out of the 16 managers, only 5 answered the survey. I halved the number of questions for the library kaimahi survey. The first ākonga survey was quite long and I finally got it down to ten questions for the general kaimahi and the short ākonga survey. In saying that, those that answered the long surveys gave rich, thoughtful answers and they have truly shaped the nature of this inquiry. The questions and answers for the surveys can be found in [Appendix C](#).

Figure 4

Data Gathering



(Figure created by Author)

I had five different surveys with a variety of different questions because of the different stakeholder groups. From these surveys I got some good data to start my analysis journey. Again, this was an iterative and comparative process.

Figure 5

Data Analysis



(Figure created by Author)

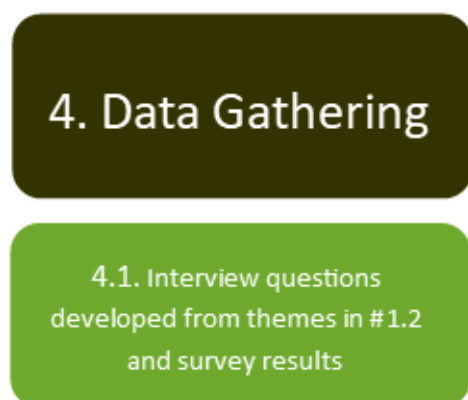
I kept returning to the data and looking at it in different ways to get a greater understanding of the themes, codes, and insights. I coded each question to start the process of understanding the data. The first type of analysis I did was in the Miro board (see [Appendix L](#)) so that I could see it visually. I put all the answers to all the questions under my seven themes to see what came out. Then I divided them into sub-categories such as any with the word ‘more’ and any that mention the library space.

From here I created a table under the themes and extracted keywords from the answers for each question. Clear patterns and themes were emerging such as equity of service, centralisation but still individual libraries, treaty partnership and how that looks, improving access and having greater access to resources and thoughts on the future technology that could be implemented.

Now that I had a good understanding of the data in the surveys (see [Appendix C](#)), I wanted to get more voices as the TDR process requires as many voices as possible. The voices I got from my surveys were internal Te Pūkenga voices. I also wanted to gather the voices of external experts around Aotearoa. The LIANZA office was able to help me with this. They contacted my interview participants and asked if they wanted to be involved. The group they contacted was the TELSIG (Tertiary Education Library Special Interest Group). This allowed me to reach some universities, the public as well as one or two ITP librarians and a private library consultant who has been involved in libraries for much of her career.

Figure 6

Data Gathering



(Figure created by Author)

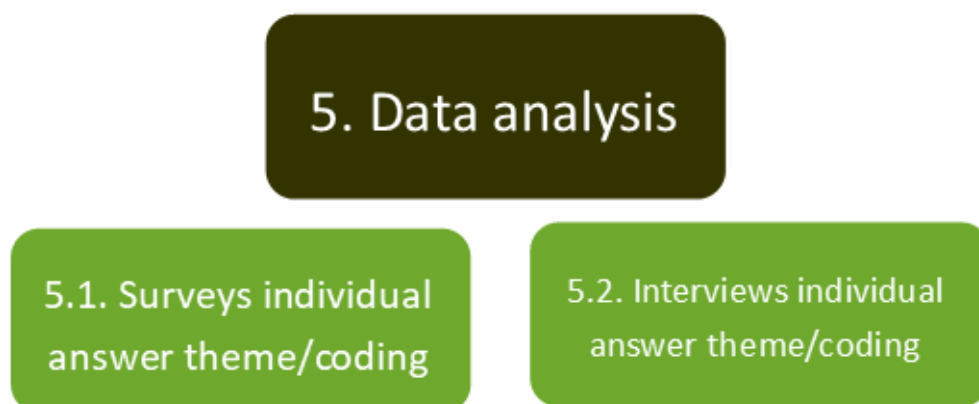
From the codes, themes and insights that came out of my survey data, I came up with ten interview questions for three interviews. These questions were:

1. What do you think the role of libraries in an academic institution is?
2. What are some benefits you see from COVID-19 and library services?
3. What does equity of service look like to you, regarding library services?
4. Do you believe libraries uphold Te Tiriti o Waitangi principles?
5. How would you see centralisation working in an academic library service such as Te Pūkenga?
6. Thinking of Industry 4.0 technology is there anything that libraries should be looking into now?
7. Do you think information literacy, critical thinking and academic integrity teaching are still needed for our ākongā/learners?
8. What should an academic library space look and feel like to you?
9. What would you like to see in an academic library in the next ten years?
10. Thinking about the next 10 years, are there any new job positions that libraries should be considering?

The Grounded Theory approach to research supports the TDR framework. Grounded Theory is continually building on the data from the previous data collected and TDR is reflective by nature. So, it requires the researcher to reflect and sit with the data over time altering the inquiry to add new data if upon reflection it is lacking in the original data or if you feel that you need another set of voices to truly give a holistic view of the project.

Figure 7

Data Analysis



(Figure created by Author)

While analysing the interview data I went back and did another analysis method with the original survey data in a word document table where I focused on each question. Making sure I had got the understanding and insight I needed from a question level.

4.7 Te Tiriti o Waitangi training workshop

At this stage in my research journey, I had the privilege to go to some Te Tiriti o Waitangi training provided by Wintec. It focused on the history of Aotearoa and the four provisions and how our jobs can relate to these provisions. It was another pivot in this research journey. Even though I had asked questions in my surveys and interviews about te Tiriti o Waitangi, I had focused mostly on the 3 Ps. Protection, partnership, and participation. From this workshop, I realised if we wanted to be true partners in the treaty, we had to go beyond the 3 Ps and focus on the principles and the intent and spirit of both the treaties.

Also, during this time, the Wintec library started a project called the *Painga* project. This was the library's attempt to begin decolonising the library service. It focused on collection management, resource creation and the library space. Both ideas from this project and the treaties training has influenced the innovation in this inquiry.

4.8 The ITP Library Managers Forum

I also had an opportunity to present to the ITP library managers forum on where I was at in this inquiry. The ITP library managers are the sponsors for this project. I hope this document can help inform them in decision-making for the merger to Te Pūkenga. It was good to share where I was at in the project and obtain feedback. The main feedback I received was that Te Pūkenga would be divided up into rohe (regions), that they like the collective leadership idea especially because it was linked to Aotearoa’s history and that they like the apprentice programme. Refer to section 6.1.3 for more information.

Figure 8

Data Gathering and Feedback



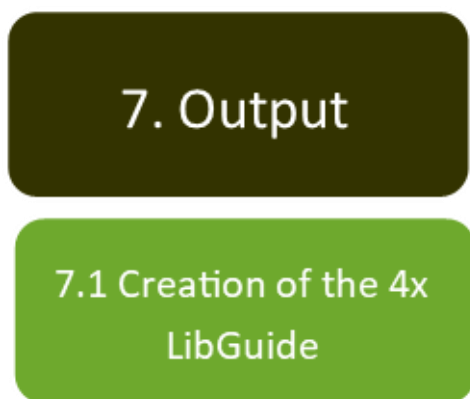
(Figure created by Author)

The final piece of data gathered was a workshop where the liaison librarians took what we learnt about the four principles of both the English and Māori Te Tiriti o Waitangi and relate them directly to our roles. It was a great process to go through each of the principles and see what we could do in the library to uphold the various aspects of the treaty. This can be seen in [Appendix A](#).

The research journey led me to create three library guides (refer to [Appendix F](#)) that became part of the Wintec Librarys' Painga project. These were on the *History of Aotearoa*, *Mātauranga Māori*, and *Pacific Worldview*. A fourth one is being created now under the heading of *Equity and Inclusion*. The first two were created for ākongā to use in their studies especially if they wanted to add aspects of Mātauranga Māori into their assignments. This was then approved by the Māori Achievement Unit. These two guides led to the Pacific Worldview library guide which also shaped the final innovation and then the Equity and Inclusion guide will focus on eurocentric worldview, racism, and inclusion. These can be found on the Wintec library website.

Figure 9

Outputs



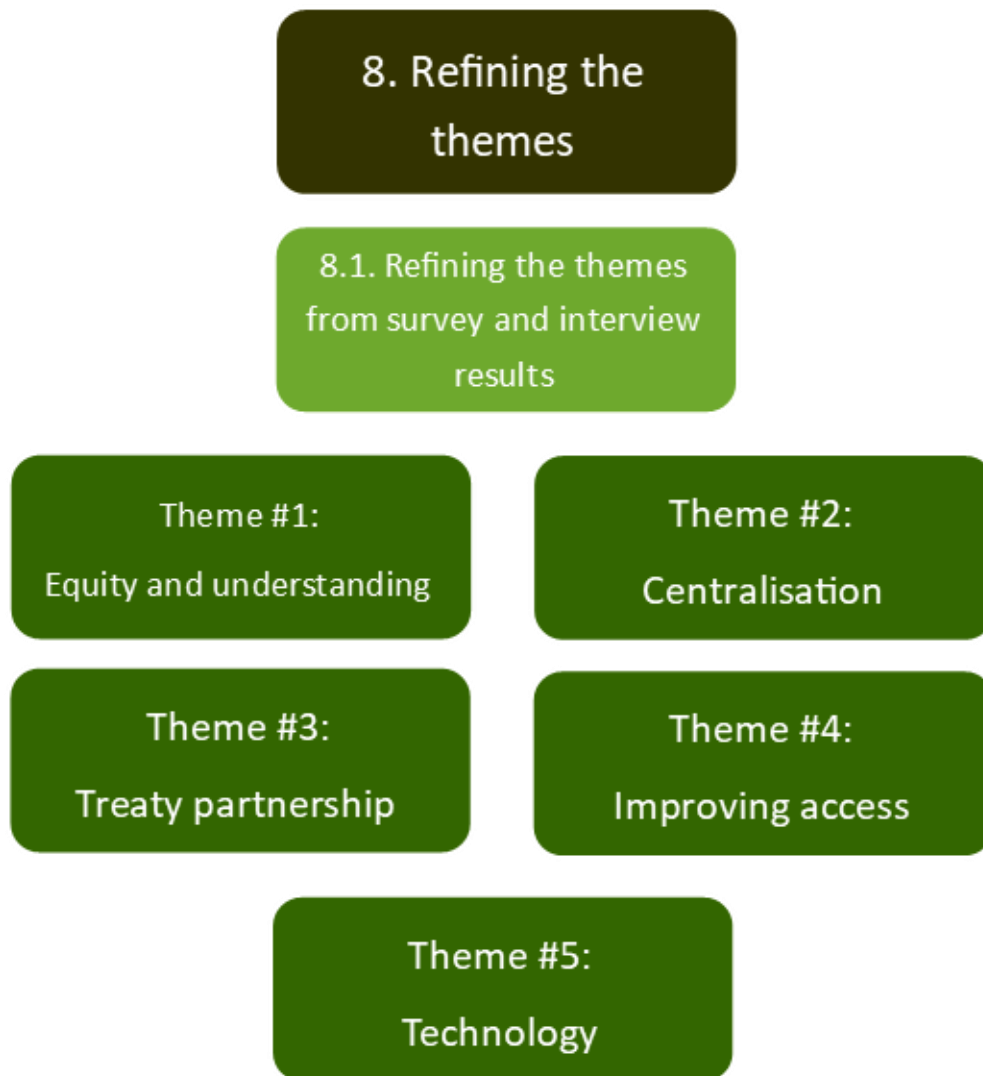
(Figure created by Author)

Out of the all the data gathering and data analysis, I started to refine the themes. The final themes are seen in Figure 10. These themes I feel are the foundation of what any library needs to focus on in Aotearoa and an Industry 4.0 future. On further reflection though there were a few gaps in the data that needed to be addressed. They were Aotearoa-based management styles, refer to [Appendix K](#). COVID-19 effect on libraries, assigning value to libraries, refer to [Appendix J](#) and Te Pūkenga's final organisation and management structure which was finalised in October 2022.

The final five themes that have formed out of all my data and iteratively Constructed Grounded Theory and the TDR lens are as follows in figure 10.

Figure 10

Refining the Themes



(Figure created by Author)

I moved those five themes into the three areas of the library service I am proposing. They were leadership, proposed structure and design thinking organisation. I linked those three headings to the new Te Pūkenga values under an overarching value of Kaitiakitanga, which means guardianship, stewardship, trusteeship, and trustee.

“The three Te Pūkenga values are Manawa nui, Manawa roa and Manawa ora. Manawa Nui which means we reach out and welcome in. This value describes a person or group’s behaviours that embody manaakitanga, humility, patience, respect, tolerance, and compassion” (Te Pūkenga, 2022b, p. 7).

“Manawa roa means we learn and achieve together. This value describes a person or group’s behaviours that embody staying power, resilience, fortitude, grit and doing what needs to be done to achieve the collective goal” (Te Pūkenga, 2022b, p. 7).

“Manawa ora means we strengthen and grow the whole person. The value describes a person or group’s behaviours that embody breathing life into all aspects of another life form” (Te Pūkenga, 2022b, p. 7).

I divided the proposed library system into three parts and placed them under the three Te Pūkenga values as headings and titles for each part. Manawa ora for leadership, Manawa Nui for the kaimahi structure and Manawa roa for the concept of a design thinking organisation.

The five themes that came out of this inquiry are all seen in these three parts. Te Pūkenga libraries leadership (Manawa ora) need to focus on equity and understanding, centralisation, treaty partnerships, and improving access and technology. Te Pūkenga library kaimahi in the structure (Manawa nui) needs to deliver equity and understanding in all their services, centralise to move with the times and create equal access to resources across the motu. To be a treaty organisation, in partnership and have more Māori and Pacific kaimahi, more te reo Māori spoken and seen in the library spaces online and physically. They need to improve access to resources to make sure ākonga gets the best possible education experience from anywhere in the country. Technology needs to keep up with the times and ākonga and other key stakeholders' expectations.

Te Pūkenga libraries need to become a design-thinking organisation (Manawa roa). To keep relevant and meet the needs of their stakeholders and ākonga expectations and needs Te Pūkenga libraries need to stay up to date with technology. Constantly re-evaluating and adapting to innovations. It will have the expertise to create and generate these innovations and ideas from within its kaimahi. Each kaimahi will be part of an innovation or cross-functional group.

Figure 11

Creating the Innovation



(Figure created by Author)

4.9 Mixed Methods

Having described the theoretical framework of Grounded Theory, which I have chosen to work with under the umbrella of TDR, I will now turn to the methods I have used to gather the data and voices. Surveys, interviews, and workshops were chosen as the data collection methods because they all have different benefits and strengths when it comes to data collection.

Interviews were chosen because you can ask more in depth questions. You can also ask further clarifying questions at a point in time and it allows the conversation to go where the interviewee leads it. It is very flexible in its approach (Kothari, 2004). Therefore, this method was chosen for Aotearoa-based library professionals who work outside of Te Pūkenga. They were experts from university, polytechnics, and public libraries. This gave the inquiry a very holistic viewpoint, from many different perspectives. I wanted to make sure they directed the conversation, and it was flexible enough to get thoughts and ideas that I as the interviewer, may not have thought about but because of their expertise, they could comment on.

Surveys were chosen because they could be used effectively across a wide geographical location. The participants can still respond in their own words, it is confidential, and participants can take their time answering the questions (Kothari, 2004). This method was used for library kaimahi and ākonga because I wanted to get as many voices across the whole of Aotearoa as possible and surveys were the best way of doing this.

The workshop method for data gathering was used in the Te Tiriti o Waitangi workshop that my colleagues and I ran to understand how the liaison librarian role fitted with the Te Tiriti o Waitangi principles. The workshop was run on the traditional method of brainstorming. This was a judgement free zone where the team could build on each other's ideas, ask questions, and explore what it means to work under Te Tiriti o Waitangi principles (Martin, 2012).

The software I used to create my forms was Microsoft forms. I chose Microsoft forms as more people have access to Microsoft products. The first survey conducted was completed by the the ITP library managers and sixty questions were a mix of qualitative and quantitative questions. The quantitative were mostly yes, no or rating questions while open-ended questions were used to get

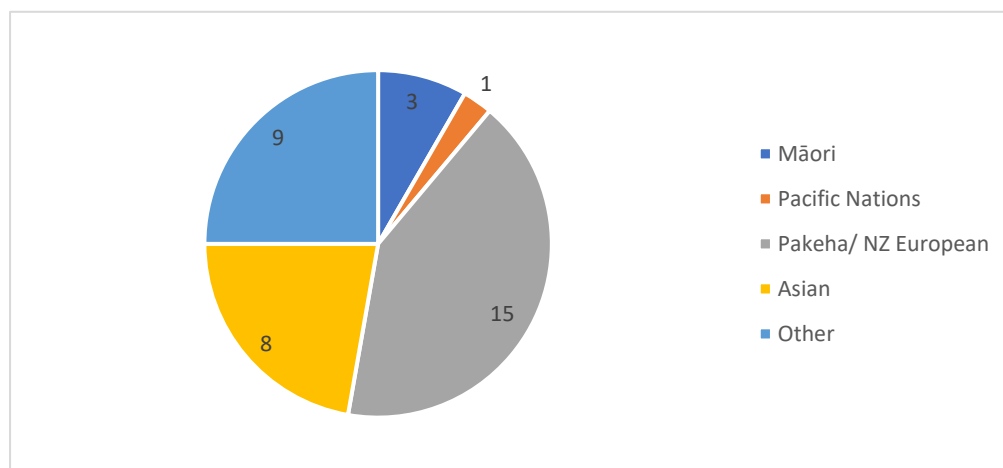
the qualitative data. In hindsight, the survey, because I wanted to make sure I covered the complexity of the issue, asked a lot of questions. The survey aimed to get a comprehensive look at how each ITP library operated now and how the ITP library managers could see Te Pūkenga libraries working in the future. What I found was that all the ITP libraries run vastly differently.

These sixty questions were then sorted into seven themes. These themes were devised from the data literature reviews. As all sixty questions could fit under one of these seven themes and all these themes are important topics in library service. It also made it easier to analyse the data as it was quite extensive.

All avenues of data collection were self-selected and self-identified. Five key stakeholder surveys had 62 entries, three interviews with library professionals (one individual and two group interviews) with a total of eight participants, a how-to apply the Te Tiriti o Waitangi principles to the library workshop and a presentation and feedback from the ITP library managers at their yearly forum.

Figure 12

Demographic of Participants



(Figure created by Author)

The methods of data collecting such as surveys and interviews were chosen to enable the biggest number of voices to be heard across different organisations and the motu. I appreciate LIANZA

(Library and Information Association of New Zealand Aotearoa) for helping me with communication across the wider library community.

The surveys that were created collected both quantitative and qualitative data. The qualitative data gave greater meaning to the quantitative data as there were limitations to the survey questions and the number of participants who chose to be involved.

4.10 Reflective Interviewing

For each interview, I asked the same ten questions, but the second group gave rich detail and the conversation naturally flowed between them. It became a self-directed conversation and only half the questions ended up being answered. They were answered in such thoughtful detail that could only be achieved by letting the conversation go where it did. In the process, I used reflective interviewing techniques.

I wanted to understand how each of these library professionals from outside Te Pūkenga saw and viewed the change and what they believed was important to focus on. I wanted to let the expert highlight their expertise and who they are. The more relaxed an interviewee is, the more authentic they are and will share more of themselves in the interview process (Roulston, 2013, p. 52).

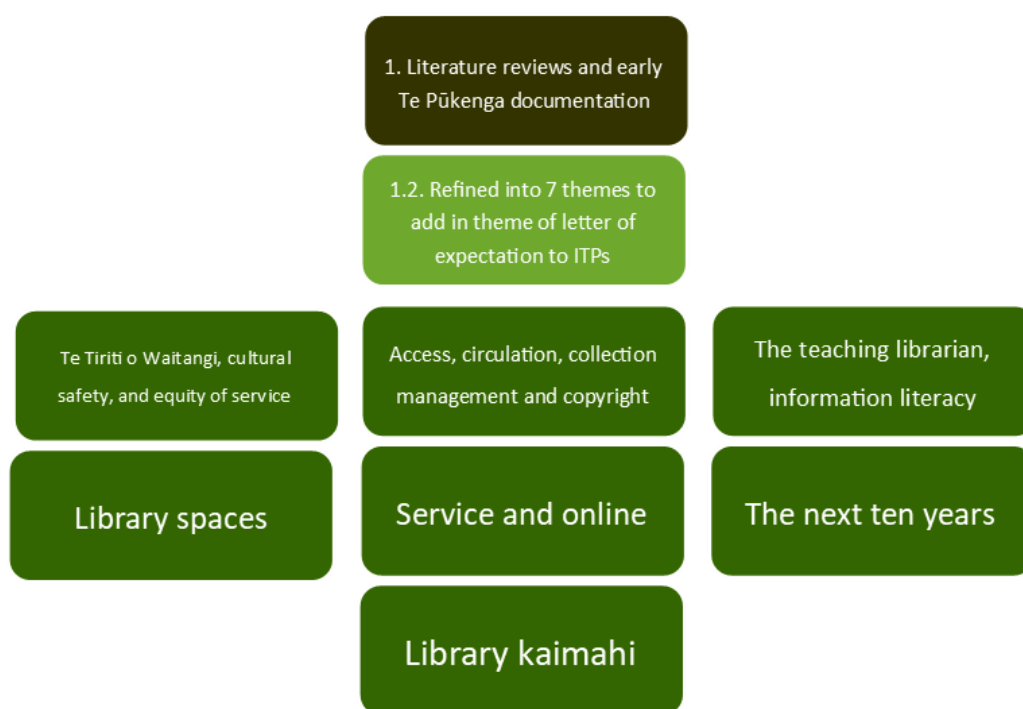
As seen, many voices using several different methods and tools, were collected to be a part of this inquiry. It was a very iterative, intuitive process where each step was decided by a reflective process of analysis of the steps before. The next section shows the findings and analysis of the surveys and interviews and the key themes and insights that came out of them.

5 Findings, Discussion and Analysis

This inquiry used many different avenues to gather the voices of the stakeholders as seen in figure 12 in the previous section. Five self-selected, self-identified key stakeholder surveys had 62 entries, three interviews with a total of eight library professionals (one individual and two group interviews), a workshop on how to apply the Te Tiriti o Waitangi provisions to the library and finally a presentation and feedback from the ITP library managers at their 2022 yearly forum.

Figure 13

Redefined Topics



(Figure created by Author)

5.1 Surveys

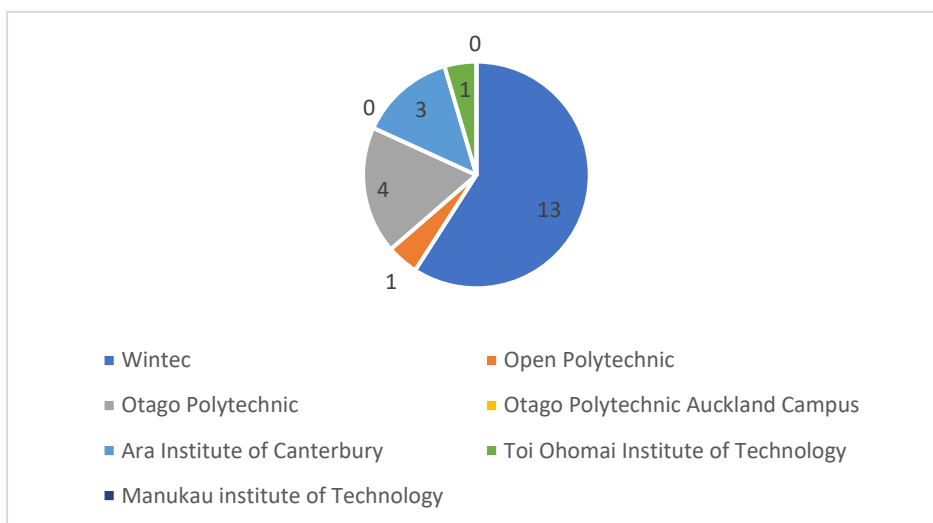
There were five individual surveys covering five different stakeholder groups. Altogether there was a total of sixty-two survey participants. The four different stakeholder groups were library managers, library kaimahi, ākonga and Te Pūkenga kaimahi.

The two ākonga surveys captured a limited range of data. The long ākonga survey was Wintec based. It was the second survey I conducted and was still learning the art of crafting survey questions. I thought I would trial it with the Spatial Design and Architectural Design ākonga from Wintec first as they had just finished a project on designing a new academic library. There were seven respondents, and this survey was more in-depth.

The short one was also limited because it was self-selected and was only picked up by sixteen ākonga. Again, it was focused on Wintec as seen in the graph below in figure 14. The aim of the surveys conducted was to hear the voices of the ākonga because they are our main stakeholder group. The libraries' main objective is to be ākonga centred and aim to deliver their library needs. Therefore, it is important to hear what they want in a library service rather than assuming to know what they want.

Figure 14

Breakdown of Subsidiaries that Ākonga Participants are Based



(Figure created by Author)

These surveys are limited because of the small numbers that chose to complete the surveys as compared to the whole ākonga cohort which is about 205,328 a year for the whole of Te Pūkenga (Te Pūkenga, 2022a). They were also very Wintec-focused and had many post-graduate ākonga. This may be because they are very invested in their studies. Library services and resources will have an

impact on how they achieve their studies. For a full breakdown of ākongā statistics refer to [Appendix B](#).

The other three surveys were of the other major stakeholder, kaimahi. One targeted directly the ITP library managers which got five results, one targeted library kaimahi which got twenty-five results, and one of all other Te Pūkenga kaimahi which got thirteen results. The reason they were all different is that I wanted to target certain questions to library kaimahi to get their expertise and knowledge on certain areas which would have made no sense to people working outside the library.

The other aim of this research was to hear the voices from all over the sixteen Te Pūkenga subsidiaries. I wanted kaimahi to feel safe and completely anonymous while answering the information so I made the question to identify which subsidiaries you worked in optional. This made it harder to figure out if the survey got a wide representation from all the subsidiaries.

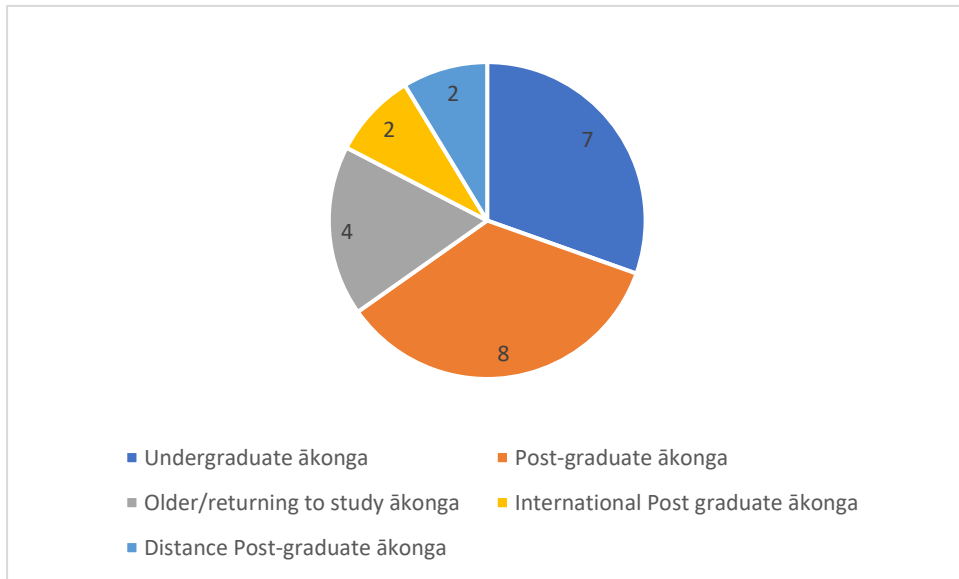
Twenty-six kaimahi participants chose to self-identify as being based at the Wintec subsidiary and twenty participants identified as working in other subsidiaries. Eight participants chose not to identify where they were from. This question was not asked in the library managers' survey as it would have been too easy to identify the identity of the participant.

Future research could be done that gets a wider representation from all subsidiaries. This further research could be focused on either ākongā or just on kaimahi. To get more of a narrow look into what these stakeholders want to see in their library service.

Within each stakeholder group, there are also sub-stakeholder groups. I asked the ākongā what level of study they were completing. I asked the general Te Pūkenga kaimahi what type of job they held. The breakdown of ākongā is seen in figure 15 and the breakdown of kaimahi is seen in figure 16.

Figure 15

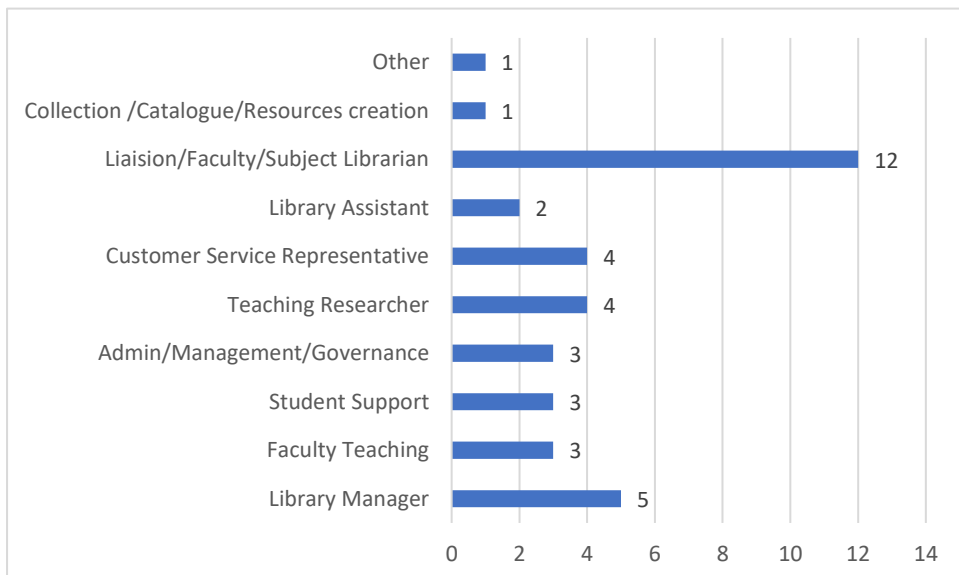
Breakdown of the Level of Ākonga



(Figure created by Author)

Figure 16

Breakdown of Job Titles for Te Pūkenga Kaimahi



(Figure created by Author)

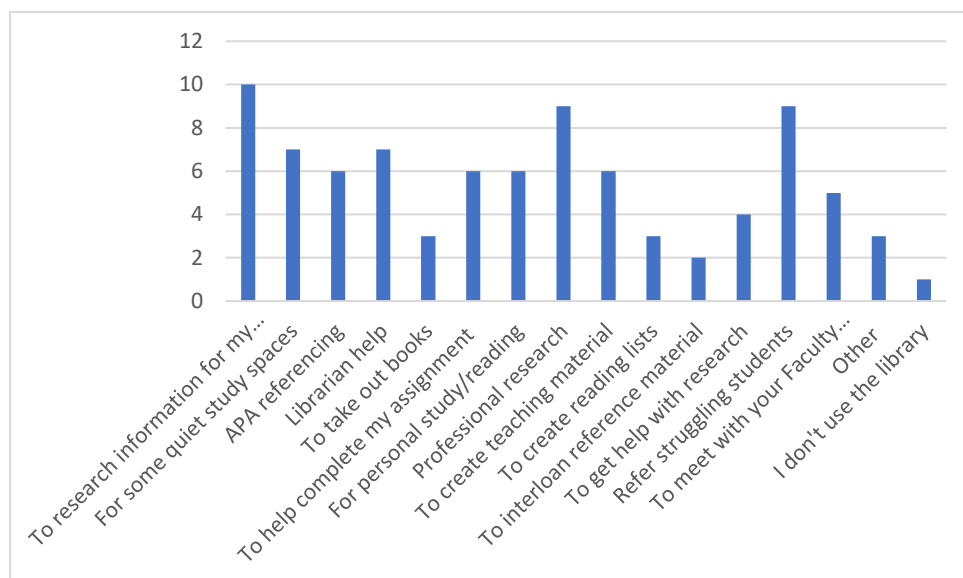
Figure 16 shows the percentage breakdown of kaimahi roles that filled out the survey. This is a good range of kaimahi that was surveyed and the distinct roles across most of the organisation. The limitation of this data is that it considers only thirty-eight voices out of the about 8018 voices of kaimahi of Te Pūkenga (Te Pūkenga, 2022a). The other limitation is that these kaimahi answered three quite different surveys. At the time they were written to match the different stakeholder groups but it means that the findings will be different with different levels of depth from each one.

The first few questions were about getting to know the participants, who they were, and where they came from. The next question to the ākongā and the general Te Pūkenga kaimahi was what they used the library for. To get a picture of the kind of usage each group had with the library service at their subsidiaries.

As you can see in figure 17 there are many reasons why ākongā and kaimahi use the library. *'Professional research,' 'to research information for my assignments,* and *'to refer my students that are struggling'* were the most ticked categories combined for both kaimahi and ākongā. This indicates to me that Te Pūkenga stakeholders value the resources and the role of libraries being the place to find information for their research and assignments.

Figure 17

Breakdown of why Ākonga and Kaimahi use the Library



(Figure created by Author)

Overall, there are some limitations to the breakdown of my participants. The main aim of my research is to hear the tapestry of the voices of Te Pūkenga’s stakeholders, and I believe I have achieved this in a very general way. More in-depth research into each stakeholder group would be beneficial for future research projects.

5.1.1 The Treaties of Waitangi, Cultural Safety, and Equity of Service

All five of the surveys asked questions about either equity, Te Tiriti o Waitangi or whether participants felt culturally safe in their libraries. I wrote the surveys before I went to Te Tiriti o Waitangi training offered by my institution to further kaimahi knowledge of the history of Aotearoa. So, my questions are based on the three Ps, protection, partnership, and participation. If I could do it again, I would base it on the provisions of both Te Tiriti o Waitangi as I now understand the three Ps is a watered-down version of the treaty. I must go with the information I gathered, and it is a good start as many New Zealanders understand the three Ps.

Cultural Safety

General Te Pūkenga and ākongā surveys

For general Te Pūkenga kaimahi and the two ākongā surveys I asked two questions about cultural safety, and I have amalgamated their answers together. One was on whether they felt culturally safe at their library and the other on what they thought that looked like to them. This section of my survey findings is a mixed method approach.

First, all the general kaimahi and ākongā survey participants answered *yes* to the question do they feel culturally safe in their institutional library. From that question they answered what they thought cultural safety looked like to them. The answers focused on *space* and *kaimahi*. The space needs to reflect the Māori culture and two participants specifically mention the displays they see in libraries that help this. Also, one participant mentioned being bilingual on all the platforms (physical and online) and ways of finding information such as Māori subject headings made them feel culturally safe.

The next thing mentioned by the general Te Pūkenga kaimahi is the library kaimahi. One mentioned '*friendly responsive staff*' and another mentions that:

Otago University has Māori liaison staff to support Te Ao Māori. While it is a Western institute they are attempting to better serve Mana Whenua and grow awareness of the decolonisation that needs to occur within libraries.

All libraries have been looking with interest at the development of five Māori library positions that the Waikato University library posted in September 2022. This was mentioned in the interviews conducted for this inquiry. Libraries in Aotearoa will see more of these positions as they start living up to the Te Tiriti o Waitangi principles.

Decolonisation is a major theme coming from all the information sources in this inquiry. One way to do this which is represented in both the literature, previous research, and the surveys I conducted is this need for more Māori librarians and support learning of librarians fluent in te reo Māori and spaces that reflect Te Ao Māori.

From the ākongā survey, the two same themes came through. The space (both physical and online) and the kaimahi. The main keywords and concepts that are used regarding the space are, *“embraces all different people”, “being recognised for who I am and treated with respect,”* and *“a safe and quiet place to sit without any discrimination.”* It is mostly about the atmosphere and how space makes someone feel that it is important to our ākongā.

One of the major components that create this atmosphere in the library space is the kaimahi. Ākongā say what makes them feel culturally safe is *“friendly staff,” staff and ease of finding the information I need,”* and *“there is a lot of diversity.”* These ideas mirror what the general Te Pūkenga kaimahi said in their survey about what makes them feel culturally safe.

Three comments that stood out from the ākongā survey were *“I guess largely because it's all I've ever known in terms of Library space,” “Never really mattered “,* and *“Being pakeha, the Library is a familiar space that has been central to a western world view. It is a service that is ingrained in western culture.”* There is a sense of familiarity for pakeha and those of European descent. This also needs to be acknowledged but familiarity does not also mean it was a good familiarity, but familiarity does make people feel safe. I think as the culture of society changes to embrace more diversity the sense of familiarity will still be there but in a different form and more groups of people will feel a library to be a familiar place rather than only those of European descent.

The final comment from ākongā on cultural safety was *“No one talks (sic) to anyone in the library”*. I could not decide if this was a positive comment or a negative one. On one hand, it is sad because the library staff should have made some form of greeting when a patron enters the library and on the other hand people go to a library to get some peace and quiet. Especially if they need to study or write an assignment and want to go somewhere where they will not be disturbed.

For the longer ākongā survey I asked directly about the Te Tiriti o Waitangi and the three Ps and whether they believed their library upholds the principles. Out of the seven, four said *yes*, one *no* and two *maybe*. The next two questions asked for more information from those that answered *no*.

they need to be able to invite people in, and designed so people want to stay and encourage communities within their users

I wonder if we need to look beyond just the three P's, and instead use the Māori concepts in te reo with English alongside

Te Pūkenga hopes to be an organisation that is truly living up to its Te Tiriti o Waitangi responsibilities as a treaty partner. Both these comments are useful for Te Pūkenga libraries to consider. Ākonga want Te Pūkenga libraries to be more inviting and designed as places they want to be, a place different communities congregate, and we need to move beyond the three Ps to becoming an engaged treaty partner.

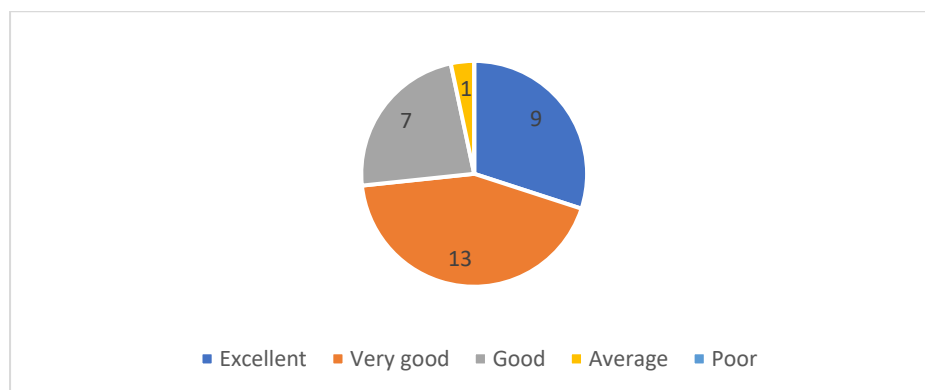
Equity of Service

Library Managers and Library Kaimahi Surveys

For library managers and library kaimahi, I asked two questions and I have combined their answers together. One was a question on equity of service and the other on upholding the Te Tiriti o Waitangi. I asked the library kaimahi to rate their equity of service. Most kaimahi and managers said that they thought their equity of service was 'very good.'

Figure 18

Equity of Service



(Figure created by Author)

After the equity of service question, I asked an open-ended question to obtain more information about what respondents believed equity of service looked like to them. It shows a clear picture of how Te Pūkenga libraries view equity of service.’ Two key quotes stood out in this area.

Moving away from a euro-centric model of service delivery, increasing the numbers of Māori and Pacific staff, increasing staff understanding of oritētanga, biculturalism, tikanga, te reo Māori, indigenous knowledge, matāuranga Māori. Continuing to develop a no-barriers philosophy and flexible approach to service delivery. Our libraries need to be comfortable, welcoming spaces, with professional support on hand.

Having resources and support available that recognise diverse learning needs, e.g.: speak-to-text software; information presented in a variety of mediums; culturally welcoming practices (e.g., use of Māori, Pasifika greetings, karakia, incorporation of whakataukī/imagery in resources when appropriate); communication protocols that benefit neurodiversity, e.g., emails avoid black text on white, use a large font, clear headings etc. Avoid unnecessary wordiness/library-speak.

Both quotes show a clear understanding of what ‘equity of service’ could look like and what we as a library service could strive for in Aotearoa. They also give some practical ways of doing this within a library setting.

From all the answers I then produced a list of keywords and phrases that sum up the comments given by library kaimahi. I then divided up the keywords and put them into four codes. These were: Who the ākongā classed in the priority groups, what equity looks like, what can library kaimahi do and what our services are.

Library kaimahi believes Te Pūkenga libraries should have a clear focus on their priority ākongā. These are Māori, Pacific peoples and ākongā with neurological or physical disabilities.

Library kaimahi think there should be more *remote access*, and *services within a te Ao Māori framework*, providing culturally inclusive services and services available across a variety of formats (in-person, online, self-directed, asynchronous...).

Te Tiriti o Waitangi

Long ākongā survey

In the long ākongā survey I asked the seven architectural and spatial design students if they thought their institutional library upheld Te Tiriti o Waitangi. As seen in the pie chart below the students were divided. Four said *yes* and the other three said *no* or *maybe*. This shows that the seven ākongā were divided on whether their library uphold Te Tiriti o Waitangi.

Figure 19

Upholding the Te Tiriti o Waitangi

42. Thinking of all the interactions you have had with your library do you feel they uphold Te Tiriti o Waitangi principles of protection, partnership and participation? (0 point)

[More Details](#)

● Yes	4
● No	1
● Maybe	2



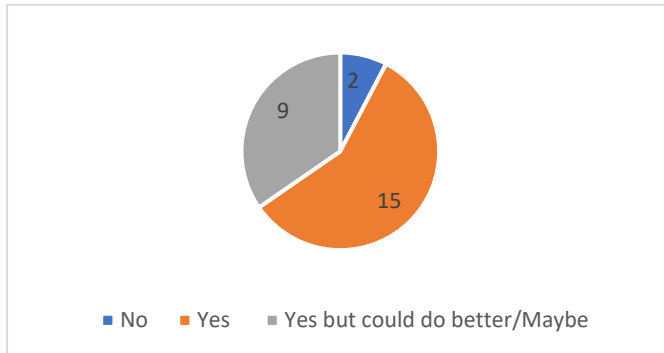
(Figure created by Author)

Library Kaimahi and Library Managers survey

Library kaimahi and managers had a similar result when asked if they believed their library upheld the Te Tiriti o Waitangi. More kaimahi thought that their library did uphold Te Tiriti o Waitangi. Eleven kaimahi said *no* or *yes but could do better*. I think further research could be done on what people think upholding or honouring Te Tiriti o Waitangi means and looks like in practice.

Figure 20

Does the Library uphold Te Tiriti o Waitangi



(Figure created by Author)

The library manager's survey went on to ask about the three Ps (Partnership, protection, and participation) and their understanding of what they meant regarding library service. Below is one response from the library managers' survey from the partnership question:

It is seen in the way that our libraries demonstrate the special place of Māori culture within Aotearoa - examples are naming study rooms after special local geographic landmarks, Māori art and design incorporated into physical spaces, and having special Māori collections of resources and taonga. It is seen in the way that we observe tikanga, and the way that Māori and Pākehā collaborate on the development of services and improvements.

These are a good starting point in understanding what it means to be a treaty partner. The one that stands out the most is:

“If Partnership is defined as recognising and respecting the status and authority of Māori to be self-determining concerning library resources, language and the culture within the Library and involving Māori at all levels of decision making then no this is not seen in _____ library as we do not have staff identifying strongly as Māori and we do not have a position responsible for ensuring the Māori voice is consulted and heard”.

Out of all the answers received, this is the closest that answers that question. I have altered the answer slightly as it identifies the library in which the participant worked so have blanked that out to protect privacy.

The other answers are all important in the process of becoming a library service that upholds Te Tiriti o Waitangi. Services that need to be seen in the library service in the next ten years.

Reo subject headings; examples are naming study rooms after special local geographic landmarks, Māori art and design incorporated into physical spaces, having special Māori collections of resources and taonga. It is seen in the way that we observe tikanga, and the way that Māori and Pākeha collaborate on the development of services and improvements.

These are great practical ideas that can be implemented easily in the next ten years as Te Pūkenga libraries travel on this journey to understanding what it means to be a treaty partner.

The next P is protection. I think “Protection” is understandable to libraries as it relates to one of the core purposes of our role, the curation of resources.

It is seen in the way that Māori resources and taonga are valued and cared for. It is seen in bilingual signage and promoting the use of te reo by staff and students. Some examples of the way principles are seen in my library include: It is seen in the way that Māori resources and taonga are valued and cared for. It is seen in bilingual signage and promoting the use of te reo by staff and students.

This answer clearly shows that we as librarians are beginning to be aware of our role in the protection of Māori taonga, mātauranga Māori and te reo Māori. Over the next ten years, re-evaluation of our collection management policies will better reflect our responsibility in this area.

Participation is the final P. It is a question we as a uniquely Aotearoa library service need to continually ask ourselves from this time onwards. Do we truly understand what this should look like in a library context?

It is seen in the way that Māori staff and students are involved in planning library services and the voice of Māori staff and students is considered in planning improvements. It is seen in the way that our library staff are seen as mentors and role models in the bicultural approach we make to delivering our services including building relationships, respecting, and valuing, every individual's unique identity and background, working together collectively and striving for excellence in this area. Every library staff member has a professional learning goal based around oritētanga and Te Tiriti o Waitangi.

Going forward library kaimahi professional development will have to incorporate how their work links into honouring the four provisions of both the treaties of Waitangi.

Finally, I asked the library managers if their institution was involved in a project to provide equitable service to help with the completion and retention of their priority ākongā. I was wanting to see if other institutions were running similar programmes to Wintec's Tōia Mai programme as mentioned in [Appendix G](#) of this inquiry. All library managers that answered the survey responded that they did.

5.1.2 Library Spaces

Stakeholders of Te Pūkenga libraries have a lot to say about the library space. This section will only relate to fifteen of the subsidiaries as the Open Polytechnic of Aotearoa is based mostly online. Their interactions are with ākongā and kaimahi based around the country.

Library Managers and Library Kaimahi survey

First, I wanted to know what the library managers' thoughts are on help desks, reference desks and opening hours of their physical space. Five out of the five library managers said they wanted the library open *Monday to Saturday*. Four out of five thought the libraries needed to be open on *Sunday*. Two of the five thought there could be *shorter hours in the summer and midterm break*.

The next question the survey asked was if the current kaimahi levels of their library would allow a reference desk service. Three out of the five library managers said *yes* and two said *no*. Then the survey asked if they thought there was still a need for a reference desk service at their library. One said *yes*, three said *no* and one said *maybe*. Then I gave them a chance to comment.

Depends on need and whether you are meaning a physical or virtual desk. Ideally, a Librarian should be available Monday to Friday either face-to-face or virtually. Perhaps 12 to 4 Saturday or Sunday.

Ākonga survey

The long ākonga survey asked about study spaces at their subsidiary library. First, if they had used a study space, of which five answered *yes* and two answered *no*. Then they were asked about asking for help from a library kaimahi at their subsidiary library. Four answered that they had some sort of help and three answered *no* they had not. To follow up the question was asked if it was helpful. Six answered *yes* and one *no*.

Then participants were asked 'in regards to library spaces is there anything you would like to see in your institutional library that they don't currently have'. Four participants commented on this question.

More interactive learning and collaborative spaces

There were limited single-study places

Little nooks and crannies, places to hide away from everyone and read

No, I like that you have spaces we can book. Presently our classrooms are quiet places during off-peak hours so in the absence of that I would be using the library more

5.1.3 Access, Circulation, Collection Management and Copyright

The next main category addressed was access, circulation, collection management and copyright. I wanted to find out what the ākonga and general Te Pūkenga kaimahi thought about our resources and access to them.

Long ākonga survey

The first question in this category asked the seven architectural and spatial design ākonga if they had been to their institutional library. All seven answered *yes*. Then I asked if they had borrowed a physical book from their institutional library. Five said *yes* and two said *no* they had not. Next, I asked if they had used the library catalogue to find a physical book and three said *yes* and four said *no*. Then, I asked them about the functionality of their institutional libraries catalogue. One participant said *excellent*, two said *very good*, two said *good* and two said *poor*. For the two that answered *poor*, I asked for some more information. One noted "*poor layout*" and the other said, "*there were technical issues with the system.*"

Next, I asked them a *yes/no* question on whether they were happy with the current selection of print material (books/physical journals) available. Three said *yes* and four said *no*. The question moved on to the usage of ebooks in the institutional libraries' collections. First, I asked if they had used the eBook collection. Three answered *yes* and four answered *no*. Then what they thought of the functionality of the eBook. Three said *yes* it was easy to use, two said *no* and one said *not applicable*. Again, I asked for more information from the two that said *no*. One answered, *Just not the same as a book - hard to navigate*.

Library Kaimahi survey

A similar question was asked of the library kaimahi. In their survey, I asked how they would rate the availability of the books and ebooks in their institutional libraries' collections. Five answered *excellent*, ten answered *very good*, and seven answered *good*. None answered *poor* or *very poor*.

Long Ākonga survey

Next, I wanted to find out what stakeholders thought of their library's database collections. The long ākonga survey asked if they had used the database collection at the institutional library, five answered *yes* and two answered *no*. I asked about the functionality of the databases they used. Two answered *excellent*, two *very good*, two *good* and one *not applicable*. Then I asked if they were happy with the choices of databases available at their institute library. All seven answered *yes*.

Library Kaimahi survey

Again, I asked the library kaimahi to rate the availability of their databases. Eight said *excellent*, eight said *very good*, five said *good* and one said *average*. All three surveys that mentioned collections of books/ebooks and databases mostly said that they thought their collections were excellent or very good. In the future, a survey specifically targeted at Te Pūkenga researchers would be a good idea as they are a major stakeholder of ITP libraries but their voices were lost in the general Te Pūkenga kaimahi survey.

The next set of questions was only asked for library kaimahi as they relate to the inner workings of a library. First, I wanted to know what library kaimahi thought of the library management systems (LMS) that they are currently using and second if they had preference of an LMS that would suit a national library service.

Library Manager's survey

I asked the library managers how they rated their LMS. Two said *excellent*, two said *very good* and one said *average*. Then I asked their opinion on which LMS should be implemented for all Te Pūkenga libraries. Four said *Koha* and one said *Liberty*. This was followed with a caution and that they couldn't answer the question as they needed to do an assessment process first. "... *thorough assessment process to determine the best system for Te Pūkenga learners and staff,*" and "*it's difficult to answer question 17 fairly as we haven't done any recent analysis of LMS*" as commented for the question if there should be any other system considered that I did not mention in my supplied list.

Library Kaimahi survey

The library kaimahi survey asked their opinion on what LMS should be implemented in all Te Pūkenga libraries. Three said *Ex Libris Alma*, ten said *Koha*, one said *Sierra ILS*, one said *Liberty* and three participants said they did not know. When asked if they thought any other system should be considered a participant said *Folio*. One mentioned, "*Liberty has great features and if not for Koha being bilingual that would be my preference.*"

Library Managers survey

The next category I asked library kaimahi to think about is collection management and collective buying power and how they would like to see that work over the whole country. Responses to the library manager's survey included....

National database license agreements improve equity across the libraries and keep costs and administration low. Centralised purchasing but with some ability to say what our library needs

Think minimal benefits from centralisation would be more than offset by a loss of regional autonomy. The decision-making should be made in the region where the learners are.

From these results, you can see that there are two schools of thought. Those that think centralisation would lose the regional authenticity of each library and those that think it will benefit ākongā and create a more equitable service for all ākongā. Joining forces will give us a greater level of service but there still needs to be a regional identity and grass-root service to individual ākongā needs.

The same major concern is evident from the library kaimahi survey and that is the loss of the regional identity of each subsidiary library but many can see the potential and opportunities that can come out of being one organisation.

I think not having centralized purchasing for databases and many other e-resources would be to miss out on the main (only?) financial advantage Te Pūkenga has for libraries! It would be stupid to still have 16 ITPs all negotiating separately for the same resources. For one-off purchases, I think a centralised budget but not necessarily centralised staffing - so individual campuses/regions can tailor their collections (esp. physical) to their own needs - different ethnic representation on campus, different Iwi records, different local focuses for some programmes...

The survey also asked library kaimahi what systems they could see as centralised. Three said *collection management*, three said *acquisitions*, four said *systems*, two said the *instructional design for educational resources*, four said *records management* and four said *cataloguing*. When asked if there were any other services that could be centralised one participant mentioned *copyright*.

I have recently joined a cross-centre group called ITP subject librarians. In recent discussions with other ITP subject librarians, it has come to my attention that copyright is a core task of some libraries. Librarians in these ITPs make sure the institution is only using copyright-compliant resources on their electronic platforms. This I think is a great task that librarians can offer the institution and can mitigate the potential of getting fined for copyright infringement. It also shows that the institution is committed to being ethical in its use of information and only uses the best information in its resources to ākonga. Te Pūkenga Libraries service will need to be consistent across the whole institution.

5.1.4 The Teaching Librarian, Information Literacy and Embedded Support

The next category informed by the survey results is the teaching librarian, information literacy, embedded support and academic support. Information literacy is particularly important to the academic librarian. We see it as an important set of skills that ākonga need to complete their studies successfully and that they can take out into industry.

Library Manager's survey

The library manager's survey asked if their library had an information literacy policy. An information literacy policy is a policy that prioritises information literacy at an institution. One library manager out of the five surveyed said that they had an information literacy policy. I then asked if they had an equivalent policy. Three said *yes* they did and the other two said that *the library and learning support liaison team or their faculty librarians looked after information literacy*. This shows that some ITP libraries had separated out the teaching of information literacy from the library.

The survey then asked them to rate the quality of the information literacy that was being taught in their institutions. Two answered *excellent*, two answered *very good* and one answered *good*. None answered *average* or *poor*. The library managers and library kaimahi were asked if they still thought information literacy, critical thinking and academic integrity were still important to be taught in higher education. All twenty-five participants said *yes*.

The survey also asked library managers to elaborate on why they think teaching information Literacy and critical thinking is still important. Information literacy skills as very clearly demonstrated by the library managers' survey are essential skills that all graduates need to take with them into industry.

The ability to find information and use it ethically is an essential skill for all taura while studying. In addition, having strong information literacy skills is an important employability skill and will become increasingly so in future. I think that employers value employees who can exercise good judgement in seeking information and applying it to their work. (An area of potential future research to validate this). It would be great if Te Pūkenga Library staff could work together to create an Information literacy badge for taura, as well as continue to embed information literacy skill development into the curriculum, and explicitly state information literacy as a graduate outcome.

From here it was asked what types of library information literacy classes their library offered. Four said *research skills*, four said *finding quality resources*, four said *referencing*, three said *reference management systems*, one said *research depository training*, one said *copyright information* and one said *none of the above*. In the comments one said “*We post about research skills and referencing on talk channels in online courses*” and “*would also do copyright to a basic level if required*”.

Library kaimahi were also asked the same questions. Eighteen said that they taught *research skills*, seventeen said *finding quality resources*, eighteen said *referencing*, eight said *reference management systems*, five said *research depository training*, eleven said *copyright information* and one said *none of the above*. In the comments area, there were four comments about extra skills that were taught. One mentioned the differences of the Open Polytechnic library because they cater to mostly online ākongā.

Library kaimahi Survey

The next question directed at library kaimahi was whether or not they incorporate ako teaching and learning styles into their classrooms. “The concept of ako describes a teaching and learning relationship, where the educator is also learning from the student and where educators’ practices are informed by the latest research and are both deliberate and reflective. Ako is grounded in the principle of reciprocity and also recognises that the learner and whānau cannot be separated” (Ka

Hikitia, 2008, as cited in Te Kete Ipurangi, n.d., para. 2). Six kaimahi answered *yes*, one answered *no*, six said *their role did not involve teaching* and four said *they didn't know*.

Embedded support is an integrated service that librarians in an institution offer, that moves librarians out of the library and into the places where the ākongas are, such as classrooms. To get a clearer understanding of what embedded support meant to library staff in Te Pūkenga I asked them to define it. Many answered that they did not know what embedded support was and many had different interpretations of what it meant to them. Below are two definitions that were provided.

Ideally, (for me at least) this would mean being part of the programme and having Library information literacy classes planned into the module at appropriate times during the semester. However, in reality 'embedded Library support' can mean a range of things.

I see this as subject/liaison Librarians working closely with kaiako and ākongas to ensure that ākongas have the skills and knowledge to use library resources. Ākongas also get to know their subject librarian and feel confident and comfortable when contacting them for more help.

To move forward it would be useful for all Te Pūkenga libraries to get a joint shared understanding of what embedded support is and looks like at their institution.

Te Pūkenga General Kaimahi and Ākongas surveys

This question was also asked in Te Pūkenga general kaimahi and ākongas surveys if they had met their liaison/academic/faculty/subject librarian for their faculty or department. I asked the ākongas if they had met their librarian for their centre. Eleven said *yes* and five said *no*. The survey then went on to ask what they use the librarian support for. Four said *help with the library databases*, eight said *finding a resource*, six said *APA help* and four said *research help*. Then it asked if they thought the library was useful for their studies. Thirteen said *yes*, one said *absolutely*, and one said *no*.

For the long ākongas survey I asked if they had made a one-on-one appointment with their librarian. Four said *yes* and three said *no*. I asked what help they were looking for and one said *research skills*, three said *finding quality resources* and three said *referencing help*. When asked what level of satisfaction they got from their librarian. Five answered *yes*, and two answered *no*. The reason for one of the no's was that they received "*no answer*." I am assuming it was when they made contact.

Finally, the general Te Pūkenga kaimahi survey participants were asked if they had met their librarian for the area. Eight answered *yes*, three answered *no* and two answered *not applicable to their job*.

The limitation of this information is that the sample of participants is very small and requires more diversity. It is also more likely that those that chose to answer the survey are users of the library service already and they are not the ākonga and kaimahi that have never used the library or know what their services are.

The final group of questions in this section were directed at the long ākonga survey. The survey asked if their librarian had visited their classes. All seven answered *yes*. Then the survey asked what was taught in those classes. Two answered *introduction to the library system*, one answer *research skills*, one answered *referencing* and three answered *none of the above*. Then they were asked if they found the teaching helpful to their studies. All seven answered *yes*. Then they were asked why they answered that way. Five wrote comments on why they found it helpful. Two mentioned *APA referencing*.

5.1.5 Services and Online Help

As libraries are service-based professions, there were a lot of questions in these stakeholder surveys about services and online help tools. Industry 4.0 technology also has a direct impact on this section and as seen in the comments, many ideas for future services and online help tools have come through.

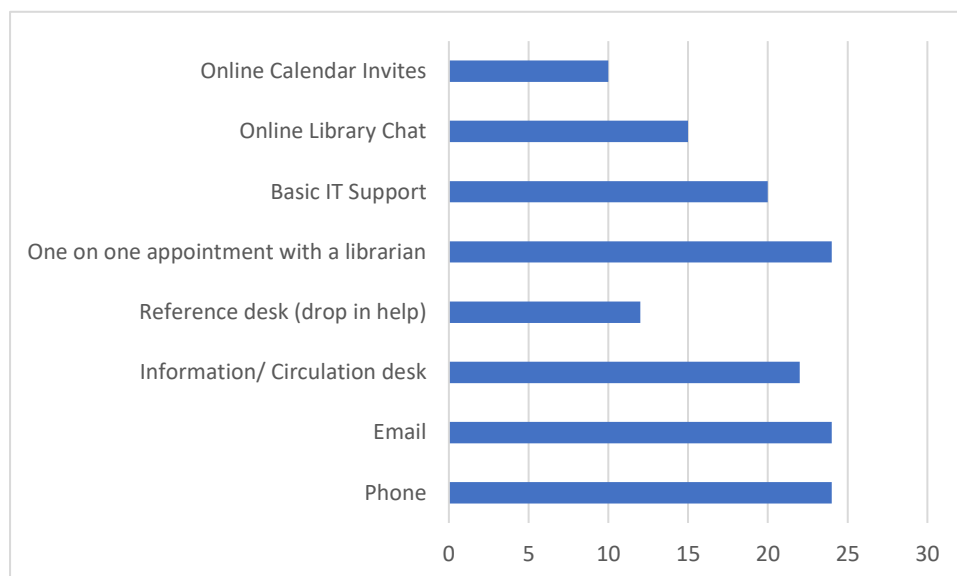
Library Kaimahi-Related Services offered by the Library

Library Managers and Library Kaimahi surveys

First, the survey in this subcategory asked library kaimahi and library managers what services they offered at their subsidiary library.

Figure 21

Library Kaimahi-Related Services Offered by the Library



(Figure created by Author)

Secondly, the survey asked if there were any other services offered at their library that were not mentioned. Two participants commented, *“teaching session, online support,”* and *“video calling appointments, help desk staff book students' appointments for other learning support staff, events, displays, in-class information literacy tutorials/workshops. Get ready for workshops (before the course starts).”*

The participants were asked if there was anything they would like to see more of: *“more use of Teams and Zoom for group and one-to-one instruction online chat,” “more study spaces,”* and *“would like to do outreach to schools and businesses, would like work on collaborative projects with city and university libraries, and would like more time in centres.”*

The next kaimahi-related service asked about in the surveys was a 24-hour online chat. This question was added as Wintec added a library chat during the lockdowns of COVID-19 to help support ākongā. After the lockdown, it was discontinued because of low usage.

The question that was asked in the library manager’s survey was ‘do you think your ākongā would use a 24-hour online chat if it was available’. Two answered *yes* and three answered *maybe*.

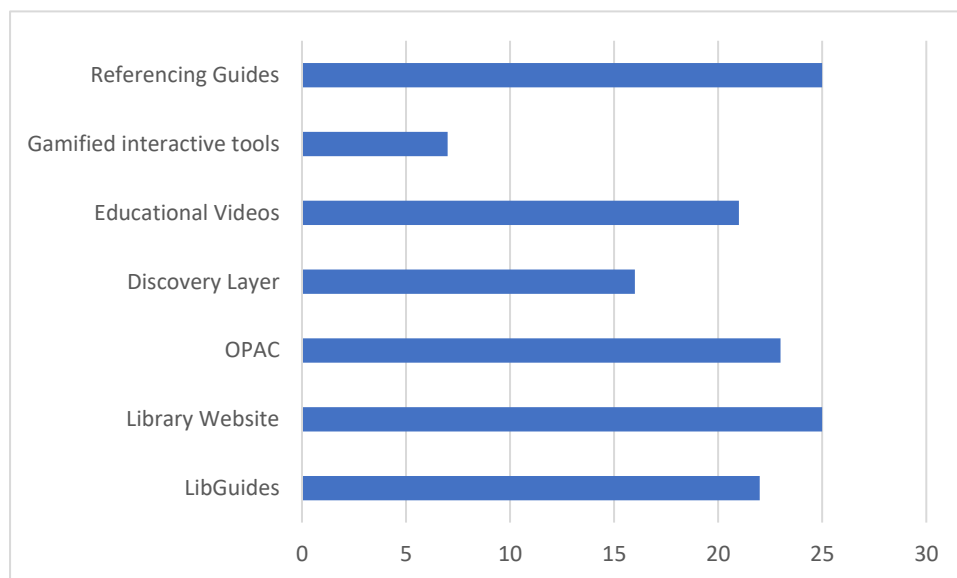
A question was also put in the long ākongā survey about an online chat function. The survey asked ‘Have you used your institutional library online chat function?’ One answered *yes* and six answered *no*.

Online Help Offered by the Library

The next subcategory in this category is online help. These are non-library kaimahi-related online self-help services offered by each subsidiary library.

Figure 22

Online Help Offered by the Library



(Figure created by Author)

Library Kaimahi survey

All twenty-five library kaimahi participants said that they have *referencing guides* and a *library website* and twenty-four said they had *library guides* (libguides) and a *closed system catalogue*

(OPAC) located within a library space. The only thing not mentioned in this question which was an oversight was the self-help machine. It is instead mentioned in a question relating to library spaces.

Then the participants were asked if any other resources were not mentioned in the above list. Below is one response to this question. That their library uses *'library talk channels'* as well. Library talk channels are chat channels embedded into each classes learning management software, like Moodle or blackboard, so that ākongā can directly contact their librarian while on their classes Moodle or blackboard.

We have a presence in every one of our courses via a Library Talk Channel the course where learners can ask questions visible to others in the course. It is not a 'chat' as such but we generally respond within 24 hours if not sooner

To support this information four questions were also asked in the long ākongā survey. The first was 'Have you used any of the additional electronic help guides at your institutional library?' Six answered *yes* and one answered *no*. Then they were asked what sort of electronic help guide they used. Five said *online referencing guide*, one said *library subject help guide* and one said *not applicable*. Then they were asked if they had used anything not mentioned in the list provided. One participant commented, "*I have used the videos as well as the online referencing guide as well, electronic help guide*". Finally, I asked if they were helpful. Six said *yes* and one said *not applicable*.

All three surveys, the library manager's survey, the library kaimahi and the long ākongā survey asked what services they would like to see in their library in the next ten years.

5.1.6 The Next Ten Years

Library Manager's survey

The first question that was asked in the library manager's survey, the library kaimahi survey and the long ākongā survey about the next ten years related to library services. What they would like to see in the library services in the next ten years. There were many great ideas but two stood out as they had clearly related their ideas back to Te Pūkenga and what the changes could mean in the next ten years.

Innovated ways to alert learners to the importance of information literacy skills for their study and lifelong learning. Clear, practical videos, yes but other tools/graphics – short, punchy, meaningful (as mentioned above in collaboration with skilled marketers/graphic designer). Referencing course developed under Te Pūkenga (in collaboration for maximising its accessibility and effectiveness)

Another great opportunity for us to work together to develop distinctly Te Pūkenga online help resources. For example, an information literacy module that first-year students could complete could be embedded in the learning management software. Also resources to help to teach - videos, quizzes etc. Perhaps combined subject guides.

In all the five surveys conducted the question of ‘what would you like to see in the next ten years,’ ‘do you have a vision, and can you articulate how you believe Te Pūkenga libraries will look in 10 years’ and ‘what are some key characteristics that make it distinctly Te Pūkenga libraries as opposed to any other academic library around the world and NZ?’ was asked.

From here I broke it down into some more sub categories. These were resources, library space, overall services and future job descriptions. Libraries connect the user to the right information they want. Libraries provide resources regardless of what they are. Whether physical or electronic.

Library spaces are what people think of when they think of libraries. I like to refer to a library as an iceberg. What you see in the library space is just the tip of the iceberg as most resources and services are online now. In saying that, libraries will always need a physical space as this serves patrons who are looking for a quiet place away from the hurry, busyness and noise of the world and a space where they can go to study.

Resources

Academic libraries provide resources to both ākonga and kaimahi to meet their research needs. From these surveys you could see that library kaimahi saw a real opportunity to provide access to resources not seen on this scale in Aotearoa before. A service that saw any ākonga or kaimahi from any part of the motu visit any Te Pūkenga library and get the same level of service and resources.

They can issue books and return books, as all Te Pūkenga libraries will have the same library management system.

Equal access to resources across the range of institutions across the country” and “Te Pūkenga libraries will be collaborative and visionary, still strongly vocational. A student will be able to attend any campus and feel at home. There will be equal opportunity for all students to access the best quality resources and library teaching sessions.

*no travel barriers - no student has to travel further than the nearest large library to access Te Pūkenga places of education and libraries within. National interloan service continues,”
“seamless support to ākonga, regardless of location or how they access the Library.”library”.*

Balanced with this are the recurring comments about keeping each subsidiary library with its own identity. This is because at the moment each library knows its ākonga and kaimahi and caters its library service around the wants and needs of their cohorts and the papers that are taught in each center.

point of difference as variation is our identity” and “each Library will retain its own identity yet benefit from the collective economies of scale. documents and policies will be communal, staff will be paid and access other benefits equally across the network, secondments will be common.

Equity of access is another major subtheme coming out in this subcategory. This is a strong emphasis in the newly formed Te Pūkenga and it is showing strongly in the survey comments that library kaimahi strongly believe Te Pūkenga should offer equity of service and access to resources.

*“As kaupapa Maori is so kinesthetic and so many of our learners respond well to this format,”
“we provide a Library service that supports all learners but with a focus on supporting Māori and Pasifika learners,” “equal access to resources across the range of institutions across the country”
and “well-resourced, easily-accessible resources, world-leading in terms of equitable access.”*

As soon as Te Pūkenga was first proposed ITP libraries saw an unprecedented opportunity to centralise service to give their ākonga and kaimahi a wider range of high-quality resources. The idea is that instead of 16 little budgets there would be one large budget that could buy all the sought-

after databases and offer them to all ākonga across the motu. This idea is clearly seen in the comments of the library kaimahi surveys.

“Extensive database coverage at all libraries due to collective buying power,” “Te Pūkenga is an opportunity to create a national library with access to a similar range of material to a University library” and “Tauria can go into any Te Pūkenga library and get the same level of assistance. There will be a single LMS and national database licensing and possibly collective purchasing. Staff will be confident in working with bicultural tauria.”

Te Pūkenga General Kaimahi and Ākonga surveys

From the ākonga and general kaimahi surveys a strong theme of wanting more resources and greater access to databases came through. This shows that ākonga and general kaimahi feel that their institutional library is too small and does not cater to their research needs. The word more came through all the surveys, numerous times.

*“**More** resources and **more** E-books that I can see on a Kindle device,” “**more** multicultural resources. Living Library times (I.e., people who can share experiences). **More** indigenous knowledge,” “**more** access to global online published content,” “better systems for accessing information,” “**more** information sources,” “**more** variety of books for research,” “huge varieties of books,” “go digital and in-person and deliver services for items,” “**more** e-books” and “continued access to the resources that promote the education and learning of the region and Aotearoa communities.”*

The comment that stood out to me the most was “More multicultural resources. Living Library times (I.e., people who can share experiences). More indigenous knowledge.” This is a wonderful idea. Academic libraries haven’t created many oral histories in the past. Maybe we should start a project of oral history interviews of current ākonga, Te Pūkenga kaimahi and kaiako and past ākonga. One of the interesting trends of libraries is trying to produce knowledge in-house and then sharing it rather than the tradition or collection of external knowledge and bringing it into the library. This could be an idea for a future research project produced by Te Pūkenga libraries.

Library Space

Library Kaimahi survey

The next major sub-category in this section is library space. Library kaimahi gave some suggestions on what they would like to see in the library spaces over the next ten years. One comment stood out and nicely sums up how they would like to see the library space in ten years.

Perhaps ITPs, more than universities, attract an even greater diversity of learners, due to the wide range of levels of courses taught. Te Pūkenga libraries reflect this: ALL Te Pūkenga learners see the library as a place where they feel welcome and actively look for knowledge, inspiration and support. Te Pūkenga libraries reflect the unique culture of Aotearoa, embracing our bi-cultural heritage and our place in the Pacific, as well as the many cultures who now reside in NZ and those beyond our shores who choose to study via a Aotearoa ITP

Te Pūkenga General Kaimahi and Ākonga surveys

Ākonga and kaiako want to see more space. Again, the mention of the word more. This was mentioned by two participants. *“I would like to see the Library have more space.”* They want *“more private rooms. I like to walk and listen to music while studying to help focus due to ADHD. This behaviour prevents me to use more of the Library for studying as I do not want to disturb other people,”* *“a Library that reflects the multicultural nature of NZ would be amazing,”* *“greenery spaces where people can enjoy, be still, read to enhance their wellbeing,”* *“retain books and quiet area for study. To become a learning hub with some social welfare aspects,”* *“to see more books in my Library rather than depending on e copy of articles,”* *“more quiet and isolated spaces to study,”* *“Ideally - a safe place to read for a long period of times digital book that automatically changes to what I want to read without having to download etc. that shows diagrams in a good scale and I can annotate easily. Otherwise: a place people can connect and work together with space to spread out,”* *“further integration of a cafe into the space (part of the Hub)- less of a 'quiet' space & more of a learning space,”* *“relaxation spaces,”* and *“increase in dedicated study spaces for ākonga, smart connected information HUB's for collaboration across Te Pūkenga, smart study rooms with TV's and webcams for interconnected study spaces.”* These are great comments as they are beginning to form a very clear picture of what ākonga and kaiako want to see in their library space, and how it should feel. It

seems ambience is very important in a library space. It has to feel safe, relaxed and multicultural. Nature was also mentioned as it was mentioned it enhances well-being.

Overall Service

Library Managers and Library Kaimahi surveys

The next subcategory in this section is service and help. Many participants talked about combining services. Besides databases and eBook collections, libraries in a rohe could jointly create other resources to cater to the needs of ākongā and kaimahi. Things like online chats, self help videos, library guides (Libguides), teaching resources etc.

“Local clusters share their library chat/help service,” “I would like to think that Te Pūkenga libraries would be able to combine the best of existing libraries to provide a higher overall level of service,” “a unified approach to information literacy,” and “another great opportunity for us to work together to develop distinctly Te Pūkenga online help resources. For example, an information literacy module that first-year students could complete and that could be embedded in the learning management software. Also, resources to help to teach - videos, quizzes etc. Perhaps combined subject guides.”

The final comment to leave you within this section is that a library's online services should be a *“reflection of local and national culture online.”* I like the way this is phrased as we often think of library space but forget that our online face needs the same makeover to make stakeholders feel welcome in our online spaces.

Te Pūkenga General Kaimahi and Ākongā surveys

The ākongā and general kaimahi surveys didn't have a lot to say under service they would like in the future. Two participants chose to comment and their comments were very insightful. They also commented on the possibility within Te Pūkenga to have access to databases and resources equal to the universities.

“Te Pūkenga is an opportunity to create a national library with access to a similar range of material to a University library. At present, each ITP has to negotiate separate access to databases etc, which results in a very limited knowledge base. The move to Te Pūkenga is a chance to address this” and “a place that is cutting edge and has anticipated changes in learner needs, that provides an environment that is stimulating and welcoming whether it be online or face to face.”

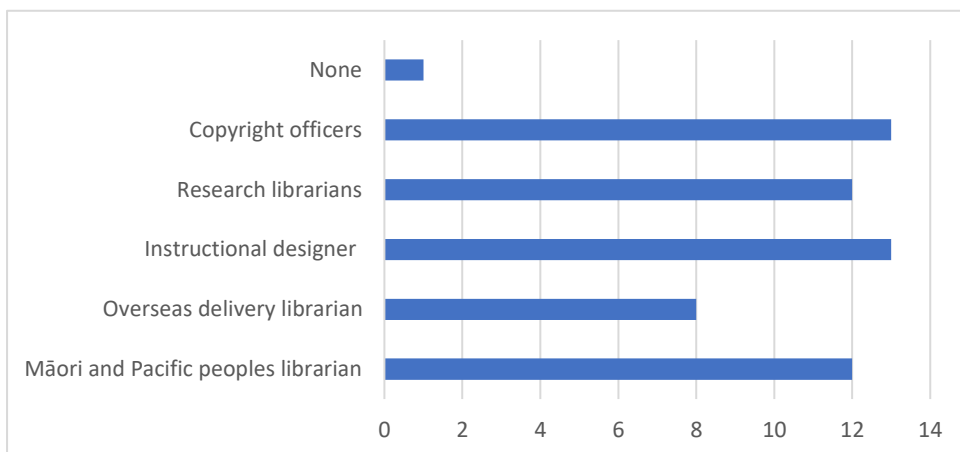
Future Job positions

Library Kaimahi survey

Next, I asked library kaimahi to think about different job descriptions that could be needed in the next ten years. The survey gave them a list of suggestions inspired by the literature review of this inquiry and then allowed library kaimahi to add more suggestions. As you can see from the below chart ‘*copyright officers*’ are the most popular suggestion for a new job role within Te Pūkenga libraries. Followed closely by ‘*Instructional designers* and ‘*Māori and Pacific people's librarians*’.

Figure 23

Job Titles needed in the Next Ten Years



(Figure created by Author)

Three participants made additional comments on what roles they would like to see in Te Pūkenga libraries. These were *marketing and promotion specialists*, *centralised copyright officers*, and a *sustainability role*.

An interesting and thought-provoking comment to conclude this section coming out of the library managers' survey was the recommendation that instead of looking at job descriptions maybe it would be best to look at functions.

"I don't think this is quite the right question. Instead of positions, we need to be considering what functions will need to be fulfilled, and positions will fall out of that. Te Pūkenga's focus is on improving outcomes for Māori, Pacific and disabled learners, so this is where our attention should fall. We need to make an effort to recruit more Māori and Pacific staff to our libraries. As a whole, we are quite euro-centric, particularly at the management level. We have already established a core purpose for Te Pūkenga's libraries, and although that is not set in concrete, this also should be the basis for decisions about functions and roles. Here's the purpose we came up with at one of the recent ITP library managers ' Forums "Vocational library services aim to provide students and staff with the teaching, learning and research resources they need to succeed. They provide equitable access to resources and support and help to develop lifelong learning, information literacy and employability skills. Vocational education libraries provide high-quality hard-copy and digital resources, mediated and diverse spaces, access to technology and professional support".

5.1.7 Library Kaimahi

The final category to come out of this inquiry is library kaimahi. This section can be divided into three parts. Working for Te Pūkenga and how kaimahi feel about it, career librarians, and teaching librarians.

Library Kaimahi survey

The first sub theme is working for Te Pūkenga. In this category, I asked kaimahi how they felt about the merger or creation of Te Pūkenga. Three participants said they were *excited! I can see so many possibilities*. One said *pretty happy, I generally like change*. Ten said *optimistic but not sure how my role fits* and three said *a little pessimistic because of past experiences*. No kaimahi said that they were *terrified*.

Next, I asked kaimahi what they would like to see from the library to support their well-being during this time. Nine said they wanted *good communication from library managers*. Four said they wanted *frequent check-ins with their library manager*. Two said they wanted *monthly newsletters*. Six said they wanted *similar roles networking and meeting*. Four said they wanted *state of the nation zoom meetings with all library kaimahi* and eight said they wanted *all of the above*. This shows that kaimahi want to be involved in the decision-making and to have more communication.

When asked if they wanted any other support. One participant said “*recognition of the sedentary nature of many library roles and active support to encompass movement,*” “*small teams that work across disciplines so that we can stay connected & supported and not become isolated,*” and “*protect job conditions.*”

In the subcategory, the survey asked if library kaimahi could see how their role supports students in completing their studies. Eighteen said *yes*, one said *no* and one said *maybe*. With this question I wanted to see how library kaimahi views their roles. As we are here for our ākonga and a clear understanding of how we support their success is important.

The next major subcategory in this section is titled, career librarians. Anecdotally over the years, I have heard librarian’s comment that there is no clear career path in ITP libraries. This is because most ITP libraries have been remarkably small teams with a flat management structure. So the first question asked in this section was: ‘Do you want to progress your career in librarianship?’ Sixteen said *yes* and four said *no*. The next question asked to support this question was: ‘In your current library, can you see a clear career path you could follow?’ Six said *yes*, twelve said *no* and two said *not applicable*. Future research could be done in this area.

The final major section in this category is teaching librarians and it only has one question. The survey asked teaching librarians if they felt they had the qualifications/support/ongoing training to support them. Fourteen said *yes* and six said *no*. This question was asked as from the literature review it was revealed that teaching librarians didn’t see themselves as teachers. In hindsight, this question could have asked for a different way to get more useful data. This is another area that which further research could be conducted.

The final question in this category asked participants if they had any additional thoughts and comments. Three participants chose to answer.

Some consultation would be lovely. Consideration of the library space seems to be an afterthought

As much local autonomy as possible is vital to provide a responsive service and a sense of place/confidence and guardianship

A benefit of Te Pūkenga is that students who are distance students would be able to go to a physical Library near them to seek assistance in person if desired. This could be research, referencing etc, rather than relying on phone/email/videos to try to answer/address their issues

Some really good comments on this question. More emphasis on local autonomy and the benefits of centralising some of our services. Were the two major themes coming out of these surveys.

5.2 Interviews

The ten questions for the interviews were created from the insights and findings from the survey questions. A question about COVID-19 was asked because the interviews were conducted at a time when COVID-19 was a major disruption in the lives of everyone in society.

Introduction

Libraries have many different roles in academic institutions. With interviews, I had a mixture of public, university and polytechnic librarians so these answers to the interview questions resulted in a diverse range of responses from many different perspectives.

In one of the group discussions, one participant mentioned that librarians were guardians in their parent institution. This I think matches nicely with the Māori concept of 'Kaitiakitanga'.

For our institute here, we are the guardians. Copyright, we preserve, collect and manage all the research output from the institution. So whether it's a digital repository, whether it's any other system or physical collection, or print material, we are the guardians of it [sic].

Copyright is a continual theme coming out of the data for this inquiry. It is a service that is currently performed by another department within Wintec but it seems many of the other ITPs and universities see it as one of their core functions. They believe helping kaiako know what information they can legally use on their learning platforms and reviewing those platforms to make sure their institution is copyright compliant is important.

How we work and communicated with other kaimahi and ākonga were the main things that affected kaimahi. Two focused mostly on the working conditions of kaimahi. The flexible hybrid working movement meant that kaimahi could work from home more often. That ākonga preferred some classes to be online and kaimahi like to do their meetings online. This had a flow on effect on kaimahi wellbeing. Going forward we need to discover how to get the best of both worlds.

One of the things we did at Christchurch City Libraries when I was there back in about 2000, I don't know, might have been about 2010. We set up what became known as the Fingertip Library, which was a call centre for all the libraries in Christchurch. So, if you rang Christchurch city libraries, you got the fingertip Library. It was your Library at your fingertips and they did online, and on phone. But as long as you've got the sort of call centre software, you could have Librarians at any of the Polytechnics doing their stint.

The categories and themes that came out of the interviews were access, research and information literacy, library spaces, library kaimahi, equity of service, treaty partnership, centralisation and Industry 4.0 technology. These are discussed in detail below.

Participants

I conducted three interviews with library professionals from around Aotearoa. The first interview was with a library consultant. The second and third interviews were group interviews with the members of TELSIG (*Tertiary Educational Library Special Interest Group*). It is a group that was created by LIANZA. There were four members in the first interview and three in the second.

5.2.1 Access

COVID-19 was a major disrupter in the world and this was also evident within libraries. Academic libraries had to move all their services and resources online. Libraries had to make sure that ākongā still had access to all the resources they needed. In the beginning of COVID-19 libraries had to come up with solutions quickly to maintain access to the library collections and library kaimahi. In an emergency, situation innovation happens fast, and because of necessity libraries had to rethink the services they offered so that they would fit into the new unprecedented situation that was unfolding around the world.

Services have needed to be reconsidered. We need to [sic] think more about making collections accessible.

Access, both physical and online, was discussed a lot in the interviews. Access (to provide both resources and physical study spaces) is a core role of libraries, and ākongā and kaimahi still expect libraries to fulfil this role. Improving access was also discussed in relation to equity of service.

In terms of promoting equity, I think we do try to help with that. In the Library, we have laptops we can loan out. We have still computers, desktops, and machines in the Library. So that's making it more accessible, good wi-fi, free access to our online resources so that we make sure that that's available.

From here the discussion flowed into the problem of digital poverty in our communities. Many of the ākongā that come to study in our institutions don't have laptops or wifi at home and they are not digitally literate. Many ākongā struggles through their studies, accessing content only using their phones.

Equity-wise, we realise people don't have the internet at home. People are not [sic] good on zooming. They are not good on LMS. Like Moodle. There are poor adult digital literacy and equity issues [sic].

One of the participants talked about the concept of the *inside-out library*. The *inside-out library* is the understanding that in the past, the role of libraries was to get information into the library and curate it. The inside-out concept is the opposite and that is, Institutions are now starting to produce information and libraries store this unique information and showcase it to the world. This is part of the open research movement, where institutions are trying to move as much of their data out from behind paywalls as possible and make it more accessible for both ākongā and researchers around the world.

The inside-out library, I think is often the one that sits invisible but is growing in tertiary libraries. The idea that traditionally libraries were about getting the information that's out there to our students and staff. But the inside-out library is you take the products of the university or the polytechnic or the training Institute. It could be their theses. It could be unique and special collections. It could be research that's currently behind paywalls, but you want to make it available openly. It could be the research data. The library's job is to bring it together, curate it, to push it out to the world. To also preserve it for future generations.

The conversation flowed to collection management. For years deciding what went into the collection was the sole responsibility of the librarians and depending on whom that librarian was decided the outcome of that collection. Getting a range of voices and making sure the indigenous worldview is

heard so that collections become more rounded and inclusive is the direction libraries need to adopt in the coming years.

But we always need to keep in mind that the entire Library model is a western one and has a fair bit of structural racism within it. OCLC is doing a lot of work about reading descriptive practices, like even things like our metadata standards and ontologies have a lot of terms in them that are racist, that is sexist. I think we need to [sic] endeavour to be responsive to the treaty and the treaty principles. I think that there's a lot more we can do, particularly in digitising libraries. New Zealand decolonisation I think is a lot harder. Partly that's because we are in colonial legacy structures, and I think it's important to acknowledge that.

Most of the participant were hesitant when discussing centralisation. They could see all the good things as mentioned above but they were realists and most of them worked in university libraries so they knew the reality of the publishing world in Aotearoa. In the scheme of things Aotearoa is a small entity compared to the big publishing countries. Even though we might get a greater budget combined publishers might hike up the prices and contracts and licences are still agreed on FTEs (full time equivalent student numbers) and the prices of each database increases each year.

But then, on the other hand, probably the suppliers of the resources will just whack the price up because they'll be potentially losing business.

It's really workable we are a network of 56 libraries. So definitely a service model change like we do interLibrary loan and now we have a central sorter. Auckland City libraries [sic] are in one region. For Te Pūkenga [sic], they will probably not will go with one region.

In all three interviews the participants discussed the potential of specialisation in each cluster or region. At the point in time I was writing this report Te Pūkenga hasn't commented whether or not they will specialise in certain regions but the library will have to adapt quickly if that is the outcome.

Two different participants related virtual reality (VR) back to libraries and offered two suggestions on how libraries could use it successfully. One mentioned VR and video being used to create tours of the library that ākongā could access before they come to their library to get familiar with the space. The other mentioned using VR reading rooms to access certain collections. Those collections could be browsing collections from anywhere.

I think our Library has been thinking of doing [sic] this. A virtual reality experience of being in the library.

Virtual reading rooms and you will have access to collections virtually.

I just recently was in Europe, we had to go over. My son's wife was Italian, and you know, her mother and father spoke no English and we spoke virtually no Italian. The translation app was pretty amazing. That will break down barriers and be amazing.

5.2.2 *It Research and Information Literacy*

Collating institutional research outputs produced by institutions was mentioned a lot by this group of library professionals as being a core function of the academic library. This goes hand in hand with academic libraries moving into the teaching area. Teaching the skills of research and retrieving quality information is believed by these participants to be the second important core function of the academic library.

All the participants agreed that was still very important to teach information literacy. Some went on to say that it will become more important especially now that every ākongā has a mobile phone in their hands.

become more crucial, even because once everybody have a device in their hand. There is more copying and plagiarism. So, it's really becoming trickier than before for librarians [sic].

One participant went on to talk about the importance of librarians staying up to date about how databases and search engines work. They say they are the experts so they actually have to be the experts.

But I think that's one of the things that it's really important is that library staff keep up with these trends that are happening and are aware so that they can alert their learners and students.

Two participants talked about the difficulties of becoming embedded into a programme and that it was really up to the kaiako and how much they value information literacy and critical thinking. It is believed that it needs to come from the top down and there isn't often enough time to incorporate

information literacy and critical thinking into papers. In an ideal world it would be a compulsory part of the paper.

I think it's something that is integral to the library, especially in academic environments. Being able to have a Library that can teaching is as essential. It's not always there. It is sometimes at the academics discretion, whether they enable this sort of teaching and learning to be part of their courses.

Research, open access, copyright, digital lending and publishing were all topics that come under scholarly communication and were discussed by the participants as being important in the next ten years.

The Library in a tertiary institution is essential for enabling and providing research platforms, resources, tools, support and training. Learning support, and research support are essential for the institution”

Less paywalls with open educational resources and open access. There is still a lot of money associated with that. But in terms of ease of access an academic library needs to remove more of those barriers. Making sure that [sic] service is quicker and more efficient and really works for the user. Quite transparent on how we provide access to a whole range of resources. The more the better, and being able to do it easily would be good.

Electronic browsing collections was an innovation that was discussion at one of the group interviews. At the moment it is hard to browse the electronic collections and those coming into the library often miss what is available electronically. They thought that VR would work by creating VR libraries where they can browse the different electronic collection as you would a physical collection.

5.2.3 Library Spaces

One participant talked about the shrinking of the library space she worked in. Slowly over the years, they have lost study rooms, classrooms and space itself as the institution thought it could be better used by a different department.

Ideally, I think for us it would be to have space. Our space seems to get smaller and smaller all the time because space is expensive, and you can always move the library if somebody else wants space.

A trend noticed by some of the participants was the shrinking physical collections. In the past, you would walk into a library and you would be confronted with rows and rows of books but the space is not needed for that so much anymore because of electronic collections. The collections that are still physical are given more prominence and dedicated spaces that appear more like living rooms.

The priority moving away from giving preference to the [sic] library collections or being the best space for students to study.

Another trend that was noticed was that now some major American libraries are moving their physical collections to another site so that they can keep their library space as a more social or quiet study space.

We are looking for more spaces and other people are saying that libraries are closing! We are not closing, they are expanding. The trend is actually creating more space, with remote collection facilities. To use space in a scientific way because if some of the collection is in storage then libraries don't need to keep them according to the classification number and they can have less staff to maintain it [sic].

The use of space is changing in libraries. Especially in academic libraries, ākonga and kaimahi are looking for different types of spaces depending on their need at that point in time. Sometimes they want silent spaces and sometimes group study rooms.

People like, a social space, they like quiet space. They like to have some food and drink. They like to be able to get access at times that suit them. I think with a polytechnic library, you've got a far greater ability to have entry by swipe card and maybe just have security guards.

Making sure the library spaces are flexible was also discussed. The collections that are in the library space are moveable so that the library space can be as flexible as possible. Many libraries use mobile shelving and seating so they can convert the space for an event and then be able to move it back again.

So we can see that libraries are becoming more about having furniture which is adaptable, changeable, and movable. Shelves on wheels [sic].

Even though library resources are becoming more cloud-based, library kaimahi still believes that space is important. If you have ever worked in a library you know there are many different reasons ākongā and kaimahi use the library space.

That warm, dry space. It was Internet, it was electricity, it was hardware provided to them. And that I think back that equity support is providing that services for the institution, being able to allow students to have that space and study.

Much of the discussion on equity of service was focused on the library space. Librarians have been working towards making their spaces culturally safe because a core belief about libraries is that it is open to all people. Many of the comments in this section mirror what was said in the surveys.

So I think that there is a need for [sic] neutral space (digitally and physically), the library is a common ground where you can feel comfortable.

5.2.4 Equity of Service

In all the interviews it was discussed how equity of service looks in a library. Examples such as offering technology, wifi, spaces and events to ākongā of diverse backgrounds. One participant brought up a piece of work created in 1994 called *Te Ara Tika: Guiding Voices: Māori Opinion on Libraries and Information Needs*. This is mentioned elsewhere in this inquiry as it is still a key document for libraries in this area.

At that point it was things like bicultural signage, trying to use Te Reo and Māori Librarians being appointed. And usually, there was only one and there was a lot of pressure on them [sic].

She went on to reflect on what libraries are working on now even though we haven't quite succeeded in those areas mentioned above.

Much more about working in partnership, designing services and partnership, giving up some of the control.

5.2.5 Library Kaimahi

Library kaimahi was discussed in depth in the interviews. Since COVID-19, flexible hybrid working meant that kaimahi could work from home more often. This has changed the whole nature of work. Kaimahi now is asking their employers to keep some of the benefits of COVID-19 such as flexibility and work-from-home options regardless of their role. Just like ākonga prefer some of their classes to be online and kaimahi like to do their meetings online as well.

So it's not just you turn up to work and you work 8 to 5 and that's what's expected. I think it's changed a lot in terms of being far more flexible and where it makes sense to be at home and offer sessions online and just moving things forward a lot more and quicker than they would have, if we hadn't had COVID-19.

One participant mentioned the new challenges that have popped up in some workplaces because of COVID-19. One participant talked about the importance of retaining professional kaimahi.

It has become a big challenge to keep our professionals in the Library.

The other important issue that was discussed was the need to have more diversity in library Kaimahi. Diversity has been a known issue in academic libraries in Aotearoa for a long time. Libraries understand that when ākonga look at the kaimahi they don't always see themselves reflected.

Particularly dominated by people, by woman of a certain age, but usually Pakeha and frequently have humanities background.

The profession is aware of this. And at the level of the LIANZA and at the level of various other organisations, even within libraries like my own, there are real serious discussions, how do we attract more diversity in terms of gender and neurodiversity.

It was acknowledged that library kaimahi have been allies in the equity of service space for a long time. Only now are they beginning to make practical changes in this area but institutions are set in their ways and changes can cost time and money. This is why this is the perfect time for Te Pūkenga

libraries to diversify their libraries because Te Pūkenga is new and wants to create a network that can lead their kaimahi and ākongā into the future.

Only now are we being able to address it properly? The University of Waikato just recently recruited five dedicated Māori and Pacific positions on all levels of their organisation.

One exciting thing that one of the participants is working on is providing paid internships to try and attract Māori and Pacific ākongā to work in a library.

One of the things that we're now doing is internships. We were trying to hire internships. We were trying to get Māori and Pacific students and give them some experience working for a year or 18 months in the Library, get them really enthusiastic about us [sic].

5.2.6 Treaty Partnership

Aotearoa is a settler colonial country but the thing that makes us different is both the English and the Māori versions of the Treaty of Waitangi. It is a unique foundation that can help Aotearoa move beyond a settler colonial country and become a country that values and recognises the indigenous peoples of the land, their culture and their worldview. Knowing what it means to be a Treaty partner is an important part of being a citizen of this country.

In the group interviews, it was discussed that upholding the Te Tiriti o Waitangi principles was talked about in most library strategies. LIANZA has produced many resources and offered training where needed on what it means to be a treaty partner.

So we make sure those values are quite embedded within the Library strategy and [sic] at the core of what we do.

One participant in group two talked about how it linked to equitable service and the values of Kaitiakitanga and Manaakitanga. Kaitiakitanga in a library context could mean our responsibility around our collections and Manaakitanga in a library context is about the library kaimahi, customer service, and the library space.

Manaakitanga where we're open and generous with fostering an environment for inclusiveness.

Iwi partnership is the responsibility of every organisation in Aotearoa. This comes back to the idea that we need more Māori and Pasific kaimahi in libraries and to upskill existing kaimahi in the area of Te Ao Māori and their responsibilities as a partner to the treaties.

Hocking collections is a very unique and rich Maori and Pacific collection [sic], and of national significance. So it's incredibly important for them to work with local iwi, with tangata whenua and have them in the team.

They talked about the challenges and difficulties that Te Pūkenga libraries will have to overcome if they decide to centralise. How most of the ITP libraries have been isolated with small buying power for a long time. That some don't even have qualified librarians and what equity of service could look like across the whole motu using centralisation and what it would take to get there.

Then there is the complication that Te Pūkenga libraries have been on their own for a long time. Each Library has developed its services, systems and resources. They all have their way of doing things. Also, many of the smaller libraries only have one librarian and some don't have a librarian at all.

That's part of equity too, because way bigger institutions provide better, better content access whereas smaller institutions or rural schools just don't have the resources to imagine how that's equitable across the country.

5.2.7 Centralisation

The participants who were interviewed thought that centralisation could work with the collection management of both electronic and physical resources, acquisitions, institutional repositories and the LMS. They also saw the benefits of this for ākongā.

Being able to provide big databases such as Elsevier, Wiley and Springer Nature which most polytechnic libraries now probably can't afford. This in turn will enable Te Pūkenga to provide a great range of higher-level qualifications such as a greater range of masters and PhDs. They even talked about how if Te Pūkenga did manage to become centralised in these areas and buy a greater

number of databases for their ākonga then they would become a greater competition for universities.

Most of the participants were hesitant when discussing centralisation. They could see all the good things as mentioned above but they were realists and most of them worked in university libraries so they knew the reality of the publishing world in Aotearoa. In the scheme of things, Aotearoa is a small entity compared to bigger countries. Even though we might get a greater budget combined, publishers might hike up the prices and contracts and licences are still agreed on FTEs (full-time equivalent) and the price of each database increases each year.

But then, on the other hand, probably the suppliers of the resources will just whack the price up because they'll be losing. Potentially losing business.

They talked about the challenges and difficulties that Te Pūkenga libraries will have to overcome if they decide to centralise.

Then there is the complication that Te Pūkenga libraries have been on their own for a long time. Each Library has developed its services, systems and resources. They all have their way of doing things. Also, many of the smaller libraries only have one Librarian and some don't have a Librarian at all.

Auckland City Libraries

One of the participants believed a similar system to Auckland City libraries could work across the whole of the motu. Auckland City libraries use a floating collection to circulate the collections across Auckland and then a fixed home location to maintain certain collections to a particular location to cater to the local community.

It's really workable we are a network of 56 libraries. So definitely a service model changes like we do the interlibrary loan and now we have a central sorter. Auckland City libraries are in one region for Te Pūkenga [sic], they will probably go with more than one region.

5.2.8 Industry 4.0 Technology

The participants focused their discussions on customer service, access and ideas that other libraries have used Industry 4.0 technology. Access was very related to customer service. One participant mentioned a recent experience they had had with an AI customer service chat. The participant wanted to make a complaint. They ended up going round and round in circles and it was very hard to get a human being to talk to. There is a place for Industry 4.0 technology but it needs to be a resource and not a barrier to giving good customer service or access to the resources needed.

For students that actually interact with the Library, I think they prefer humans. I was just following a thread the other day about how frustrating it is that you cannot talk to a real person now in customer service.

Virtual reality was mentioned as already being implemented in a programme at Auckland University and how it could be useful for distance ākonga to still get hands-on experience.

I saw one project at the University of Auckland. So you can go there [sic] and use VR and then you have two or three projects to choose [sic] from.

Two different participants related VR back to libraries. With two suggestions on how libraries could use it successfully. One mentions VR and video being used to create tours of the library that ākonga could access before they come to their library to get familiar with the space. The other mentioned VR reading rooms. So that they could access certain collections in a library that way. Those collections could be browsing collections from anywhere. At the moment it is hard to browse the electronic collections and those coming into the library often miss what is available electronically. They thought that virtual reality would work by creating virtual reality libraries where they can browse the different electronic collections as you would a physical collection.

I think our Library has been thinking of doing [sic] this. A virtual reality experience of being in the library.

Virtual reading rooms and you will have access to collections virtually.

But perhaps that could be a way of using virtual reality, that you could go in and browse ebooks as books and then borrow them electronically.

One of the participants reminisced about a service they implemented at the Christchurch City libraries back in 2010. She believed that the technology that COVID-19 promoted such as zoom could enhance and build on that concept. This would also support the aim of Te Pūkenga to create equity of service.

One of the things we did at Christchurch City libraries was we set up what became known as the Fingertip Library, which was a call centre for all the libraries in Christchurch. So if you rang Christchurch City libraries, you got the fingertip Library. It was your Library at your fingertips and they did it online and on phone. But as long as you've got the sort of call centre software, you could have Librarians at any of the Polytechnics doing their shift.

Integrating any new technologies, you need the right technical support. Libraries have often been frustrated with the traditional technical support provided by general IT teams within institutions. This is because they don't understand the complex, unique nature of library systems and the different jargon used. One of the interview groups discussed the importance of getting the right kaimahi in this area. With both IT skills and Library database skills.

We do have a tech team within the Library. They are looking at hardware, software and looking at system integration, which is going to be key to all services going into the future because the staff numbers are dropping and the system is doing a lot more of these manual jobs.

This conversation leads on to a conversation about the dangers of employing skilled technical support kaimahi as they would normally be earning a six figure salary but that kind of salary in a library is rare and if they were offered that then an inequality in wages is seen. This is a danger for libraries but also addresses the traditional problem of low pay in librarian jobs and the difficulty to attract new kaimahi to libraries.

What is found is that there is a real equity issue because most of those IT positions, tend to attract men, but they come in as IT specialists for libraries and now [sic] you can see the real issue because they are getting much higher wages than librarians [sic]. Now you've got a significant number of peak specialist guys and libraries earning up here and your traditional kind of female Librarian being down here.

5.2.9 Insights from the interviews

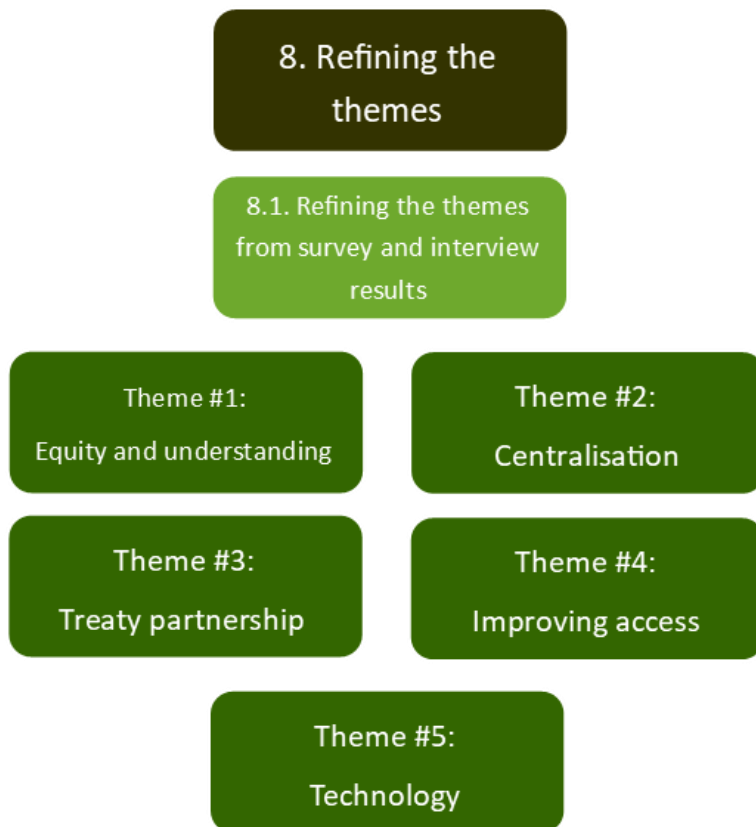
From the surveys and interview findings, I then developed the five key insight under five themes or headings that came out of all the information gathered for this inquiry. These were equity and understanding, centralisation, treaty partnership, improving access and technology. These five themes and insights are what I then created for the proposed library service - making sure it incorporated all five insights, and that it fitted seamlessly into the vision that is Te Pūkenga. This vision can be seen in the announced new structure of Te Pūkenga and all the documents developed by Te Pūkenga in the last two years.

5.3 Insights

The main themes that keep coming up in the surveys and Interviews are equity and understanding, centralisation, treaty partnership, improving access and technology. These five themes are what I have based my innovation on. I believe Te Pūkenga libraries will have to focus on these five themes under the headings leadership, kaimahi structure and design thinking over the next ten years to truly evolve into a library service that is world-class in the industry.

Figure 24

Refining the Themes



(Figure created by Author)

Equity and Understanding

From the surveys and interviews, I believe equity of service looks like actively putting the needs of our priority ākongā (Māori, Pacific peoples, Accessibility challenged ākongā) needs at the top. The

service will move away from a euro-centric model to a no-barriers philosophy. It will be diverse, flexible, and individual and our online and physical spaces will be culturally welcoming. Library kaimahi will reflect the diverse backgrounds of Aotearoa society. They will understand oritētanga, biculturalism, tikanga, te reo Māori, indigenous knowledge, and matāuranga Māori. They will communicate in such a way that is accessible to those with neurodiversity and have a fluid approach to helping all ākonga. This will be done by having a variety of ways of contact (in person, online, self-directed, asynchronous). More remote access to the library resources and services will be developed and all services will be culturally inclusive.

Centralisation

The opportunity for Te Pūkenga libraries to centralise many of its services would benefit ākonga in the future. Greater buying power and giving equality of access to resources across the motu would help with the unification of programmes and papers. Helping to create consistency in programme development and ensure that wherever you study in Aotearoa you would receive the same level of education with the resources to back it up. Ākonga could go into any Te Pūkenga library in Aotearoa and receive the same level of service and the resources they need to succeed in their studies.

Extensive database coverage at all libraries due to collective buying power”, “Te Pūkenga is an opportunity to create a national Library with access to a similar range of material to a University Library” and “Taurira can go into any Te Pūkenga Library and get the same level of assistance. There will be a single LMS and national database licensing and possibly collective purchasing. Staff will be confident in working with bicultural taurira (survey quote).

Being able to provide big databases such as Elsevier, Wiley and Springer Nature which most polytechnic libraries now probably can't afford. This in turn will enable Te Pūkenga to provide a great range of higher-level qualifications such as a greater range of master's and PhDs. (interview quote).

Treaty Partnership

To help uphold their obligation to the principles of the Te Tiriti o Waitangi, Te Pūkenga libraries would provide strong Māori and Pacific collections (physical & online). Māori and Pacific collections librarians be hired who have the expertise and skills that are needed to create these collections.

There would also be Māori and Pacific kaimahi at every level of the library structure to acknowledge the need to be in partnership over governance.

Te Pūkenga's focus is on improving outcomes for Māori, Pacific and Disabled Learners, so this is where our attention should fall. We need to make an effort to recruit more Māori and Pacific staff to our libraries. As a whole, we are quite Euro-Centric, particularly at the management level (survey quote).

The collection management policy will actively protect Māori knowledge, interests, values, and other taonga. Te Pūkenga collections librarians will buy and promote Māori and Pacific resources. This will normalize te reo Māori, learning and tikanga and will focus on the needs of our priority ākongā.

The library space would reflect the Māori people, culture and history of the land it stands on. They will be welcoming spaces that reflect and honour the diversity of Aotearoa. Oritetanga, biculturalism, tikanga, te reo Māori, indigenous knowledge, and matāuranga Māori will be seen in the architecture and design of each library space.

Te reo subject headings; examples are naming study rooms after special local geographic landmarks, Māori art and design incorporated into physical spaces, having special Māori collections of resources and taonga. It is seen in the way that we observe tikanga, and the way that Māori and Pākehā collaborate on the development of services and improvements (Survey quote).

Improving Access

From the surveys and interview findings, it is clear that both ākongā and kaimahi want greater access to resources, library kaimahi and library spaces. They want more quality resources that they can access from anywhere around the motu. They want knowledge, and qualified library kaimahi to help them with their research needs and they want flexible library spaces that they can use regardless of where they are. They also don't want barriers to them using these three services to help them complete their studies.

Less paywalls with open educational resources and open access. There is still a lot of money associated with that. But in terms of ease of access an academic library needs to remove more of those barriers. Making sure that [sic] service is quicker and more efficient and really works for the user. Quite transparent on how we provide access to a whole range of resources. The more the better, and being able to do it easily would be good. (Interview quote)

Library spaces need to still reflect the community of ākonga and kaimahi that they work with. In addition to this, they need to reflect on the bicultural nature of Aotearoa and show that Te Pūkenga is a treaty organisation and that they strive to uphold the treaty is all that they do.

Moving away from a Euro-centric model of service delivery, increasing the numbers of Māori and Pacific staff, increasing staff understanding of orititanga, biculturalism, Tikanga, Te Reo Māori, indigenous knowledge, Matāuranga Māori. Continuing to develop a no-barriers philosophy and flexible approach to service delivery. Our libraries need to be comfortable, welcoming spaces, with professional support on hand. (survey quote)

In the library kaimahi surveys and interviews, they talked about the need to be in the scholarly communication spaces at their institutions. Research, open access, copyright, digital lending and publishing are all topics that come into this term. These are all topics being discussed in the larger library world and Te Pūkenga libraries need to be part of those discussions. They need to integrate themselves into the process and systems within Te Pūkenga proper.

For our institute here we are, the guardians. And, anything that deals with copyright, but also, we ensure we preserve, collect and manage all the research output from the institution. So, whether it's the digital repository, whether it's any other system or physical collection, or print material, we are the guardians of it. So that includes here we have more than 1000 thesis research. (interview quote)

Technology

Technology is always improving. To achieve all of the other four insights we need to keep up with technology and we need the budgets and specialised kaimahi to ensure that we do have all the new technology that ākonga expect and are used to. Centralisation will provide better access to resources and equitable service across the motu. Library spaces are also a very important sub-topic

of Technology. Our library spaces need to be technological, flexible, smart spaces that can accommodate any new technology that is developed.

Local clusters share their library chat/help service”, “I would like to think that Te Pūkenga libraries would be able to combine the best of existing libraries to provide a higher overall level of service”, “a unified approach to information literacy”, and “another great opportunity for us to work together to develop distinctly Te Pūkenga online help resources. For example, an information literacy module that first-year students could complete could be embedded in the Learning Management Software. Also, resources to help to teach - videos, quizzes etc. Perhaps combined Subject Guides. (survey quote)

And also, I've read a little bit about virtual reading rooms and the idea that you will have access to those collections virtually (interview quote).

All five themes feed into the innovation suggested in section 6. The innovation is divided into three sections under the Te Pūkenga values and they sit under the overarching value of Kaitiakitanga. I have tried to make sure that the proposed library service encompasses equity and understanding, centralisation, treaty partnership, improving access to resources, library spaces and incorporating design thinking into the structure so that technology and innovation will future-proof the service.

6 Scenario - Kaitiakitanga: A transdisciplinary design of the library of the future

Value: - *Kaitiakitanga* means “guardianship, stewardship, trusteeship, trustee” (Te aka The Māori dictionary, n.d.).

The complex, and evolving nature of Te Pūkenga means that aspects of service can change very fast in a very short amount of time. I have created the scenario in a very broad way so that it should not become out of date but be able to weather any changes that come in the next few years. It is a very big-picture view where the details need developing and when they are needed by the right people. It can also be taken in small bits and adjusted to fit, so it can be a good decision-making tool for library managers.

I think the value and kaupapa (topic) of kaitiakitanga relates directly with the kaupapa and role of libraries. Librarians are the guardians of information and knowledge usage and curation. We are stewards in a larger organisation and trustees of the resources available in that organisation. That is why I believe it should be the overarching value that Te Pūkenga libraries should strive towards and uphold.

Te Pūkenga also has three values that they hope their organisation will run on. These are Manawa Ora, Manawa Nui and Manawa Roa (Te Pūkenga, n.d.). I have assigned them to each of the three sections in this proposed library service.

Manawa Ora is the value assigned to the new proposed leadership structure. Manawa ora means, “we strengthen and grow the whole person. Manawa ora describes a person or group’s behaviours that embody breathing life into all aspects of another life form” (Te Pūkenga, 2022b, p. 7). Since leadership and management are fundamental to changing an organisation, this value was assigned to that area of the library service, as they will have to bring all the library kaimahi with them on the journey of change.

Manawa Nui is the value assigned to the proposed structure that could work over a large geographical distance. Manawa nui means “we reach out and welcome in. Manawa nui describes a

person or group’s behaviours that embody manaakitanga, humility, patience, respect, tolerance and compassion” (Te Pūkenga, 2022, p. 7). The concept of Manaakitanga I believe is also very important in a library service. Te Aka Māori Dictionary (n.d.) uses the following words to describe Manaakitanga... “hospitality, kindness, generosity, support and the process of showing respect, generosity and care for others” (para. 1). Librarians and library kaimahi, especially in an academic library need to embody manaakitanga when they are working with ākonga and other Te Pūkenga kaimahi. That is what each ITP library does now, but it can be upscaled to be a core value of all the kaimahi at the proposed Te Pūkenga libraries. It also will show how we should look after library kaimahi who work in the Te Pūkenga libraries. If we embody this value, Te Pūkenga libraries will be a sought-after place to work.

Manawa Roa is the third Te Pūkenga value and that is assigned to the last part of my proposed library service, which is for it to become a design-thinking organisation. To do this well it needs to incorporate all library kaimahi in the continual innovation and development of the service as a whole. Getting the key kaimahi from across the motu involved in everyday decision-making so that the service doesn’t stand still but is always evolving with their ākonga, trends and technologies. Manawa roa at Te Pūkenga means “we learn and achieve together. Manawa roa describes a person or group’s behaviours that embody staying power, resilience, fortitude, grit and doing what needs to be done to achieve the collective goal” (Te Pūkenga, n.d., para, 12). This can be seen in figure 11.

This innovation is inspired by the literature review in this inquiry, and the surveys /interview findings. Including information in the appendices, the evolving nature and creation of Te Pūkenga over the last two years. Also, Wintec library’s experiences working with kaiako and ākonga, the Wintec Toia Mai project and personal experience and conversations with other library professionals within Te Pūkenga.

It has been developed out of the iterative process of Constructive Grounded Theory and listening to many voices, going beyond the library discipline and working through the reflective process of TDR over the last two years.

This innovation aims to fit seamlessly into the newly formed structure of Te Pūkenga, which was presented to kaimahi on 2022, October 6. It has also tried to incorporate all the findings and insights

gleaned over the last two years walking this research journey. Its aim is to be a future-proof the library service so that any disruption from Industry 4.0 technology will effortlessly fit into the fabric of this new library system and be there to support the successful, equitable, academic outcomes of all ākonga.

Te Tiriti o Waitangi

The main insight I take away from this inquiry is that Te Pūkenga libraries need to become an organisation based on the treaties to become a decolonised library service. The hard part is knowing what this looks like in practice.

From this inquiry, I believe a 'Treaty Organisation' will look and feel quite different from the ITP library service of today. This change in the service model needs to start from the top and work its way down and it needs complete buy-in from all library kaimahi. As with all change, it will be uncomfortable at times but if each kaimahi owns the vision and the values then I believe it will be very successful and greatly used by our ākonga to aid their success. Kaimahi stress is caused by organisational change if "a cloud of ambiguity and uncertainty, when those processes are undertaken without consultation with employees, and when changes are either miscommunicated or not communicated at all" (Inderscience, 2017, para. 2). To show value to library kaimahi the change process needs to be done well, with a lot of communication and all library kaimahi need to know why the change is important.

To understand the unique nature of Aotearoa the inquiry needs to go back in time to 1840 to the signing of the Te Tiriti o Waitangi. This was covered briefly in the introduction because the two documents are fundamental to any research in Aotearoa.

Te Pūkenga 2020 drafted one of their foundational documents called *Te pae tawhiti: Te Tiriti o Waitangi excellence framework working draft 2020-2025*. It outlines what Te Pūkenga believes are their responsibilities under Te Tiriti o Waitangi.

As well as Te Tiriti o Waitangi, Te Pūkenga is committed to guaranteeing our services work for ākonga and cater for Māori ākonga and their whānau needs, to help give them a positive successful

education. “This objective is driven by our legislative mandate, our charter, regulatory guidance, and the will of our governing council and leadership” (Te Pūkenga, 2020c, p. 5).

From this responsibility, Te Pūkenga outlines seven goals they hope to focus on, as they develop a new higher educational service for ākonga. These seven goals are “Tiriti o Waitangi partnerships, inclusivity & equity for Māori, greater relevance of provision, better equitable access, stronger Māori participation, more equitable outcomes, and stronger responsive practices” (Te Pūkenga, 2020c, pp. 13-14).

These goals and outcomes are great foundations for Te Pūkenga to start on and the direction for them to head. A second document was produced in July 2021 called *Te pae tawhiti: Insights into Te Tiriti o Waitangi and Māori equity practices throughout the network*. In this document, they elaborated further on their responsibilities under the Te Tiriti o Waitangi.

As an organisation, we aspire to Te Tiriti o Waitangi excellence, and our first step on this developmental journey was to understand our current Te Tiriti o Waitangi and Māori-Crown relations practice, and current capability and capacity to deliver to that aspiration. (Te Pūkenga, 2021, p. 2)

The above report was taken from insights of a self-reflective exercise from across Te Pūkenga to get a picture of how the organisation upholds Te Tiriti o Waitangi. The findings from these insights were that the ITP subsidiaries had inconsistent perspectives of what a Te Tiriti o Waitangi partnership looked like. There needed to be a systems approach to re-vision and resource the existing partnerships. Also “Te Pūkenga will have to give equal thought to the outcomes, goals and the future state of Māori education” (Te Pūkenga, 2021, p. 7).

Relating the Treaty Articles to Library Services

[Appendix A](#) is a table taken from a Te Tiriti o Waitangi workshop offered to all Wintec Kaimahi and then a morning workshop with just the Wintec liaison librarians as they related their jobs directly back to the four provisions of both the English and the Māori version of the Te Tiriti o Waitangi. In the end, they decided much of their thoughts were more for library-wide services rather than just their role specifically. It is included here in the innovation because if the Te Pūkenga libraries want to

become a *Treaty Organisation* then they need to know what the provisions are and think about how they relate to the services, tasks and functions of their library and their place within their parent institution. It is my recommendation that all Te Pūkenga library kaimahi go through a similar task and this could be a foundation of a Te Tiriti o Waitangi policy for Te Pūkenga libraries.

An Academic Library Service

This inquiry aims to articulate an academic library service which has a Te Tiriti o Waitangi foundation, that can work for Te Pūkenga libraries and the geographical challenges it offers. We need to make sure we don't lose any valuable, knowledgeable staff members with skills and strengths that are hard to find, but to pivot and take advantage of the opportunity that has been given to us to make a world-class, innovative, and future-proofed service that can carry Te Pūkenga into the Industry 4.0 age.

The benefits for this new proposed library system will that it creates a library service that has all the benefits of being one of the largest academic library systems in the southern hemisphere such as buying power with vendors. This larger library service will ensure that ākonga, kaimahi, kaiako and researchers will have a greater range of databases and resources to use in their studies. Also, Te Pūkenga kaimahi will be able to carry out joint projects with expertise from all the different libraries teams to create exciting new resources and educational tools. There will be one collective website and Library Management System (LMS). This will enable our ākonga to issue and return physical resources from anywhere. Centralisation will enable Te Pūkenga libraries to have a larger pool of kaimahi to give world-class customer service to our ākonga for longer periods.

In June 2022, Te Pūkenga announced that as part of the proposed structure they would split the country into four regions or rohe. From the surveys, there was a strong message that library kaimahi wanted to make sure each library maintained its distinct personality. To cater to this desire, I recommend that each of the four rohe create and maintain a unique personality that reflects the personalities of the individual libraries that exist now. Each rohe will reflect the communities in which they dwell and serve. Physically each branch and local library will reflect the Iwi, land, and history on which it resides.

Four rohe were created by Te Pūkenga. Te Tai Tokerau (North) will cover Northland and Auckland. Te Tai Rāwhiti (East) will cover Waikato, Bay of Plenty, Gisborne, and Hawke's Bay. Te Tai Hau-ā-uru (West) will cover Taranaki, Manawatū, Whanganui, Wellington, Marlborough, and Nelson/Tasman. Finally, Te Tai Tonga (South) will cover West Coast, Canterbury, Otago, and Southland (Te Pūkenga, 2022b).

Each main branch library or libraries would look after and build the smaller libraries within their region, providing online systems, teaching, research, and resource support to the smaller district libraries, where there will be a lesser number of staff located. The kaimahi located in these smaller districts will focus on ākonga and general Te Pūkenga kaimahi day-to-day support. The main branch library would support with extra kaimahi when needed. The centralisation team with their specialised expertise will look after all libraries across the motu.

This theme was very clear from the survey results. Most people saw the benefit of centralisation but did not want to lose any level of individual service to their ākonga, kaimahi, kaiako and researchers.

The main aims of this proposed library service are to uphold the Te Tiriti o Waitangi within Te Pūkenga libraries, incorporate more Māori and Pacific kaimahi into the library structure, and finally to stay up to date with Industry 4.0 technology so that Te Pūkenga libraries stay relevant in the world of tomorrow.

6.1 Manawa Ora - Leadership

Value: Manawa ora describes a person or group's behaviours that embody breathing life into all aspects of another life form (Te Pūkenga, 2022).

Traditionally libraries are governed in a eurocentric, corporate style of leadership where you would have an overarching manager or in the library world, chief librarian. My proposal is that because the nature of work is evolving, and the large geographical distance between libraries that the new Te Pūkenga library, is a move away from that style of leadership and more towards a collective style of leadership.

Proposed Management

Te Pūkenga libraries are no longer going to be sixteen small institutional libraries with very little power but instead will be one large institutional library that will rival most university libraries. Because of this, they need a management structure that is more in keeping with the times. In my investigations, I have also looked at two management structures that could uniquely shape the future of Te Pūkenga libraries. The first is the Ubuntu philosophy as a management system, and the second is a distinctly Māori leadership style that is represented through traditions. Refer to [Appendix K](#) for more information.

This new collective style of leadership suggested in this inquiry, that is based a little bit on the Ubuntu and Māori leadership styles mentioned in [Appendix K](#), would answer directly to the AKO Delivery leads. It would be made up of the four rohe library directors, a new centralization director, two Māori and Pacific people's advisors from inside Te Pūkenga, and an ākonga accessibility advisor.

“It is about acknowledging the Treaty rights of Māori people and promoting their participation in decision-making, respecting and valuing people's differences and promoting equity, fairness and organisational unity. It demands total commitment to the creation of a new belief system based on power sharing, quality management performance, the provision of relevant services of high quality, teamwork, and the elimination of monoculturalism” (Garraway & Szekely, 1994, p. 6).

This precedent for a council-styled, collective leadership method is taken from Aotearoa's history, from a time just after Te Tiriti o Waitangi was signed. In 1835, 34 northern chiefs signed 'He Wakaputanga o Te Rangatiranga o Nu Tirenī'. This document in English is known as the Declaration of Independence of the United Tribes of Aotearoa (NZ History, 2021). I propose a council of library directors model themselves on that example. Thereby maintaining industry knowledge and expertise through the change to Te Pūkenga but also allowing for innovation through collective knowledge of the library ITP industry. These library directors would be responsible for a rohe but would not be based in a single branch or local library. They, like the Rangatira, would travel around the motu as a united leadership team.

I also recommend a rotating chair from the rohe library directors, similar to the style of leadership of LIANZA and Te Rōpū Whakahaū. Every two years an acting chair is appointed with an incoming chair ready for the two years beyond. The LIANZA council is made up of six elected regional councillors (LIANZA, n.d. para. 3).

In addition to a rotating chair, I recommend a library secretary that works with the Chair and provides a consistency and knowledge base that the incoming chair can rely on and promotes a smooth transition. The incoming chair will be voted on by the library council.

Eketone (2002) in his thesis about Māori-styled leadership, mentions the connectedness of all things. In the five hundred plus years before Cook, each Iwi governed themselves, but each member of the Iwi knew their place in their society and worked for the greater good of the Iwi as they still do today. In a euro-centric background, it is more individual and capitalistic. If Te Pūkenga libraries can change what they are used to and open their minds and hearts to a new way of thinking, then a council-styled leadership could work. Each library would need to be able to see itself in the body of the whole organization that is Te Pūkenga libraries and to a wider extent Te Pūkenga proper.

Also, according to Eketone (2002), people need to know their leaders. Pepeha and mihi are a great way for leaders to tell their stories. People trust leaders better if they know a little about them. Done well this is a tool that leaders could use to develop more trust and buy-in in the workplace. One of the library council's main jobs will be making sure the kaimahi of Te Pūkenga library know who they

are. This will be a challenge because of the geographical location of all the different branch and local Te Pūkenga libraries. Communication will be the key.

To uphold our obligations as a treaty partner, I propose two additional seats on the library director's council that are representative of the Māori and Pacific communities at Te Pūkenga. They will be there to give advice, direction and knowledge of how Te Pūkenga libraries can best serve these two communities. "Biculturalism in libraries is defined as an organisational strategy based on the spirit and intent of Te Tiriti o Waitangi" (Garraway, & Szekely, 1994, p. 6).

Another seat will be added called the accessibility advisor to cover our third priority ākongā group. Ākongā with accessibility needs, whether physical or neurological.

In this leadership structure, I believe I have incorporated the five insights from this inquiry. Equity and understanding, centralisation, treaty partnership, improving access and technology. With a council-styled leadership, the collective voices can continually put equity of service and our ākongā at the centre of all we do. In addition to this, continually giving priority to our three groups of priority ākongā. Having the three advisors on the council as well as the AKO leads will mean that these three groups' needs will always be on the agenda.

The second insight of centralisation seems to be the most preferred option for the future of Te Pūkenga libraries, hopefully saving money in the future by providing consistency of services and resources across the motu. With the proviso that each library keeps its identity so that it can best serve the needs of its ākongā in its area.

Thirdly, treaty partnership was a big theme coming out of the interviews, literature review and surveys. Te Pūkenga libraries need to uphold the four provisions of the Māori and English versions of the treaty to be a good treaty partner. These include principles such as kāwanatanga and governance; sovereignty; partnership (engagement of Māori expertise – Mana Whenua); tino rangatiratanga (Independence); full, exclusive and undisturbed possession of taonga (treasures); Māori autonomy; Iwi/hapū authority; self-determination; active protection etc, to be a good treaty partner. With this council leadership style taken straight from Aotearoa's history and the continuous position of a Māori advisor from within Te Pūkenga, I believe this is a good starting point to achieve

this. This council will demonstrate partnership, put the right people in the right jobs so that Māori have exclusive and undisturbed possession of their taonga, help ākongā to be self-determining in their education, actively protect Māori rights and customs by promoting them and including any rights or customs in the workplace that is desired. Making sure the library's decisions benefit equal outcomes by promoting and building equity of service. Making sure all resources are easily accessible. This would come straight from the top and would be followed through by all the teams in Te Pūkenga libraries. Since this inquiry didn't get any Iwi input this only a starting point and recommendation. In the future I hope that there is greater Iwi, hapu and key Māori organisations input in the decision making and details of this new library service. This inquiry only provides a recommendation and a possible mechanism to allow this to happen.

The fourth major theme that came out of this inquiry is improving access. The participants in the surveys and interviews believe libraries need to provide greater access to resources in a variety of different ways. These resources can be both physical and online. This will be actively promoted by the library council. Encouraging their kaimahi to come up with new ways to access the library resources and to make sure it is meeting the needs of their ākongā.

The last major theme that is seen clearly in this leadership style is technology. Technology is developing very fast and libraries need to stay up to date. Technology can also help with the other four themes. The new centralisation manager would be responsible for making sure that all Te Pūkenga libraries keep up to date with emerging technology so that the library service continues to remain relevant and relatable to our ākongā and key stakeholders.

6.2 Manawa Nui - Proposed Restructure and New roles for Te Pūkenga Libraries

Value: Manawa nui describes a person or group’s behaviours that embody manaakitanga, humility, patience, respect, tolerance and compassion (Te Pūkenga, 2022).

Concept

On Monday 15th August 2022, Te Pūkenga released their revised structural plan to kaimahi for consultation. As seen in figure 29, there will be nine business divisions. Libraries will sit under “Ako Delivery”.

Figure 25

Proposed Business Group Structure



Note: Image of the proposed leadership structure given to kaimahi in 2022, August 15 in a PowerPoint presentation unpublished. Each group would have two leads. A general lead and a Māori lead. The agreed structure didn't change from the proposed one. Copyright 2022 by Te Pūkenga.

This revised structure is a rethinking of Te Pūkenga, which aims to future-proof the organisation. Kaimahi are the greatest asset that Te Pūkenga library has. Without the kaimahi, Te Pūkenga libraries would cease to function. The highest priority of this change is to make sure kaimahi feel looked after, supported and communicated with. Also, retaining all expertise and knowledge that is already

in the organisation and building on it. High-quality, future-proofed, world-class equitable service is the aim.

This organisational rethink needs to be done using the collective knowledge of the library kaimahi that is already in the organisation, while filling the gaps in knowledge due to historical redundancies, budgets cuts, reduction in hours and services and unqualified kaimahi in qualified positions.

Chaudhair (2017) states it well “reference service is the essential human process of establishing contact between the right reader and the right book by personal service. Reference service is vital in the promotion of reading habit in student [therefore] each Library should provide an adequate number of reference Librarians to function as Library hosts and human converters” (p. 7618). He is mentioning just reference librarians, but I think the same can be applied to all library services.

Pay equity is another major issue in Aotearoa ITP libraries today that should be addressed in this rethink. “Pay inequity is caused by systemic sex-based discrimination leading to the undervaluation of work that is predominantly performed, or mostly done, by women” (Ministry of Business, Innovation & Employment, 2020, p. 5). Traditionally librarianship is a female-dominated profession. So, over the years, pay has stagnated. Professionalism and qualifications have not been recognised through pay. Currently, the Ministry of Education has a pay equity claim with government for librarians and library assistants (Ministry of Education, 2022). “It is important to ensure that remuneration fairly reflects the skills and knowledge required, and to eliminate the gender pay gap that currently occurs in a predominantly female workforce” (Ngā Whare Pukapuka Tūmatanui ki Aotearoa, n.d., p. 26).

This rethink will be a system that truly represents what an Aotearoa academic library could look and feel like and runs according to the four provisions of both English and Māori versions of the Treaty of Waitangi, and equity models. A new world-class library system that is a bit different in its approach, moving away from the eurocentric style of the last 200 years and moving into a new era of library services.

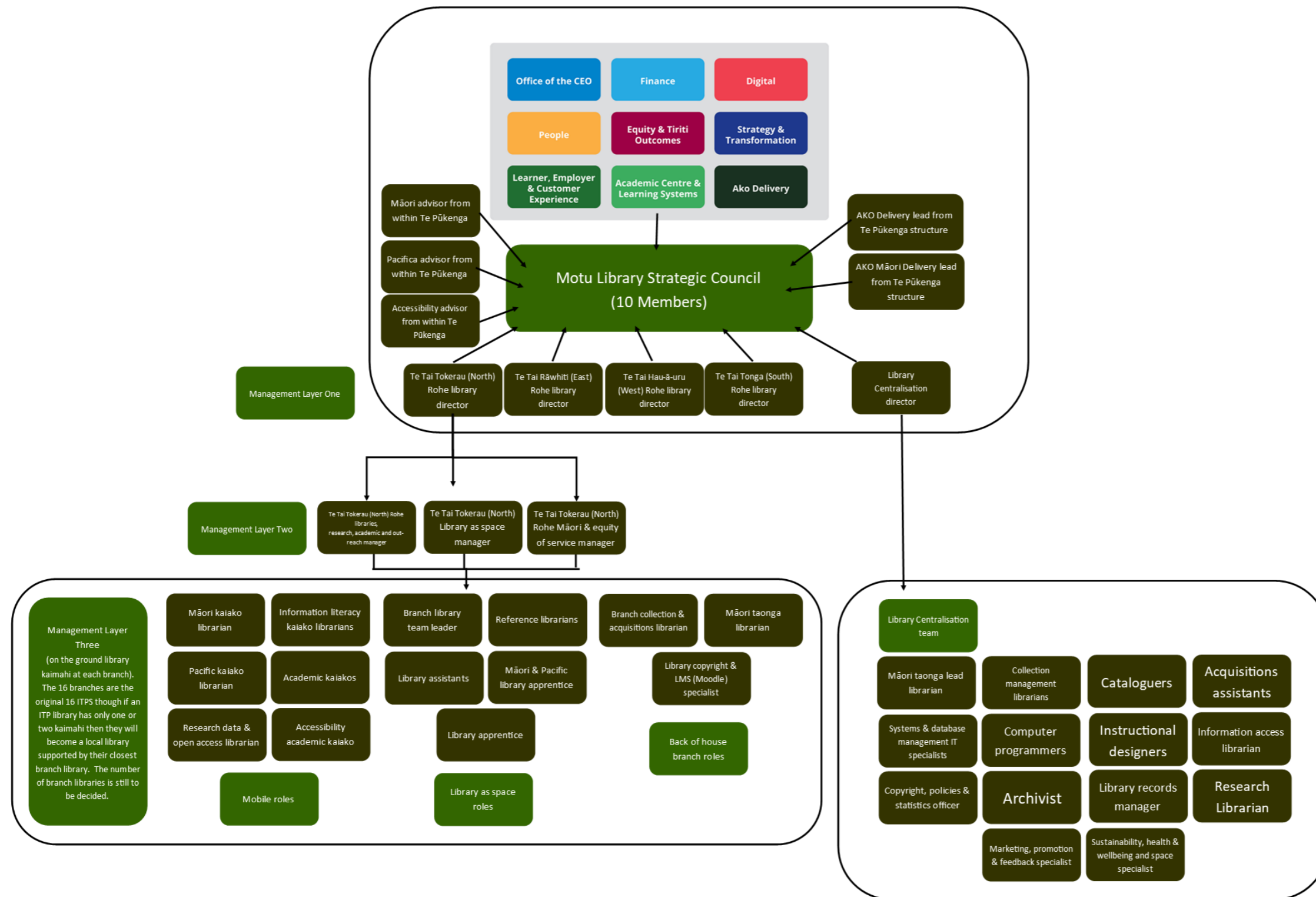
Below is a proposed library structure that has suggestions of roles informed by this research for going forward into an Industry 4.0 future and becoming a decolonised library. It should also be future-

proofed and have the expertise needed for the future. The numbers of kaimahi for each site will be determined by the rohe library directors.

The top level is Te Pūkenga's library strategic council, and they will report directly to Te Pūkenga executives. The library council will be made up of the four rohe library directors, the director of the centralisation team, and Māori, Pacific and accessibility advisors from within Te Pūkenga. The AKO delivery leads will also sit on the council. The AKO delivery leads are positions in the wider Te Pūkenga structure and the library will sit under them. This is a small change but will really show that Te Pūkenga libraries are committed to starting to become a treaty-based organisation.

Figure 26

Proposed Te Pūkenga Library Structure



(Figure created by Author)

The main aim of this library structure is to get the benefits of a larger kaimahi base and centralisation of resources, functions, roles and services to give the best level of service to ākongā and key stakeholders across the motu, but also to maintain the branch and local libraries' identities and community feel.

6.2.1 The Library Strategic Council

The Ako delivery leads (both the general and the māori lead), will be members of the strategic council to provide consistency and to make sure the council is heading in the same direction as Te Pūkenga as a whole. The three advisors will be expert kaimahi from around Te Pūkenga and will provide advice and support to make sure that our priority ākongā are always on the agenda at the very top of the management structure.

Each of the four rohe will work independently but also together. The centralisation team will support and work with all four of the rohe. Each rohe will be lead by a director who will also be a member of the library strategic council. Reporting directly to the rohe library directors, each rohe will have three library managers. These library managers will manage all the branches and local libraries within a rohe.

The library director's role is to provide strategic leadership across the whole of Aotearoa. They with the other members of the library strategic council will make major decisions to direct the future direction of the whole library service. They will also sign off any projects and business plans created by the auaha groups.

6.2.2 Management Layer Two

Libraries, Research, Academic and Outreach Manager

The libraries, research, academic and outreach manager will manage all mobile kaimahi in their rohe. They will provide leadership in the teaching and education area and make sure they have the right kaimahi in each position to provide library service out and about in all campuses in their rohe. They will make sure the equity of service across their rohe is balanced and that they reach as many ākongā where they are. In the classrooms, one on ones and online.

Library as Space Manager

The library as space manager will be responsible for each of the library spaces within their rohe. They will work with each branch team leader to manage the kaimahi that work in the library spaces.

Making sure they have enough kaimahi at each campus to service the ākonga at each of their sites.

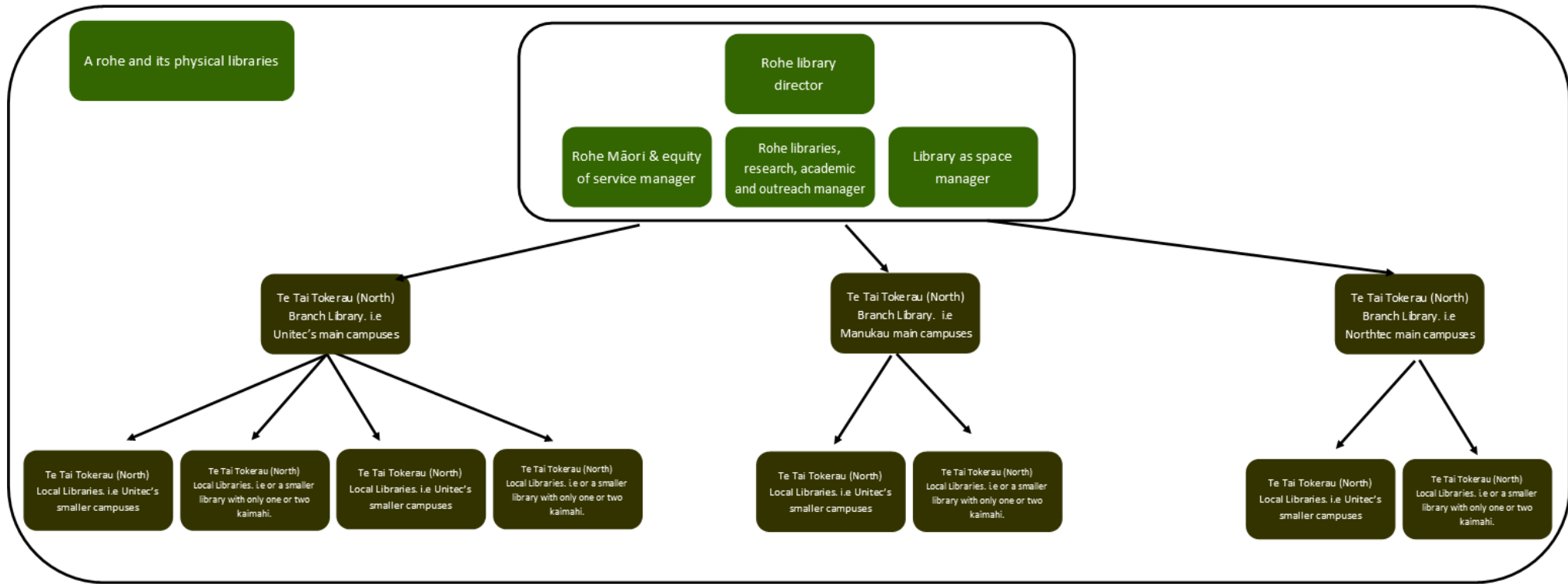
They will work with Te Pūkenga facilities to make sure each space is fit for purpose and that it fits the needs of ākonga now and into the future.

Māori and Equity of Service Manager

The Māori and equity of service manager will provide support and encouragement for all Māori and Pacific kaimahi across their rohe. They will be the lead in each rohe to deliver equity of service to our priority ākonga, making sure that we provide equity of service in a culturally sensitive way. They will be the cultural and Te Tiriti o Waitangi advisors in their rohe, to build, encourage and model into all kaimahi the ability and understanding of te reo Māori, tikanga and mataranga Māori. They will liaise with local iwi, hapu and Māori and Pacific communities to make sure each rohe is hearing the voices of these communities and implementing any recommendations suggested.

Figure 27

Hypothetical example of a rohe Library



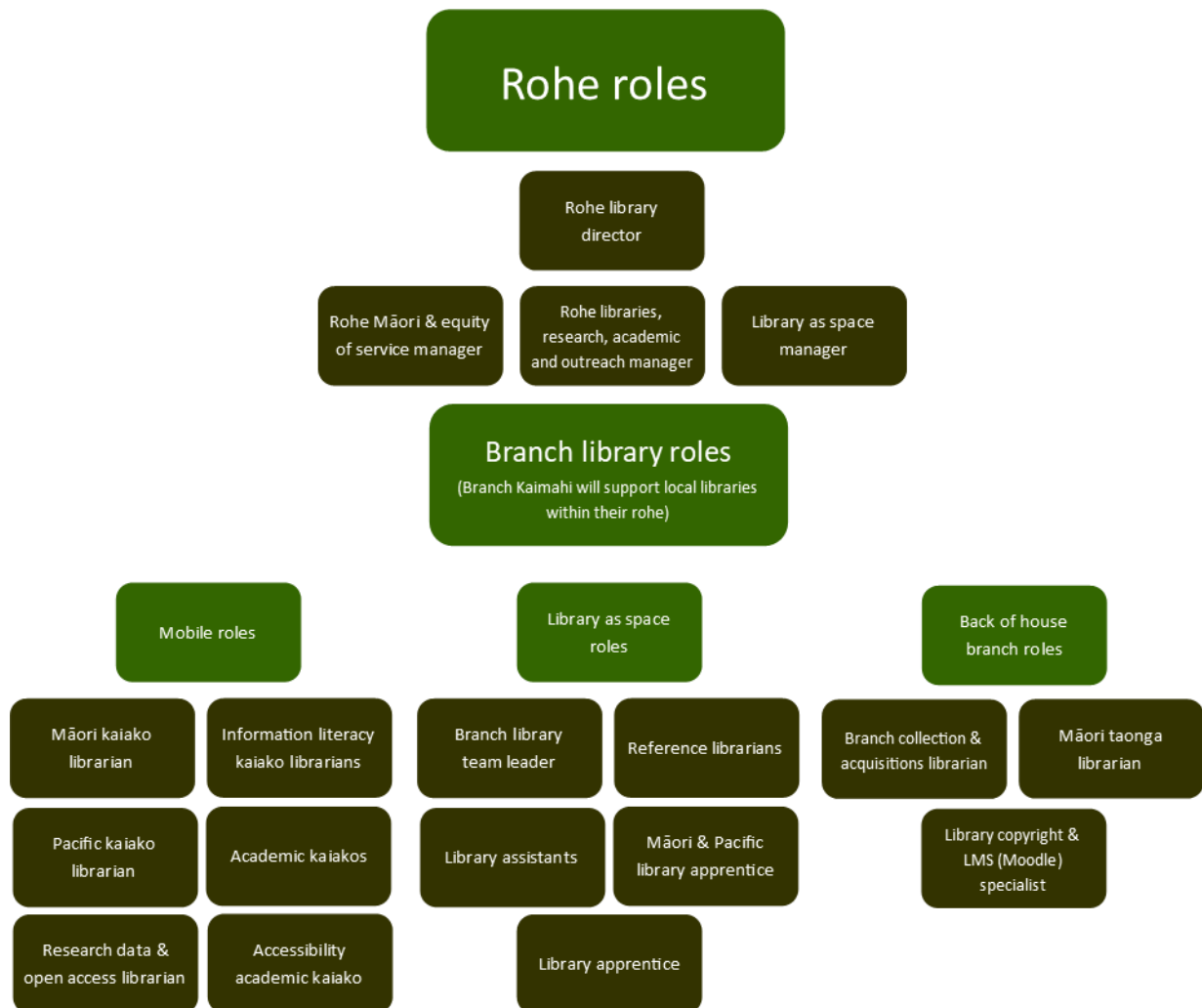
(Figure created by Author)

The larger branch libraries are where most of the kaimahi will be based. Some branches within rohe will be combined, and some medium sized and small libraries will become satellite or 'local libraries' to branch libraries. The number of kaimahi to fill a role will be determined by each rohe director and their team. The most notable difference in this structure is the intentional inclusion of Māori and Pacific roles. "The development of Māori services and initiatives in New Zealand librarianship represents one of the most distinguishing features of the profession in this country" (Barnett, 2018, p. 15).

Any of the smaller ITP libraries that may now only have one or two kaimahi will be an exception. Their libraries will be supported by the larger branch libraries in their rohe and they will become a local library. The aim will be to offer the same level of services across the whole motu. Geographically it may be hard but the larger branch libraries will provide as much in person service and support as they can to their local libraries.

Figure 28

Structure of Kaimahi Working out of a Branch Library



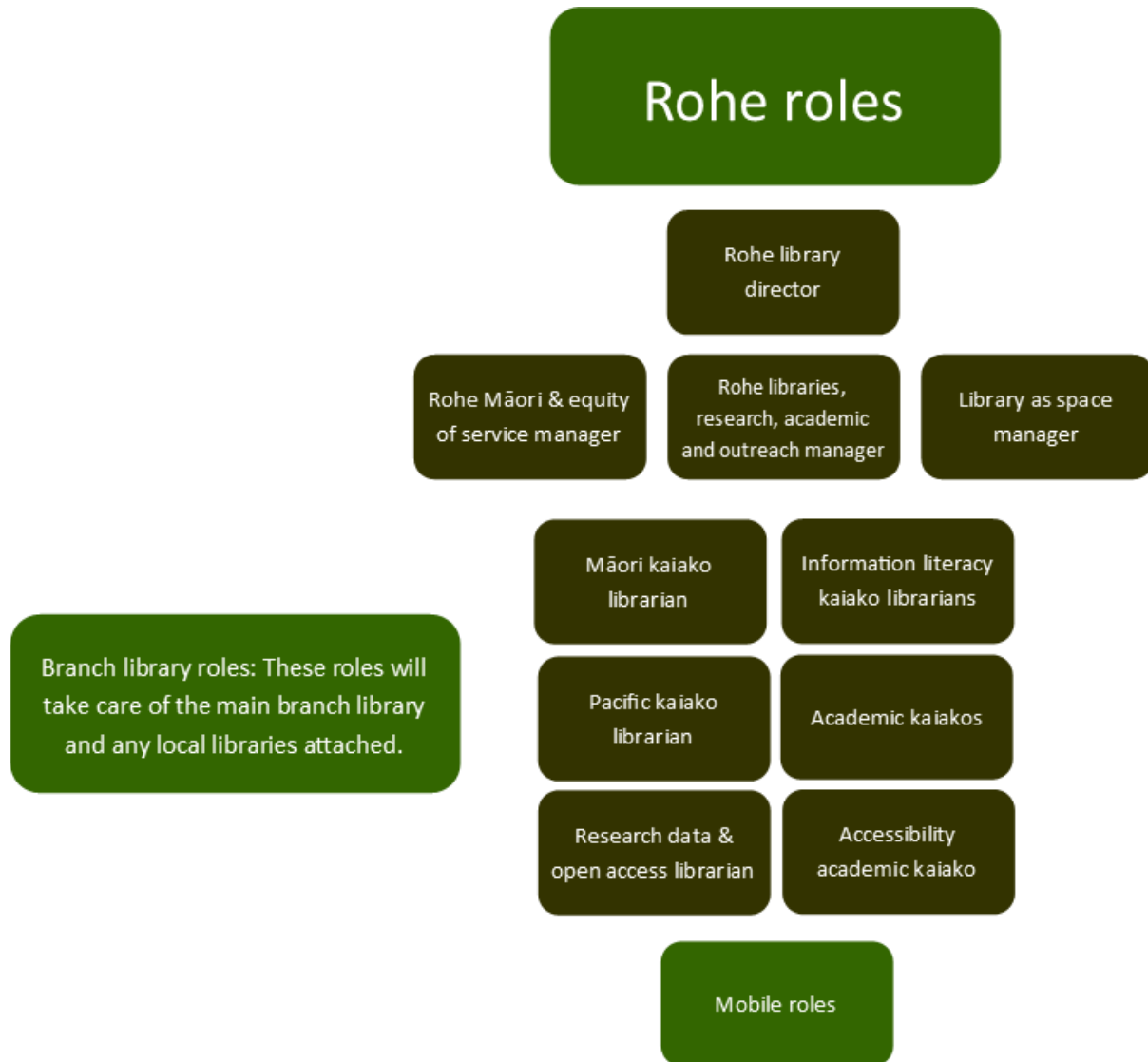
(Figure created by Author)

“Waiho i te toipoto, kua i te toiroa. Let us keep close together, not far apart. This whakatauki is about the role of a Library (and Library staff) to enable learning success and foster relationships. To connect learners to the information and people they need. Te Pūkenga Libraries will be Tiriti o Waitangi based” (survey quote).

6.2.3 Mobile Roles

Figure 29

Mobile Roles



(Figure created by Author)

Te Pūkenga libraries has a great diversity of ākonga who are all at different academic levels. Information literacy skills help ākonga with their information needs. It is the ability to lifelong learn, spot fake news, and recognise misinformation, disinformation and bias. These skills help ākonga to

spot appropriate, accurate and authoritative information to use in their assignments and everyday life.

The mobile roles will work out of the library space but will be mostly found around the different campuses. They will be the kaimahi that will be the face of the library inside classrooms, at meetings and working with their allotted faculties.

The ability to find information and use it ethically is an essential skill for all taura while studying. In addition, having strong information literacy skills is an important employability skill and will become increasingly so in the future. I think that employers value employees who can exercise good judgement in seeking information and applying it to their work. (An area of potential future research to validate this). It would be great if Te Pūkenga library staff could work together to create an information literacy badge for taura, as well as continue to embed information literacy skill development into the curriculum, and explicitly state information literacy as a graduate outcome. (survey quote)

Librarian as Kaiako (Information Literacy Kaiako Librarian or Liaison Librarian or Faculty Librarian or Subject Librarian)

The information literacy kaiako librarians will look after the teaching of information literacy, as well as ākonga one on ones, email help and learning management systems help. They will also participate as a network across the motu in the creation of educational, interactive and online resources. You will find them in the classrooms and around the campus's.

At all branch libraries and their local libraries, the kaiako librarian team will run a similar suite of face-to-face, zoom (or teams) information literacy classes. These will be research skills, academic integrity, referencing, referencing management tools, how to use the library databases, and online resources and critical thinking of resources.

The aim will be to get these classes embedded into schools and programmes each semester. Especially for first year ākonga, post-graduate ākonga and priority programmes. “At the undergraduate level, promoting the correlation between good information literacy skills (that is, better assignments → better grades → better job), the library would actively encourage participation

in training classes and library resources” (Potter as cited in Delancy and Bates, 2015, p. 40). Ākonga, faculty and stakeholders need to be able to see the link between information literacy skills and outputs.

The mobile roles will be a large network within Te Pūkenga libraries. This network will drive the information literacy space at Te Pūkenga. They will decide what Te Pūkenga means by embedded service, what resources are needed and the development of their teaching practices. There is already a network running, called the ITP subject librarian group. This group will naturally become this information literacy kaiako network.

Academic Support

As part of the mobile kaiako that works out of the library, there will be a network of academic kaiako for academic support. This support will include academic help, literacy and numeracy support, inquiry and essay writing, time management, paragraph structure, science support, maths support, and neurological and accessible academic support.

This is already seen in many of the ITPs around the motu. Library and academic support are often together. Many of them don’t run out of the library but, with this model professional librarians and academic support would again work from the library space. This makes sense for librarians as their teaching relates directly to the resources and academic support is closely related to librarian support as they overlap sometimes. These two teams have a more related role than pastoral support, but they will need to liaise with the pastoral support at each of their branch institutions to make sure all ākonga get that wrap-around holistic support.

The other type of support that the librarian and academic support kaiako will offer is asynchronous support. This is where they will be enrolled on the course they look after and they can offer live support at the same time as the teaching. This is another way for ākonga to contact their library and academic support kaiako. At the Open Polytechnic, they are already embedded into this way of support using the library talk channels in their online teaching software.

Māori and Pacific Kaiako Librarians

The Māori and Pacific kaiako librarians will be a source of advice to kaimahi and ākonga on everything Te Ao Māori related. They will also be kaiako so will be able to offer full immersion classes and create resources for those that have te reo Māori as their first language. These positions in each branch libraries will provide an ongoing reminder of Te Tiriti o Waitangi's responsibilities and help Te Pūkenga libraries to become more relatable and accessible to our priority users.

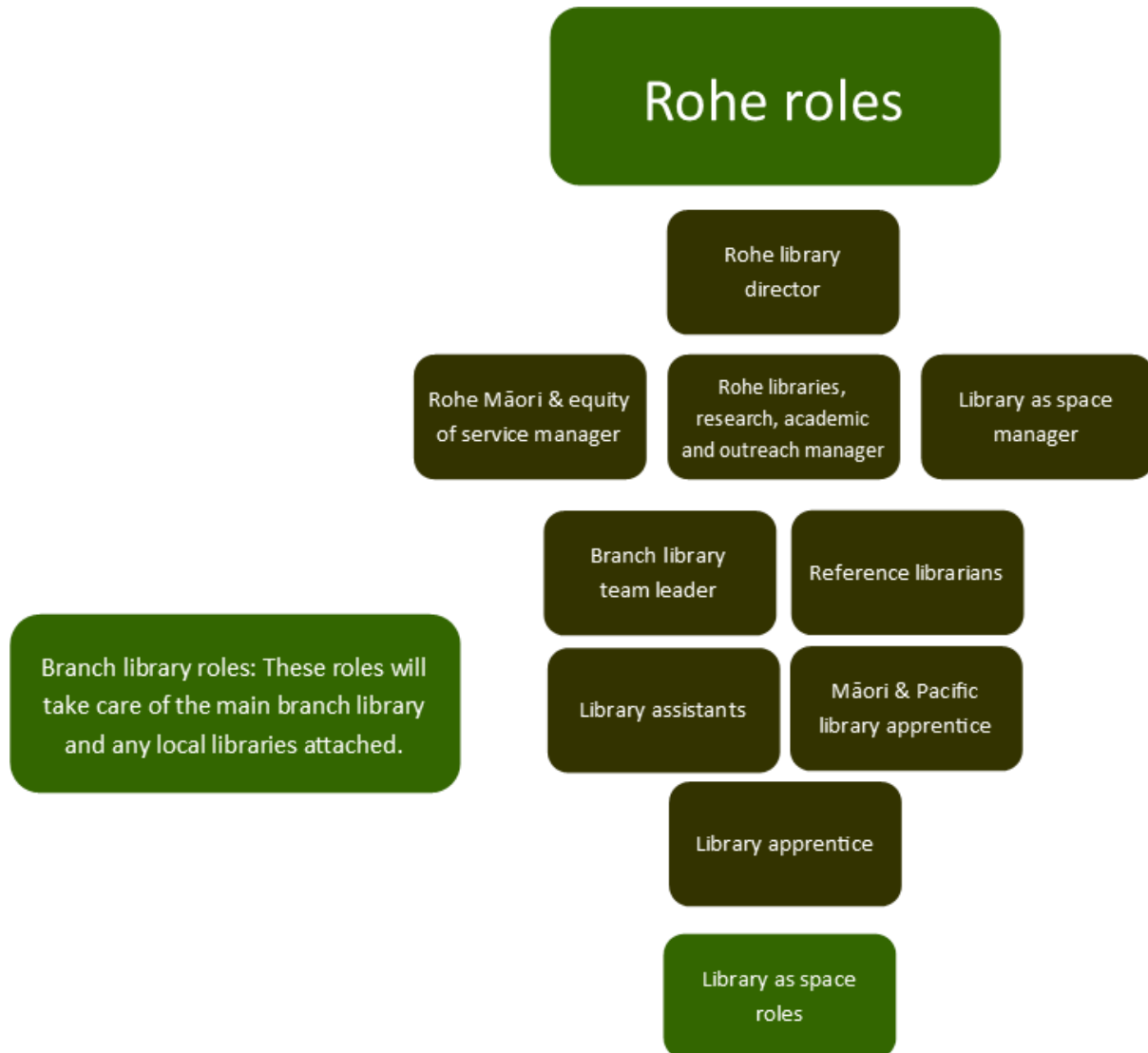
Research and Open Access Librarian

The research and open access librarian will look after the research data at their branch and local libraries. They will also promote the use and publication of open-access resources and be involved in the research community at Te Pūkenga and the wider academic world. They would support researchers with research, rangahau, ranga'au and postgraduate enquiries. Delancy and Bates (2015) in their article state that researchers do not often know what resources and services are available to them at their library. "Researchers will also need places to deposit data and distribute their research. Libraries can use tools like ORCID to connect preferred gateways like ArXiv with institutional repositories to develop a comprehensive research platform for researchers" (Cox, 2020, para. 14).

6.2.4 Library as Space Roles And Space

Figure 30

Library as Space Roles



(Figure created by Author)

Another recommendation is to plan to redesign each branch and local library to truly reflect the land it sits on and the community they serve. Each branch library should be modern, functional, beautiful, and future proof, a landmark within its parent institution.

“Perhaps ITPs, more than universities, attract an even greater diversity of learners, due to the wide range of levels of courses taught. Te Pūkenga libraries reflect this: ALL Te Pūkenga learners see the library as a place where they feel welcome and actively look for knowledge, inspiration, and support. Te Pūkenga libraries reflect the unique culture of Aotearoa, embracing our bi-cultural heritage and our place in the Pacific, as well as the many cultures who now reside in NZ and those beyond our shores who choose to study via an Aotearoa ITP” (survey quote).

Each branch and local library will be individual according to the community it serves. Its interior design, artwork, collections, and building design will truly represent the history, present, and future of the land on which it sits and the ākonga it serves. It will be a place to showcase ākonga work. Another quiet place to study when their home life is too loud, a collaborative space to generate new ideas and thoughts. “Library spaces will need to be flexible and adaptable in order to stimulate collaboration and social interaction, while still enabling quiet reflection and serendipitous discovery” (Arup, 2015, p. 37)

All the different branch and local libraries will aim to have the same types of spaces in each library, so if students move around, they can have the same facilities at each place. Each library will have silent, quiet, and collaborative study spaces. Also, study rooms, maker spaces, and library teaching spaces. Over the next twenty years the main branch libraries will be redesigned and modernised to become a landmark within the rohe - with more greenery and nature inside, more quiet spaces, more nooks and crannies to hide away in, more collaborative spaces to do group work, and a café (Pierce, 2021).

One small thing they can do is put a land acknowledgement in their spaces. “Land, or territory, acknowledgements are the practice of prefacing or signing communications with a recognition of the land from which one is communicating and of the original people from whom the land was seized” (Anderson, 2022, p. 6-7). Land acknowledgements are being done around the world to honour the indigenous people of the land, their connection to the land and the history of that land. “Libraries and archives were chosen as a focal point because they are units with obligations towards knowledge and campus history” (Anderson, 2022, p. 3). This is so that whenever someone walks into one of Te Pūkenga branch or local library they know what land they stand on, and the people of that land. It

gives visual and artistic honour, but also educates people at the same time. These will be unique and different for each branch and local library.

Maker spaces rooms will be completely targeted to the programmes that are delivered at each rohe. “Makerspaces are growing service areas in schools, public and academic libraries” (Adejo & Babatude, 2021, p. 34). If a subsidiary delivers media arts type programmes, then the maker spaces could have a recording studio, a blue screen room, or computers with movie-making software or 3D virtual programmes for fashion or spatial design. If the programmes are more engineering-based then 3D printers, modelling, and systems and programmes that relate to STEM and prototyping. “The up-dating of devices and improvement on creative activities such as music recording spaces, large format printing, art-related workshops, audio and visual capturing, are done by librarians” (Adejo & Babatude, 2021, p. 35).

In developing urban areas, local authorities invest funds for the creation of flagship knowledge centres, that juxtapose traditional library spaces and spaces for creative activities such as experimenting with new technologies, incubating a new business, or even rehearsing with a band. (Arup, 2015, p. 28)

These rooms and technology will be designed in collaboration with kaiako and ākonga at each branch library to make sure they are catering to the needs and expectations of those that will use it. A place to begin to generate knowledge and information. This will move libraries away from the traditional house of information to a place where information and new knowledge is created (Adejo & Babatude, 2021).

The reference desk in a library space no longer has the value it once had. “Faced with declining reference questions, many small-to-medium-sized academic libraries may find it advantageous to eliminate a physical reference desk in order to provide other essential online and in-person public services” (Meldrem et al., 2005, p. 305). I personally still think that the service is still important but maybe not the traditional reference desk that libraries had in the past. “Research in librarianship has addressed the value of reference work in the academic library setting, the roles and training of student employees, and the value, growth, and evaluation of student employees, laying a foundation for our study” (Quigley et al., 2021, p. 196). A drop-in service is a vital service in libraries and this is

reflected in the survey findings of this research. Some libraries have trialled an on call service where the circulation help desk kaimahi would call out a librarian when needed. Te Pūkenga libraries could still offer the service but have no physical desk. Some even going so far as having walkie-talkies (Meldrem et al., 2005).

Finally, the circulation help desk will be the heart of the branch library. This will be the domain of the library assistants. They will be the friendly face of the physical-based branch Libraries. They will look after the front-of-house duties and create the ambience in the branch and local library spaces. They will triage to other services that the library offers and services the subsidiary offers. They will arrange drop-in help with the reference librarians, one on one support with the Māori & Pacific librarians, the information literacy kaiako librarians, and academic support kaiako depending on the needs of the ākonga or kaiako and they will direct people to enrolment, IT and kaiāwhina where necessary. They will be the first point of call and first impression for many ākonga and other key stakeholders, so they will be trained in Manaakitanga and te reo. “In this model, student employees and staff answer directional and basic reference questions at the circulation desk while making referrals of more complex questions to subject librarians as appropriate” (Quigley et al., 2021, p. 195).

Branch Team Leader

The branch team leader is responsible for the smooth running of each of the branches and any local library that is linked with their branch library. They will look after the rosters of the reference librarians, library assistants and the apprentices. They will take care of the administration and day to day running of the branch and local libraries attached to it. They will also help triage help to the mobile kaimahi, that will be found out and about the campuses. The mobile kaimahi will work out of the branch library but will not spend much time there as their responsibility is the centres and schools they are assigned to. The branch team leader will network and liaise with them, as well as the other branch team leaders and will answer to the rohe library as space manager. Their main focus is the library spaces.

Reference Librarians

The reference librarians will be the professional librarians situated within the library space. Whenever an ākonga or a Te Pūkenga kaiako or kaimahi needs professional librarian help and visit

the library there will always be someone there to help them. They will also support the back-of-house kaimahi. They will be a network within Te Pūkenga libraries. They will manage all the drop-in help enquires. The reference librarians will also be the day-to-day mentors or tuakana (older sibling) for the library apprentices.

Library Assistants

Library assistants will look after the help desk at each of the branch and local libraries. They will help where they can but triage to the professional kaimahi when needed. They will be a friendly face within the library space, greeting ākongā and kaimahi as they enter the space. They will be the visible library kaimahi in the library space, creating the friendly atmosphere and providing a sense of security for ākongā when they are in the library space.

Apprenticeship Programme

In the year 2000, I started my career at the Hamilton City libraries. I was employed as a part-time trainee librarian in the reference department on the third floor of the Central Library. It was a fantastic start to my career. I was encouraged to learn every part of the profession, get involved in various projects and serve at the reference and help desks on all levels. It was for two years and at the end of the two years, I was offered a full-time job in the reader's advisory department on the second floor. As part of the entry requirement for the job, I was expected to be studying and achieve a library qualification by the end of it.

I recommend a similar programme at Te Pūkenga Libraries. The main reason for this is that Te Pūkenga is by its very nature a vocational educational provider and through the Open Polytechnic of New Zealand they train future librarians. "As future professionals, in undertaking a practicum, students have a chance to gain expertise and build their confidence through practical training and experience" (Juznic & Pymm, 2016, p. 92).

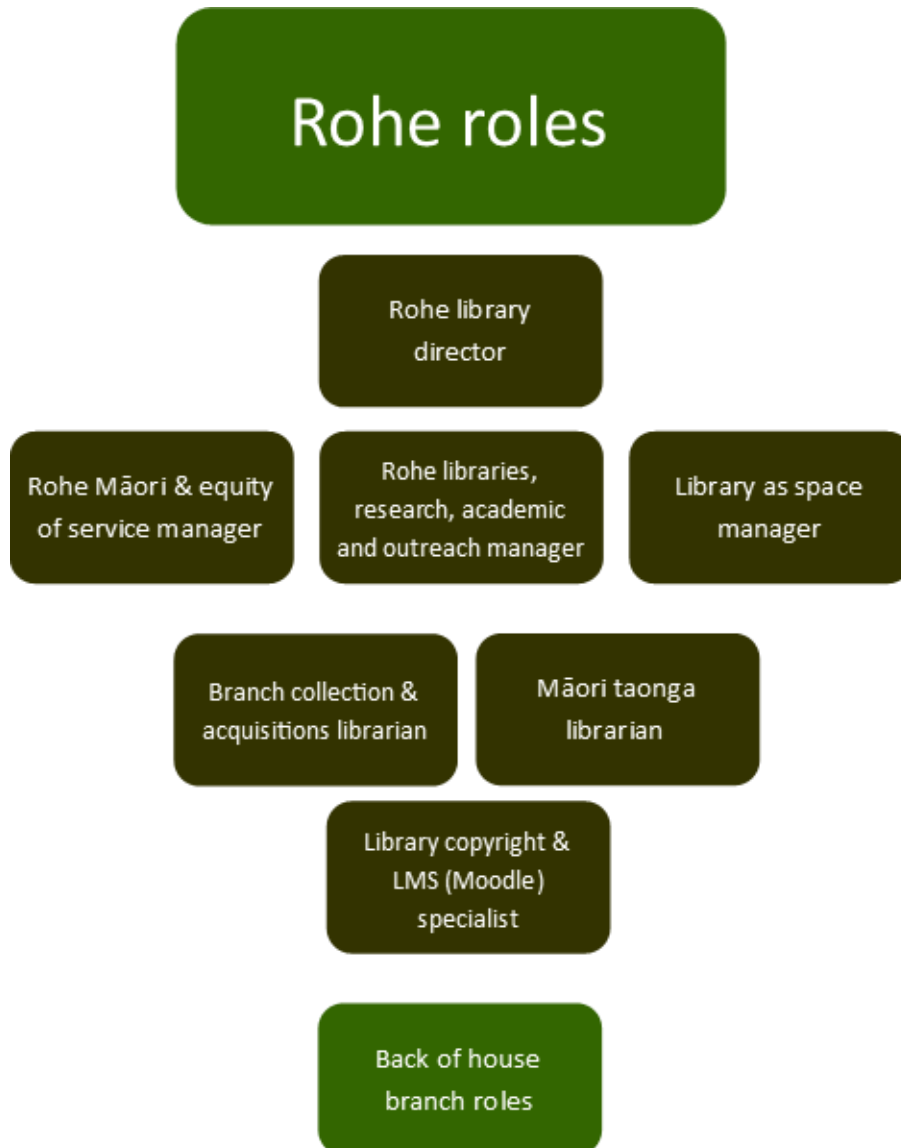
I think these apprenticeships would work very well with that programme and build the academic library profession. One of our aims is to also encourage more Māori and Pacific People into the profession.

I propose that each branch of Te Pūkenga libraries offered two apprenticeship positions. One for anyone of Māori or Pacific background and another one open to anyone. These positions may not always be filled but can be offered to anyone studying to become a professional librarian. Te Pūkenga libraries would work with the Open Polytechnic Library and Information department to fill these positions. This would be a tuakana-teina model. “The tuakana-teina model is a buddy-system model. An older or more expert tuakana (brother, sister or cousin) helps and guides a younger or less expert teina (originally a younger sibling or cousin of the same gender” (Lemanu, 2015, para. 4).

6.2.5 Back of House Roles

Figure 31

Branch Back of House Roles



(Figure created by Author)

Three back-of-house roles were added to the library structure for each branch library as a clear message came out of the surveys that each ITP library needs to have a unique collection to support their local ākonga and kaimahi. These three roles would be at each branch library to maintain the collections and to do local cataloguing, and acquisitions maintenance. They would work very closely

with the centralisation team that would have overall control of collections and budgets. Their role is to make sure each branch and local collection meets the needs of the ākonga and kaimahi that work at those campuses.

Library Copyright & Learning Management System Specialist

The next position is a library copyright & learning management systems specialist. They will make sure that each learning platform for each school and centre at their branch and local campuses is copyright compliant and is using the library resources according to their contracts and copyright rules.

Māori Taonga Librarian

The other position would be a specialised Māori taonga librarian. It is part of our treaty responsibilities to ensure that Māori has self-determination and governance over their taonga. This will also ensure that our collections are fit for purpose and will support our ākonga and kaimahi that choose to use Mātauranga Māori resources in their assignments and projects. They will work with the Māori and Pacific kaiako librarians and support any mātauranga Māori inquiries that come from the Library Assistants triage service. They will work directly with the centralisation Māori Taonga Lead Librarian.

Branch Collections and Acquisitions Librarian

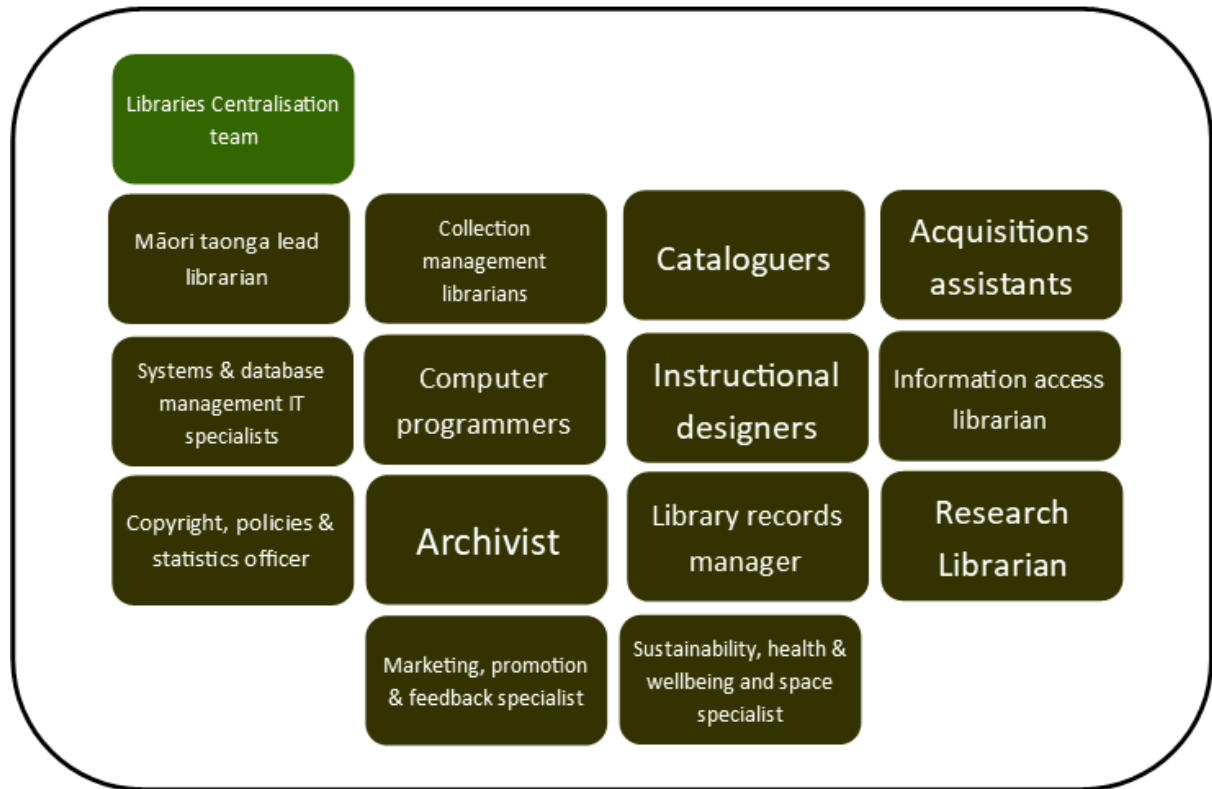
This position would maintain the local collections at their branch and local library, making sure it caters for the subjects being taught at their branch and local libraries. They will also assist with the ordering, maintenance and care of their physical collections. They will train the branch mobile roles and reference librarians in the use of any new databases and be the link between the centralisation team and their branch and local libraries.

All roles would be supported by kaimahi in the centralisation team and the rohe management teams. This is to make sure they don't feel isolated in their roles and that they maintain up-to-date knowledge of the wider collections.

6.2.6 Centralisation Team

Figure 32

Centralisation team Roles and Tasks



(Figure created by Author)

The function of the centralised team is to have an overarching role over the whole of Te Pūkenga libraries. This team would have the expertise that the wider Te Pūkenga library kaimahi can draw on. They will do most of the back-of-house functions to free up the local library kaimahi to focus on their local stakeholders of ākongā, kaimahi, and researchers. This team will also provide consistency to the whole of Te Pūkenga libraries.

All libraries will have the same policies, processes, online resources, online tools and equipment, and branding - and the centralized team will be the creators. Their goal is to make each rohe, branch and local library kaimahi mahi easier.

This team will have a 'one library' focus as they will work with all four rohe. They are the experts that all the rohe, branches and local libraries can draw on. They have a big picture view of Te Pūkenga libraries as a whole since they are not tied to one particular rohe or branch.

Distributed Workforce

The centralised team can be located anywhere in the country, they can go into their closest branch library to work if they want to work on a site or they can work from home. "A distributed workforce is comprised of remote workers who are "distributed" across locations outside a traditional, centralized workplace" (SAP, n.d., para. 1). COVID-19 has taught us that we can still achieve things and stay connected while working from home. They will do a bit of travelling to the different libraries to implement the standardisation of things each year. They will also be involved in the auaha innovation groups (refer to section 6.2 for more details) to share their expertise and experience and to give consistency across the organisation.

Much of the content for new electronic resources, systems and services will be developed by the librarians in the branch and local libraries. The centralisation team will have the skills and resources to bring the ideas and innovation that are generated in the branch and local libraries to life and distribute it across the motu.

Centralisation Director

The centralisation director will be part of the library strategic council and manage the centralisation team. They will have a one-library strategic view of the one library as a whole. While the rohe directors will have a focus of both the library as a whole they will also make sure that each branch and local library within their rohe will cater to the individual needs of each campus. The centralisation director will not have this double focus. Which means they have to have a big picture view. The centralisation team are there to support the branch and local teams to achieve their goals by providing expertise that the whole of Te Pūkenga libraries can utilise.

Māori Taonga Lead Librarian

The Māori Taonga Lead Librarian role in the centralisation team is to oversee all of the Māori Taonga held at every Te Pūkenga library. They will work closely with the Rohe Māori & Equity of Service

Managers and the branch Māori Taonga Librarians to build this collection over all campuses. They will also communicate with Iwi and hapu and other Māori groups, as well as the collection managers to ensure the whole collection is decolonised and fit for purpose going forward. They will have a one library strategic view of this special collection.

Collection Management, Acquisition's Assistants, Cataloguers

These three roles are very traditional in a library. In this scenario they are removed from the branch and local libraries and are now part of the centralisation team. They may need a base as their role could require space. They will do the majority of the resource buying, collection development and cataloguing. They will work very closely with the Māori taonga lead librarian, as well as all the branch collections & acquisitions librarians and the branch Māori taonga librarians. The branch librarian's role is to make sure that their local collections are individual to the needs of their ākonga and physically maintain the collections, this centralisation team will have a one library focus and will think of the collection as a whole across all of Aotearoa.

Systems and Database Management IT Specialists, Computer Programmers, Instructional Designers

These are the specialist IT roles. The computer programmers and instructional designers will work very closely with the mobile and library as space roles to create resources and implement any new technology that are decided on by the auaha groups mentioned in section 6.3 and signed off by the library strategic council. The systems and database management IT specialists will work with the collection management librarians and the branch library team leaders to make sure the library databases and LMS are maintained. These positions will also have a one library focus and will think of Te Pūkenga libraries as a whole.

Information Access Librarian

The information access librarian will have the role of thinking about the best ways of getting the library resources to ākonga and key stakeholder groups. Whether this is domestic or internationally based ākonga. They will also prioritise ākonga with accessibility needs and strategically think of making access easier and more intuitive. Making sure that all ākonga have the access they need to the library resource to help them achieve their goals. This position will also have a one library focus.

Copyright, Policies & Statistics Officer

This position will be a specialist for copyright. They will create and maintain the library policies and keep all relevant statistical information for reporting purposes. They will do this for the whole of Te Pūkenga libraries. They will work very closely with the branch library copyright & learning management software librarians. They will also keep up to date with the contracts of each database so that Te Pūkenga is always compliant in their use of electronic and physical resources. They will provide support to the branch libraries in these areas. They will also be the lead of the referencing i.e. APA auaha group. This position will also have a one library focus.

Archivist, Records Manager

These two roles are at the moment done outside the Te Pūkenga library in many of the institutions. The archivist will look after and maintain all the physical archives across the country. They will work with the archive retention policy and off sight storage facilities. The Records managers will look after all the electronic records and make sure that Te Pūkenga libraries are compliant in this area. This position will also have a one library focus and will be their to support all library kaimahi across Aotearoa.

Research Librarian

The research librarians' position will have an overarching view of research data management. They will work closely with the research offices at all campuses to maintain consistency in research data management at all Te Pūkenga libraries. They will work closely with the branch research data & open access librarians. They will promote the use of open-access resources and the publication in open-access sources. They will be Te Pūkenga's library representative on all national bodies relating to research in Aotearoa.

Marketing, Promotion & Feedback Specialist

This position was a recommendation from the survey data. This position would be responsible for the perception of Te Pūkenga libraries in the wider institutions and to ākongā. They will have an overarching view of marketing and promotion of the library as a whole. They will support the mobile roles and the library strategic council. They will also be responsible for conducting surveys and user

groups of key stakeholders to make sure Te Pūkenga libraries are always delivering the services that their stakeholders need and want.

Sustainability, Health & Wellbeing & Spaces Specialist

This position was also a recommendation from the survey data. This position would make sure that Te Pūkenga libraries are always sustainable in all their processes and policies. They will have an environmental focus. Attached to this role will be the responsibility to make sure Te Pūkenga library kaimahi have good wellbeing and health processes. They will work very closely with the Health and Safety manager at Te Pūkenga and other health and safety networks within Te Pūkenga. They will also work very closely with the local elected Health and Safety reps at each site. Their aim is to help create a healthy working environment for all kaimahi. This is because this new structure has a lot of new types of positions that have been normalised by COVID-19 such as distributed kaimahi. Making sure that each type of role feels connected and part of Te Pūkenga libraries as a whole. They will also assist with the libraries as space managers at each rohe to make sure the libraries spaces function as an inviting environment and culturally safe for all ākongā and kaimahi.

6.3 Manawa Roa -Design Thinking Organisation and Industry 4.0 Technologies

Value: Manawa roa describes a person or group’s behaviours that embody staying power, resilience, fortitude, grit and doing what needs to be done to achieve the collective goal (Te Pūkenga, 2022b).

Ever since its conception, Te Pūkenga has been committed to co-design. Design thinking is a great tool for allowing organisations and companies to stay innovative and forward-thinking - making sure that they know what their kaimahi and stakeholders are thinking and want from their services. It is also a great way to tap into amazing creative ideas from kaimahi that may never be heard if not for the co-design process. Many of the most successful innovative companies use design thinking to build their businesses and stay up to date (Kanazawa, 2017).

Co-design or design thinking is very closely related to TDR. It looks across all disciplines and ways of thinking to get a unique answer that is human-centred. Te Pūkenga has used it in their *Mobilising the New World* inquiry. How they have made it work is by gathering an ākongā centred co-design team of about 20 people (Te Pūkenga, 2020b).

Design thinking has become necessary in companies and organisations rather than a nice to have. Every single aspect of life is being affected by many disruptive changes, and innovation is accelerating at an amazing rate. Libraries need to stay at the forefront of it.

So, I propose that Te Pūkenga library follows suit and becomes a design-thinking organisation. Especially during the change process of the next five years, I believe it could become part of the very makeup of who Te Pūkenga libraries are. A design thinking industry that is research and data driven.

Filbert (2016) believes if the library wants to ingrain itself into the world of tomorrow then we need a ... “profound systemic reconstruction guided by TDR, multiple champions, and communicative liaisons managing network stability, knowledge mobility, and innovation appropriability” (p. 201). In this research, the idea of a design thinking organisation is explored as a possible way of doing this. It also suggests that librarians become more research active.

“To honestly address the gaps in our theories and practices, to match with other information management professionals. Libraries have always said that they are good at researching, then it’s about time we start researching our future as a profession” (Filbert, 2016, p. 201). So that they can truly understand the needs of their users and be continually academically using information that would inform their practice as professional librarians.

Using TDR and design thinking means the researcher can critically analyse all the disruptive changes as they intertwine. Seeing each change separately and together has made it possible to come up with a possible roadmap forward. This is done through reflexivity. This was achieved in this inquiry through multiple surveys, interviews, workshop, extensive reading around all the topics and subtopics and personal reflection.

To do this I propose that Te Pūkenga libraries implement some ‘*auaha*’ (Innovation) groups that have members from all over the motu. Preferably each library kaimahi would be a member of an *auaha* group. Ahn and Lee (2022) in their article talks about benefits of using a cross functional team. These were “functional diversity, organisational flexibility, empowering, motivation and communication” (p. 2). To be successful an *auaha* team will need to be open (Ahn & Lee, 2022), independent and a clear purpose. The topic of the group will determine who needs to be involved from the centralisation team. This is a way for Te Pūkenga libraries to continually move forward. Each group will have terms of reference, they will carry out research when needed and create either a business plan or a prototype. Once the business plan or prototype is developed then they will present it to the library council to implement.

There are some limitations to cross functional groups according to Ahn and Lee (2022) “although cross functional team efficiency does not directly impact firm performance, it indirectly positively affects performance via interdepartmental and external collaboration” (p. 17). Since Te Pūkenga libraries will be spread across the whole of Aotearoa, I believe that “interdepartmental and external collaboration” is a very important risk that needs to be address at the very start of the network. Te Pūkenga library kaimahi needs to communicate and know each other.

Some *auaha* groups will be more long running than the developement of a new innovation. They will be responsible for implementing systematic changes and continual service, making sure that Te

Pūkenga libraries never stay still but is continually innovating and matching their services to their ākonga needs.

The first recommendation for an auaha group is to move the libraries to mobile services. Mobile phones are everywhere now and apps are the best way to get different industries' information directly to their user. "No one should underestimate the potential of mobile internet and mobile apps" (Wang, 2011, p. 104). Many ākonga will not have a laptop but they will have a mobile phone. So, we need to meet our stakeholders where they are. To start this process, we need to create a Te Pūkenga library app that has access to our catalogues and databases. "Although an increasing number of academic libraries are providing mobile service, not many of them provide mobile access to media collections" (Wang, 2011, p. 105).

People want to design their own personalised space where they can access favourite sites, materials, bookmarks and images. Immersive experiences are rich, virtual online environments that allow learners to be engaged in a self-contained artificial or simulated world while experiencing it as if it was real. This can involve applications such as game-based learning, simulation based learning and virtual 3D worlds. Access to information can happen in any location or time zone and can replicate any environment. (Arup, 2015, p. 34)

The Wintec systems librarian has already created a prototype of a library app that could be adapted to the whole of Te Pūkenga. Ākonga and other library users in the future could access a personalised library profile, an augmented physical resource finder, the catalogue, the databases, notifications, a booking system for library spaces, information literacy kaiako, academic support kaiako, they could renew physical resources, access a library chat and even more services could be added as technology advances.

Evidence and trends reveal an increasing use of mobile internet, mobile apps, and mobile videos. Some researchers even estimated that mobile access to networked information will surpass desktop web access. As one of the major and professional information service providers, academic libraries should be fully aware of the trend and respond to it wisely. (Wang, 2011, p. 112).

My next recommendation is that one of the first auaha groups set up is a customer experience (Chamberline, 2012) and equity of service group where they look at the expected level of customer service that should be delivered at each branch and local library and how they make that service equitable. Any ākonga from around the motu should expect the same level of service from any branch or local library they enter.

Throughout the surveys, interviews and literature review there have been many great suggestions for innovation ideas. Some ideas will have to wait for technology to catch up with us, but they will be on the wishlist waiting and who knows with the skill set we will introduce and the expertise we already have maybe we can be the forerunners and bring these ideas to life.

Below are some suggestions for Industry 4.0 technology that Te Pūkenga libraries could start planning to implement or auaha groups could be set up to research them.

6.3.1 Kaimahi Related Services

24 Hour Chat

Te Pūkenga libraries will have a large number of professional librarians and academic kaimahi from across the motu that could be rostered on for this service. So, most professional kaimahi would only have to be rostered on for an hour a week at the most, and the rest of the time an artificial intelligence bot could handle it.

Electronic Booking system

All library kaiako kaimahi could have an electronic calendar booking system so ākonga and general Te Pūkenga kaimahi can book appointments directly into their calendars. “Students benefitted from minimal lines and wait times at the Business Building service point, while research consultants benefitted from the ability to efficiently and adaptively staff service locations” (Cole & Reiter, 2017, p. 142). Two very good systems need to be evaluated and decided on for consistency, Calendly or LibCal.

LibCal is an affordable, easy-to-use web platform designed to handle libraries' calendaring needs. Its four distinct modules work together to provide an integrated solution. Hours and Locations Management; Room and Equipment Reservations; Event Registration and Management; and Librarian Appointment Scheduler. (Springshare, n.d., para. 1)

Virtual Reality Classrooms

Virtual reality classrooms are not quite here yet but I believe that Te Pūkenga libraries should start planning for such innovations. Virtual reality is going to be the next big thing. “Virtual reality applications have grown tremendously in almost all domains and thus have shown a remarkable impact on various sectors like learning, teaching, attitude, and community skills” (Al Farsi et al., 2021, p. 99-100). A virtual reality classroom will be a perfect addition to the information literacy suite of resources. These virtual reality information literacy classes can be offered across the motu for all ākonga at any institution. “The future is virtual reality applications, and its benefits will remain countless and immeasurable” (Al Farsi et al., 2021, p. 107).

6.3.2 Non-Kaimahi Related Services

Virtual Reality Library Tours

The next piece of technology recommended for the library spaces is virtual reality library tours. Here ākonga can use virtual reality to tour their branch or local library. This will be great for the promotion and advertising of the different branch or local libraries and the courses and programmes they support. Ākonga can visit their library virtually before they ever set foot in it so when they do, they feel more comfortable and at home. “When the virtual tour is used as a teaching tool it provides students with a self-directed, flexible and enjoyable introduction to the science library resources and services” (Kittleson & Jones., 2002, p. 47).

Augmented Reality Book Locator

My next recommendation for each branch and local library is to make finding physical resources easier. Dewey and the Library of Congress have been around for centuries and have worked very well in the organisation of physical resources. I believe we will have them around a little longer but with

the development of Industry 4.0 technology, augmented technology libraries have a way of making Dewey and Library of Congress invisible to the user. Thereby making the access to information in Te Pūkenga libraries equitable and equal to our users. I recommend that Te Pūkenga libraries develop an augmented reality book locator system that will be accessed from the Te Pūkenga library app.

An interesting approach from a Chinese design company Toout. This little tiny device is in the first place a regular bookmark, which can keep track of all borrowed books, as well as remind the user of the return dates. Nimble is an advanced library augmented reality tool, designed by a London-based interactive designer and Google engineer Sures Kumar. (Rajan et al., 2022, 11-12)

They find the book they want in the library catalogue and then they click on the augmented reality physical book or resource locator and their phone guides them to the exact physical book or resource they want (Rajan et al., 2022). Thereby moving Dewey or Library of Congress into the 21st century and beyond, making better and more intuitive access to the everyday user.

6.3.3 Educational Resources

Articulate courses

Articulate is software that allows gamification technology. “Articulate Rise 360 is an e-learning platform that lets instructors build highly interactive courses that are accessible from any device” (Duffus, 2022, p. 351) Research on the different gamification platforms should be investigated. Te Pūkenga library could create a suite of these as well for ākonga that like self-directed learning. Again, covering academic integrity, finding quality resources, using the different databases, referencing, how to research effectively, academic writing, time management, and paraphrasing. “Used to create several short information literacy lessons covering topics from research question development to finding, accessing, and citing data to evaluating information sources” (Duffus, 2022, p. 351).

Information literacy MOOC

As well as gamification courses, self-help videos and LibGuides, Te Pūkenga library could set up an information literacy MOOC. This MOOC could be encouraged to be compulsory for all first year

ākonga. This would be run online and be led by a library kaiako from each rohe, and delivered twice every semester. “In November 2016, the European Union funded project Information Literacy Online (ILO) was started with the aim to develop, evaluate and disseminate a multilingual open-access MOOC designed to improve students' information literacy” (Dreisiebner et al., 2019, p. 106). Dreisiebner et al. (2019) discusses the positives and limitations of this MOOC in their article. My recommendation is that is a support to classroom and zoom teaching and would not take away from these teaching methods. As the article pointed out the MOOC did increase the ākonga skill in Information Literacy but the increase was the same as it would have been in a normal classroom setting (Dreisiebner et al., 2019).

7 Critical Analysis and Conclusion

This TDR inquiry is grounded in the disruptive events over the last few years for ITP libraries and the librarians that work in these libraries. To do this justice it required a complexity-based approach as it is not just one disruptive event, idea, thought or challenge it is a web of these, interconnected with people and relationships. TDR and Grounded Theory were perfect frameworks for this type of iterative inquiry.

Throughout this inquiry, I have explored many different dimensions and disciplines to get a clear picture of the complexity of this topic. To understand all the many complex topics, thoughts, ideas, disciplines, and people in this inquiry, I drew on the process of contextualisation rather than reductive methodology. All inquiry ideas are developed in the context of time. These ideas were sometimes “complementary, antagonistic, or concurrent”. I also included my perspectives and thoughts on the complexity of the inquiry (Montuori, 2013, p. 47).

This inquiry has followed an iterative analysis process. My reflections show when the inquiry is adjusted or adapted because of new information and learning. This did not always happen linearly. Some ideas are well defined but not all are completely defined. “It is this complex entanglement of the individual and the collective (and collective artefacts) that contributes to the social outcomes that we can observe” (Pearce et al., 2022, p. 7).

Academic libraries are continuing to focus on equitable ākongā success and outcomes regardless of what is happening in the world and Aotearoa - working with other kaiako members and showcasing their value to the greater institution. Traditionally leadership did not see libraries as being part of ākongā success, but academic libraries are coming up with new and innovative ideas to be seen as an integral part of the ākongā academic journey.

Research productivity, and ākongā enrolment and retention are the ways academic libraries' need to show their value. More discussion on the value of libraries can be seen in [Appendix J](#). Cox (2018) goes on to talk about the main focus of ākongā success, expectations and eventual employability need to be the way academic libraries promote their value and push ākongā as partners in the

success and value of libraries, rather than seeing them only as clients, patrons or customers. This means that they also get a say in the decision-making and future planning of the library.

Our ākongas are the centre of our Te Pūkenga whānau (family). At all Te Pūkenga libraries, the aim is to walk alongside each ākongas and to build a community of support around them, so they have all the tools to circumnavigate their way in the education world and beyond, being able to adapt to change and new ways of working quickly and successfully. Te Pūkenga libraries also hope to provide a risk-free, culturally responsive environment.

What I have learned from this inquiry is that each ITP library service is vastly different from another. To get some sort of consistency will require a radical buy-in, patience, and compromises from all subsidiary libraries and if we can do this then the outcome will be truly amazing. The final scenario was developed around the five major insights that came from the data:

7.1 Equity and Understanding

The first was that library kaimahi want to serve their ākongas and other stakeholders with greater equity and understanding. They also wanted to hear te reo Māori voices in all stakeholder feedback (ākongas kaimahi, employers, whānau, hapū, Iwi, and the wider community) and matāuranga Māori to stand as a concept of a cultural system of knowledge. “Mātauranga Māori is relevant, fit for purpose and serves the aspirations of Māori and their Te Tiriti o Waitangi partners” (Te Pūkenga / Wintec, 2022).

Moving away from a euro-centric model of service delivery, increasing the numbers of Māori and Pacific staff, increasing staff understanding of oritotanga, biculturalism, tikanga, te reo Māori, indigenous knowledge, matāuranga Māori. Continuing to develop a no-barriers philosophy and flexible approach to service delivery. Our libraries need to be comfortable, welcoming spaces, with professional support on hand. (survey quote)

But we always need to keep in mind that the entire library model is a western one and has a fair bit of structural racism within it. I'm very interested at the moment, OCLC is doing a lot of work about reading descriptive practices, like even things like our metadata standards and ontologies have a lot of terms in them that are racist, that are sexist. So, I think we do endeavour to be responsive to our treaty and the treaty principles. I think that there's a lot more we can do and we want to try and do, particularly in digitising libraries and New Zealand decolonisation I think is a lot harder. And partly that's because we are in colonial legacy structures and I think it's important to acknowledge that. (survey quote)

7.2 Centralisation

The second was that most library kaimahi saw the benefit that was centralisation but also cautioned that with a need to maintain their personality as they believed this would best serve their local ākongā.

Centralisation would make sense for managing the purchasing of library resources and other tasks. However local needs need to be considered, and a channel available for these needs to be voiced. (survey quote)

7.3 Treaty Partnership

The third major insight was the need for Te Pūkenga library to become a treaty partner in all that it does. This has to be reflected in the structure, job descriptions and kaimahi. Te Rōpū Whakahau and LIANZA have been working towards shaping libraries into a treaties-based and decolonised profession for many years. Their commitment to biculturalism, equity, diversity, inclusion, bilingual signage, Māori subject headings in catalogues, and tikanga in all library meetings and conferences has been an inspiration to all librarians. Te Rōpū Whakahau, the Māori librarian's association is active in guidance and advice and is very valued by librarians everywhere in Aotearoa. "The incorporation of a Māori services or bicultural plan for any library works best when the parent organisation has established transparent Tiriti o Waitangi or Māori service delivery goals" (Barnett, 2018, p. 20).

It is seen in the way that Māori staff and students are involved in planning library services and the voice of Māori staff and students is considered in planning improvements. It is seen in the way that our library staff are seen as mentors and role models in the bicultural approach we make to delivering our services including building relationships, respecting, and valuing, every individual's unique identity and background, working together collectively and striving for excellence in this area. Every library staff member has a professional learning goal based around oritetanga and the Treaty of Waitangi. (Survey quote)

This insight relates to the research *Te Ara Tika: Guiding voices: Māori opinion on libraries and information needs*. This inquiry aimed to “promote the development of biculturalism in library services, and in the library and information profession” (Szekely, 2002, para. 4).

Szekely’s project was made up of two parts. The first was an analysis of library services to Māori and biculturalism from the perspective of a librarian in 1993. The second part was research conducted about Māori opinion on libraries and what they wanted to see in libraries and this was done in 1997. The inquiry found six key issues to focus on. “Issues relating to intellectual access and information literacy, the need to focus on Māori youth, literacy, and relationships between libraries and schools, issues relating to Māori staffing, the need or desire to have Māori libraries, the need to take libraries out to Māori communities and increase targeted promotion, issues relating to intellectual property” (Szekely, 2002, para. 5).

7.4 Improving Access

Fourthly ākongā and general kaimahi wanted to have access to more and felt like the creation of Te Pūkenga could be an opportunity to achieve this. They wanted more resources, more library kaimahi and more in their library facilities and spaces to help them in their educational, professional and research journeys.

“More resources and more E-books that I can see on a Kindle device”, “more multicultural resources. Living Library times (I.e., people who can share experiences). More indigenous knowledge”, “more access to global online published content”, “better systems for accessing information”, “more information sources”, “more variety of books for research”, “huge varieties of books”, “go digital and in-person and deliver services for Items”, “more e-books” and “continued access to the resources that promote the education and learning of the region and Aotearoa communities. (survey quotes)

Te Pukenga is an opportunity to create a national library with access to a similar range of material to a university library. At present, each IPT has to negotiate separate access to databases etc, which results in a very limited knowledge base. The move to Te Pukenga is a chance to address this” and “a place that is cutting edge and has anticipated changes in learner needs, that provides an environment that is stimulating and welcoming whether it be online or face to face. (survey quotes)

Scholarly communication also comes under this heading. Research, open access, copyright, digital lending and publishing were all topics that were discussed in the surveys and interviews and the tasks and functions that need to be addressed in any new library service.

7.5 Technology

Library kaimahi and ākonga believe that there are many different ways that Industry 4.0 technologies could enhance the library service. Industry 4.0 technology can help with equity and service.

Digitized learning material, lecture capture content, synchronous and asynchronous online teaching and communication sessions, ‘how-to’ video tutorials and overview sessions, flipped classrooms, e-tutoring opportunities, audio and video feedback, screen capture demonstrations, online quizzes, and multimedia demos, and virtual reality simulations and simulations.

(Martzoukou, 2021, pp. 267-268)

Depends on need and whether you are meaning a physical or virtual desk. Ideally, a Librarian should be available Monday to Friday either face to face or virtually. Perhaps 12 to 4 Saturday or Sunday (Survey quote).

Video footage to provide like a virtual reality experience of being in the library (survey quote).

As always libraries continue to keep up with the disruptive change in technology, by pivoting, adapting, and remaining flexible. And they do that on a very little budget and with the constant risk of their budget being cut. New technology has a cost and for libraries to continue to move with the times they need the budgets behind them to achieve it.

From this inquiry, a list of further research is needed on many different topics. More research is needed on the decolonisation of Aotearoa libraries, finding out what individual stakeholder groups want in academic vocational library services. The specifics of how a large library system could work over a large geographical distance. Gender equity in pay in the library industry. Librarians as teachers or teachers as librarians. Emerging Industry 4.0 technology and what needs to be done now to prepare for it.

I believe these issues still need to be addressed and focused on today and are reinforced by the findings in this inquiry. Especially when we are looking at a library service that will prioritise the needs of our Māori, Pacific peoples, and ākongā with accessibility issues. Any new service delivery model needs to keep the findings of this inquiry at the forefront of their minds when making decisions about library services in the future.

8 Critical Reflection on Learning Journey

If one looks at the TDR framework the aim is to move from one state of knowledge to another state of knowing using insights or eureka moments throughout the process. During this inquiry, there were many eureka moments and insights.

As I look back over my four years working with this inquiry, I can see the twists and turns this journey has taken to get to where I am today. My inquiry started in 2018 with my postgraduate certificate (refer to [Appendix O](#)) and my thoughts on the initial project were how the introduction of Industry 4.0 technologies would disrupt the library industry. Especially focussing on the Wintec library. I wanted to know the perceptions of the stakeholders of the library I worked in. It was on the tail end of a trend in libraries that was looking for relevance in the world of tomorrow, especially with the introduction of Industry 4.0 technologies. The Industry 4.0 technologies I was focusing on were artificial intelligence, augmented reality, robots, cloud technology and big data.

In 2018 I had a eureka moment when I realised that libraries don't have to fight for relevance in the world of tomorrow as we have a place already carved out for us. We create connections between people and the right information they want. We teach information literacy skills that will be needed so much more with everyday people starting to create information and the expansion of opinion-based knowledge seen everywhere on the internet. The place is a little ambiguous and hard to define but regardless it is there and it will add value to higher education in the world of tomorrow and the success of ākonga.

My inquiry moved away from the word relevance as it's undeniable that libraries have relevance and moved towards how and where libraries fit in society and the societies in the future. What was the role of academic vocational libraries and what value do they add to the world of academia?

In 2019 the right Honourable Minister Chris Hipkin's letter of expectations came out to ITPs and that would forever change the face of ITP libraries in Aotearoa and this inquiry. After many conversations with my supervisors and manager, I decided to pivot my project to capture this momentous moment. And wondered what all the ITP libraries could look like in the next ten years under the title of Te Pūkenga libraries, not just the Wintec library.

The definition of 'disruption' became clear as the wicked problem in Aotearoa ITP libraries. Firstly, in the form of Industry 4.0 technologies, then in the form of the letter of expectation from the then Education Minister Chris Hipkins and then later the introduction of the Aotearoa Institution of Skills and Technology [NZIST]. Later to become known as Te Pūkenga.

Te Pūkenga began creating the formation of its new network with equity of service and Te Tiriti as its foundation. It hoped to even the playing field in higher education for our priority learners. At Wintec, they started a project called New Student Enrolment and Retention (NZSEAR) to help provide equitable service to their priority ākonga. This later became known as Tōia Mai (refer to [Appendix G](#)). The liaison librarians and I were involved in this project.

In 2020, 2021 and 2022 I collected the data for this inquiry from surveys and interviews conducted for this research. As a librarian and researcher, I was eager to put TDR into practice and get as many stakeholder voices as I could to inform the scenario, I would present to the ITP library managers to help with their decision-making.

The Wintec library also started a project called Painga project where we are attempting to decolonise our library. This has a few mini projects in it such as library information guides, looking at the collection and looking at the library space through a bicultural lens. A lot of the work I am involved with in this project has come out of the research for this inquiry. It has also been done in collaboration with the Wintec Māori development unit and the Pacific unit.

Sadly in 2020, this research stalled because of COVID-19. With the transition to online learning, libraries and academic institutions were busy making sure their ākonga were able to do their studies. The Wintec library service thrived at this time. They transitioned very quickly to online. They introduced a chat service to replace the physical help desk in the library. International publishers came to the party and gave greater access to their resources so that our ākonga didn't suffer because they were stuck at home.

During this time NZIST got its new name of Te Pūkenga. The Tōia Mai project was granted its new name and it began to cement its place at Wintec.

Overall, through the data, themes and coding, there is a broad picture of how stakeholders see the ITP libraries. The limitation of my research is that there was not a wide demographic of stakeholders who answered the surveys. They were optional and user driven. This meant that people who chose to answer it were probably already active library users.

In hindsight, I believe this inquiry was also too big. So much data was collected that could not be given as much justice as it deserved in this research project but I believe the data is a good platform for further research.

This is a time of transition. The ITP library managers have been meeting for over twenty years and during their meetings, they began talking about what the formation of Te Pūkenga would mean for their libraries. I presented my initial findings to their face-to-face yearly forum in May 2022.

Because they will be the change makers for the future of Te Pūkenga libraries it was important to get their thoughts and feedback. What they thought the opportunities were and what the limitations were. I received some great feedback on the idea of a council leadership group and an apprenticeship programme to build into the profession. They also informed me at this time that it was likely that Te Pūkenga would form regions. Which they later did. This enabled me to change my scenario to accommodate this.

TDR inquiries ask the researcher to step outside themselves into a space of discomfort. This inquiry led me down a path of equity, history and what it means to be a citizen in Aotearoa. Looking at the part race plays in that history and how my worldview was very eurocentric and colonial.

The most pivotal point for me in this inquiry, was when I was asked, what makes a distinctly Aotearoa academic library service as opposed to any other library service around the world? This question/insight led to the Te Tiriti o Waitangi and the history of Aotearoa. How do Te Pūkenga libraries uphold and honour the responsibility of a treaty partner?

This understanding and insight enabled me to start a journey of looking at issues outside my own worldview and preconceived thoughts. This insight and knowledge have significantly informed the final scenario and have led me to start creating resources in the form of library guides to help

ākonga and kaimahi in the same journey of discovery to look beyond their worldview. Links to these library guides can be found in [Appendix F](#).

Insights and eureka moments have come over the years from the surveys, interviews and readings to redefine the nature of this inquiry. Over the final months of the research, these insights and eureka moments have become solid concepts in this inquiry and five major themes and insights that I have formulated the scenario around.

The next stage of this work is to present the data and inquiry to the ITP library managers to use in their decision-making and that they can refer to over the next few years of change. I also hope to present at LIANZA regional weekend school in 2023 and write an article for the LIANZA journal Library Life.

Two future projects I would like to be involved in is a suggestion from one of the ākonga in the surveys to create oral histories of prominent kaimahi and ākonga who attend or work for Te Pūkenga. The other is an oral history project interviewing library professionals and asking them about important issues that librarians are discussing in their organisations at that time. A snapshot in history.

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10 Glossary

Ākonga / Tauira	Student /learner
Kaimahi	Staff member
Kaiako	Teaching staff member
Mahi	Work
Kaitiakitanga	Kaitiakitanga Stewardship - Kaitiakitanga means “guardianship, stewardship, trusteeship, trustee” (Te aka The Māori dictionary, n.d.).
Auaha	Innovation
Manawa nui	We reach out and welcome in
Manawa roa	We learn and achieve together
Manawa ora	We strengthen and grow the whole person
Ōritetanga	Equality, equal opportunity
Rohe	Region
Motu	Islands of Aotearoa
Kaiāwhina	Pastoral Care
Whānau	Family
Tikanga	Law

11 Appendices and Portfolio

Appendix A: Relating the Treaty principles back to the library service

	Provision	Current expression (Common Principle)	Application
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<p>Article One</p> <p>The Treaty of Waikato Article One (English Version): “The Chiefs of the Confederation of the United Tribes of Aotearoa and the separate and independent Chiefs who have not become members of the Confederation cede to Her Majesty the Queen of England absolutely and without reservation all the rights and powers of Sovereignty which the said Confederation or Individual Chiefs respectively exercise or possess, or may be supposed to exercise or to possess over their respective Territories as the sole Sovereigns</p>	<p>Kāwanatanga</p> <p>Governance</p>	<p>Good governance</p> <p>Partnership</p> <p>(Engagement of Māori expertise – Mana Whenua)</p>	<ul style="list-style-type: none"> • Consultation and partnership with Māori are needed: <ul style="list-style-type: none"> ○ Leadership ○ Teaching and Learning ○ Māori Taonga curation ○ Rangahau curation ○ Māori Subject Headings ○ Posters ○ Signage ○ Library as Space: Welcoming ākonga into the space ○ Matāuranga Māori usage in academia ○ Decolonising the collection ○ Bilingual: physical and electronic resources ○ Te Reo Māori spoke in the library space • Engagement of expertise <ul style="list-style-type: none"> ○ Māori Kaimahi throughout the structure ○ Kaimahi training and upskilling ○ matauranga Māori ○ Tikanga
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<p>thereof” (Te Tiriti o Waitangi, 1840, art. 1).</p> <p>Te Tiriti o Waitangi Article One (Māori Version): “The Chiefs of the Confederation and all the Chiefs who have not joined that Confederation gives absolutely to the Queen of England forever the complete</p>	<p>Sovereignty</p>		<ul style="list-style-type: none"> ○ Decolonisation of collection ● Consulting with Mana Whenua (Need to find a way to hear their voices) <ul style="list-style-type: none"> ○ Surveys ○ Focus Groups ○ Hui (Meetings) with Māori Development Units ● Ask for advice and help
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<p>government over their land” (Te Tiriti o Waitangi, 1840, art. 1).</p>			
<p>Article Two</p> <p>The Treaty of Waikato Article Two (English Version): “Her Majesty the Queen of England confirms and guarantees to the Chiefs and Tribes of Aotearoa and the respective families and individuals thereof the full exclusive and undisturbed possession</p>	<p>Tino rangatiratanga/ Independence</p>	<p>Māori autonomy Iwi, hapū authority Self-determination</p>	<ul style="list-style-type: none"> ○ Land and history acknowledgement art in all Te Pūkenga Libraries stating the land, Iwi and history of the land on which it dwells. ○ When giving a talk or tour in the library space always acknowledge the original owners of the land that you are standing on.

<p>of their Lands and Estates Forests Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession; but the Chiefs of the United Tribes and the individual Chiefs yield to Her Majesty the exclusive right of Pre-emption over such lands as the proprietors thereof may be disposed to alienate at such prices as may be agreed upon between the respective Proprietors and persons appointed by Her Majesty to treat with them in that behalf” (TE TIRITI O WAITANGI, 1840, art. 2).</p> <p>Te Tiriti o Waitangi Article Two (Māori Version): “The Queen of England agrees to protect the chiefs,</p>	<p>Full, exclusive and undisturbed possession</p>		<ul style="list-style-type: none"> ○ E mihi ana ki ngā mana whenua o (Rohe/Region) e noho nei au (I recognise the ancestral and spiritual landmarks of (rohe/ region) where I live. ● Self-determination & Autonomy <ul style="list-style-type: none"> ○ Tuakana/Teina model modelled in libraries ○ Meeting ākongā where they feel comfortable, and safe to be flexible to meet their preferences. ○ AKO teaching and learning practices ○ Māori Kaimahi ○ Listening to Māori ākongā ○ Māori Library Job Titles and Māori Library name ○ Te Reo Māori welcoming Library video and displaces ○ Library electronic resources in Te Reo Māori ○ Information Literacy Classes run in Te Reo Māori ○ Incorporating Māori aesthetics into all displays and Library designs ○ Tikanga represented in the library space and teaching practices ○ Mātauranga Māori valued and displayed in the libraries
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<p>the subtribes and all the people of Aotearoa in the unqualified exercise⁷ of their chieftainship over their lands, villages and all their treasures.⁸ But on the other hand the Chiefs of the Confederation and all the Chiefs will sell⁹ land to the Queen at a price agreed to by the person owning it and by the person buying it (the latter being) appointed by the Queen as her purchase agent” (TE TIRITI O WAITANGI o Waitangi, 1840, art. 2).</p>	<p>Taonga / Treasures</p>	<p>Active protection</p>	<ul style="list-style-type: none"> ○ Rangahau supported and privileged ● Active Protection of Taonga <ul style="list-style-type: none"> ○ Decolonising the Collection Management process ○ Partnership with internal groups ○ Creating and defining the matauranga Māori collections and spaces ○ Creating and defining the Taonga Collection ○ Cataloguing for Ngā Upoko Tukutuku ○ Access the effectiveness of Te Reo on all electronic resources ○ Shelf End Signage ○ Creating and defining the Pacific Collection and Spaces ○ Rangahau and Rang’hau (Pacific Research) Research ● Ask for advice and help ● More Questions: <ul style="list-style-type: none"> ○ How does full, exclusive and undisturbed possession relate to collection Management of Māori Taonga owned by the library? ○ How do we actively protect Māori Taonga? ○ What about the land each Library sits on? ○ How do we hold and provide access to matauranga Māori and other Taonga
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<p>Article Three</p> <p>The Treaty of Waikato Article Three: “In consideration, thereof Her Majesty the Queen of England extends to the Natives of Aotearoa Her royal protection and imparts to them all the Rights and Privileges of British Subjects” (TE TIRITI O WAITANGI, 1840, art. 3).</p> <p>Te Tiriti o Waitangi Article Three: “In consideration, thereof Her Majesty the Queen of England extends to the Natives of Aotearoa Her royal protection and imparts to them all the Rights and Privileges of British Subjects” (Tiriti o Waitangi, 1840, art. 3).</p>	<p>Ngā tikanga katoa rite tahi, all the rights and customs</p> <p>Rights and privileges</p>	<p>Equal outcomes</p> <p>Equity, Options</p> <p>Participation</p> <p>Access</p>	<ul style="list-style-type: none"> • Equal outcomes Equity, Options <p>For this one, I believe there needs to be a greater understanding of Equity and Equality as they are often mixed up.</p> <p>Equity will enable Equal outcomes because everyone is not starting from the same point.</p> <p>Library Kaimahi needs to know and understand this and add this understanding to its practices and services.</p> <ul style="list-style-type: none"> ○ More Consultation needed ○ Information literacy and Life-Long Learning is where we as Liaison Librarians can shine here ○ Acknowledging and breaking down barriers ○ Promoting AKO in information literacy teaching ○ Making connections with individual ākonga ○ Libraries being an engrained part of the induction process ○ Networking with Kaiako Kaimahi, getting into classes and outreach service
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			<ul style="list-style-type: none"> ○ Library services are available at different venues ○ Upskilling Library Kaimahi ● Rights and Customs <ul style="list-style-type: none"> ○ Welcoming bilingual Library Spaces ○ Friendly faces of Library Kaimahi and being greeted ○ Qualified Librarian Kaimahi available in the library space ○ More Library Kaimahi ○ Welcoming bilingual Library Spaces ● Access <ul style="list-style-type: none"> ○ Greater and easier access to information ○ Translation of catalogue, videos etc ○ Teaching according to AKO principals ○ Protection of each ākongā sense of ownership ○ More audio books available ● More Questions <ul style="list-style-type: none"> ○ How do we incorporate oral knowledge in the traditional academic framework of knowledge gathering?
<p>Article Four</p> <p>Te Tiriti o Waitangi & the Treaty of Waikato: Article four was added later but was given as a verbal assurance</p>	Ngā whakapono katoa,	Religious freedom	<ul style="list-style-type: none"> ● Religious freedom <ul style="list-style-type: none"> ○ Access to information ○ Range of resources ○ Karakia: Use general karakia not directed to a deity ○ Freedom of access to information for all ○ Thinking about all the different religions and beliefs of the world

<p>but was not given legal status by the Waitangi tribunal. It gave the assurance of religious rights to all people.</p>	<p>All the faiths</p> <p>Ngā ritenga Māori, Māori customs</p>	<p>Protection of Māori spiritual practices</p>	<ul style="list-style-type: none">○ Attending all available training● Protection of Māori spiritual practices<ul style="list-style-type: none">○ Follow Tikanga in meetings and ceremonies○ Getting the right people involved○ More Kaimahi Training
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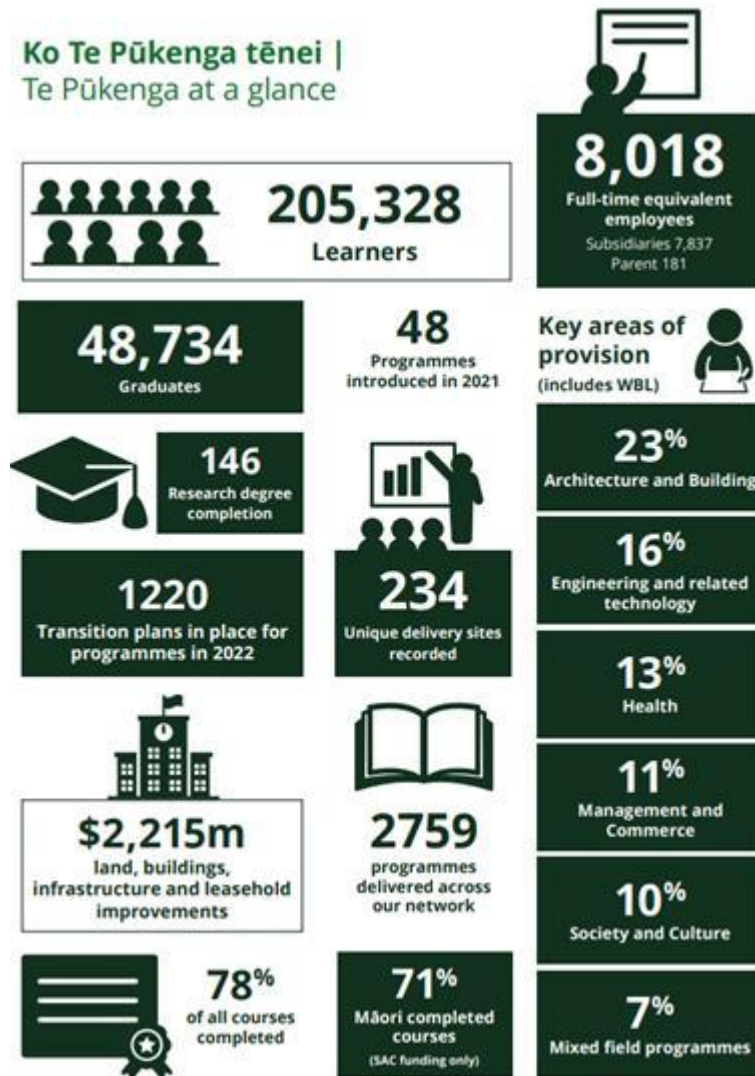
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The Treaty of Waitangi, February 6, 1840, <https://waitangitribunal.govt.nz/treaty-of-waitangi/te-reo-maori-version/>

Appendix B: Breakdown of statistics for ākonga and kaimahi'

Figure 33

Breakdown of statistics for ākonga and kaimahi



Note: Te Pūkenga's national statistics by Te Pūkenga, 2022a, Ko te Pūkenga tēnei: Te Pūkenga at a glance, p. 7.

<https://www.scribd.com/document/587683737/Te-P%C5%ABkenqa-enqagament-document-Ta-Tatou-Huarahi-Our-Pathway>. Copyright

2022 by Te Pūkenga.

Appendix C: Raw Data from Surveys & Interviews

[Te Pūkenga Library staff survey \(1-25\).xlsx – Library Kaimahi Survey](#) [Te Pūkenga Library staff survey \(1-25\).xlsx – Library Kaimahi Survey](#)

[Te Pūkenga Library managers' survey \(1-5\) \(1\).xlsx – Library Managers Survey](#) [Te Pūkenga Library managers' survey \(1-5\) \(1\).xlsx – Library Managers Survey](#)

[Te Pūkenga Libraries and your studies \(1-16\) \(5\).xlsx – Short Ākonga Survey](#) [Te Pūkenga Libraries and your studies \(1-16\) \(5\).xlsx – Short Ākonga Survey](#)

[Te Pūkenga Library Tauria Survey \(1-7\) \(1\).xlsx – Long Ākonga Survey](#) [Te Pūkenga Library Tauria Survey \(1-7\) \(1\).xlsx – Long Ākonga Survey](#)

[Te Pūkenga Libraries and your mahi \(1-13\) \(1\).xlsx – Te Pūkenga Kaimahi Survey](#) [Te Pūkenga Libraries and your mahi \(1-13\) \(1\).xlsx – Te Pūkenga Kaimahi Survey](#)

[Interview One](#)

[Interview Two pt1](#)

[Interview Two pt2](#)

[Interview Three pt1](#)

[Interview Three pt2](#)

Appendix E: Gantt Charts

[22 June 2022 -Gantt chart Te Pūkenga Library Project.xlsx](#)

[22 June 2022 – Gantt chart Te Pūkenga for future research projects.xlsx](#)

[2022-03-09 The Painga Project](#)

Appendix F: Library Guides Created in Response to this Inquiry

[Tiriti o Waitangi - Aotearoa History kete o te wānanga - LibGuides at Wintec](#)

[Mātauranga Māori - Mātauranga Māori kete o te wānanga - LibGuides at Wintec](#)

[Pacific Worldview - Pacific Knowledge - LibGuides at Wintec](#)

Appendix G: Wintec's Toia Mai Project

The final topic to feed into this literature review is Tōia Mai from Wintec. Over the past five years, Wintec has been on a journey trying to find ways to bridge the gap between the success of different groups of ākonga. These were Māori, Pacific peoples, low-income ākonga, and ākonga with disabilities. According to Bishop (2003 as cited in Te Pūkenga / Wintec, 2021) he states that “ākonga learn best when teachers understand and appreciate their backgrounds and build creatively on their existing knowledge and learning styles”. Because of this understanding, Wintec has been putting together a program that embodies that. In 2021 it became known as Toia Mai.

Through extensive research and canvassing of what ākonga want in order to succeed in their studies, and the continual ongoing passion, tears, and relentless dedication of many Māori and Pacific peoples kaimahi members (as well as many other nationalities), Tōia Mai was born. It is still a work in progress but it is starting to address the systemic, colonial divide that has scarred the Aotearoa academic landscape for far too many years.

There is a Hone Tuwhare play called *In the Wilderness Without a Hat*. According to Eketone's (2002) thesis, he likens the play to Māori going out into the western world without your... “Kakahu (clothing), your Kaumatua (elder) and your tipuna (ancestors), you will not survive culturally and spiritually”. I think this is the same for our ākonga who come to study. So, Te Pūkenga needs to give them the support, environment, and language they know and understand to help them thrive culturally, spiritually and succeed with their studies and future aspirations. If not here in Aotearoa, then where?

So, what is Toia Mai?

Tōia Mai is an excellent framework that will guide system-wide change, to enable Wintec to improve equitable outcomes for ākonga Māori and all ākonga, and demonstrate Te Tiriti o Waitangi partnerships. It is also taken from the installation art of a moored waka that is located down by the Waikato River which was created by one of Wintec's kaiako Joe Citizen and ākonga from around the different Wintec schools.

Statistics have shown us that tertiary education has not served Māori, Pacific and ākonga with accessibility challenges well. The retention rates for these ākonga are traditionally lower than the mainstream ākonga.

The Kaiāwhina team and the tutors wrap around a complete care package for the ākonga and bring in the extra support when needed. They make sure their basic needs are met i.e., transport, food, finances, mental health as a foundation of care and then move on to academic support from there.

Appendix H: Information Literacy at Wintec

In Unitec’s information literacy model, you can see the skills that Information literacy covers. Unitec has decided to name them: to reflect, question, explore, converse, contextualise and attribute. All frameworks are slightly different, but the understanding and concepts are the same. Information literacy is authentic and inquiry-based learning. An information literacy framework in a vocational institution highlights the importance of understanding any discipline when applying Information literacy principles to gain a skill in that discipline. This skill set enables the ākongā to transition to industry. Any good research and education are iterative -a constant building on one’s knowledge and skillsets by asking new questions and following new lines of inquiry. Information literacy skills are paramount to the success of this.

In 2017 Wintec Library’s information literacy librarian came up with a framework that would incorporate AKO teaching and learning directions and principles into an Information literacy framework. “In te ao Māori, the concept of ako means both to teach and to learn” (TKI: Te Kete Ipurangi, n.d., para. 2).

Information literacy has the same goals. To teach ākongā how to critically analyse information and to use it ethically to enhance their studies and everyday life. Some ideal attributes that an Information literate ākongā would have are: “Independent learning and the ability to transition between educational, social, and professional environments. Motivated to engage within the learning as inquiry process and contribute to the information creation environment. Intuitive critical thinking skills that allow them to evaluate and navigate the information landscape, ethically aware members of society” (Wintec, 2017, p. 2).

These are attributes I believe Te Pūkenga would want all their ākongā to possess when graduating. To achieve this Wintec wove information literacy into the holistic teaching and learning framework that the then Wintec teaching and learning coaches were impressing on their kaiako. This can be seen in at the end of this section. As you can see information literacy fits seamlessly into the overall teaching and learning framework.

Figure 34

Components for holistic teaching and learning at Te Kuratini o Waikato: linked to all Wintec priorities

Key components	Culturally relevant pedagogies	Cultural responsiveness	Cultural accountability	Te Ngāwhā Whakatupu	Information literacy	Work – Ready Skills	AKO
Ako Environment	<ul style="list-style-type: none"> Group work – PBL Making information available, repeating it and following up 	<ul style="list-style-type: none"> Tables in groups Creating a safe environment for students to share in the facilitation of teaching, learning and social activities 	<ul style="list-style-type: none"> Relationships with Wintec marae, Kaumatua, TKK, Values – Based Practice Framework 	<ul style="list-style-type: none"> Te reo – bilingual terms used within all mediums (walls, workbooks, Moodle) Te Tiriti – 3 P’s Tikanga Tainui – local knowledge Ako – Teaching and Learning 	<ul style="list-style-type: none"> Access to resources and support with effective use. Engaged within the information creation and management environment. 	Sense-making	Student-centred Inquiry-based Authentic
Ako Experiences	<ul style="list-style-type: none"> Creating opportunities for leadership to develop through roles of responsibility Tuakana/Teina 	<ul style="list-style-type: none"> Inviting students to share experience and skills to encourage understanding of diversity and create respect Inviting others to share kai, hosted by students 	<ul style="list-style-type: none"> Regular feedback sessions Using an ‘Holistic Assessment’ Tool to keep informed and current with needs and support systems 	<ul style="list-style-type: none"> Correct pronunciation Incorporation of te reo Knowledge and awareness of Te Tiriti links Ako/Values-based Practice 	<ul style="list-style-type: none"> Critical assessment of resources Involvement in the research process. 	Personal	
Ako Connections	<ul style="list-style-type: none"> Inclusive teaching and learning Acknowledging all can contribute Creating opportunities Encouraging skill sharing 	<ul style="list-style-type: none"> Student feedback regularly and multiple opportunities and staff Community involvement - Te Runanga, TKK, SLS, MPTT, Library 	<ul style="list-style-type: none"> Centre Director, Team Manager support Prep – provide time and space for connections Invite guest speakers 	<ul style="list-style-type: none"> Guest speakers Attend kaupapa Invite community to events Be aware of iwi strategies and directions Audit/database Local knowledge content 	<ul style="list-style-type: none"> Applying information appropriately Respecting academic integrity. 	Relational	
Links to Wintec Values	<ul style="list-style-type: none"> Whakamana i te tangata Whakaaro whānui Kia tuou kia hua 	<ul style="list-style-type: none"> Mahi tahi 	<ul style="list-style-type: none"> Manaakitanga Whanaungatanga 	Integrate Information Literacy with Work ready or separate them out to triangulate the three frameworks within AKO?			

Note: Wintec, 2017 copyright belongs to Wintec

Scholarly and vocational study of information literacy skills enhance ākongā in several work-life skills, that determine where an ākongā succeeds or fails in the workplace. These skills are the ability to “define information needs, use various information sources, identify, evaluate, and apply results, and manage those results” (Sivankalai, 2021, p. 5).

The next area Wintec’s inquiry linked information literacy skills to was the work-ready skills framework. This framework was designed in consultation with industry. See at the end of this section to see how information literacy skills taught by the library incorporate into this framework seamlessly.

Te Pūkenga is a vocational education provider. So, all learning and implementation of scholarly endeavours must fit with industry. The information literacy skillset taught by qualified librarians does this.

Figure 35

Wintec work-ready skills framework

Outcomes	Descriptors	Work-ready skills	Information literacy attributes	Integration	Examples
Personal	<ul style="list-style-type: none"> Developing resilience in facing challenges Appraising own skills and the job tasks realistically Tolerating ambiguity, uncertainty and pressure Reflecting on personal values Adopting ethical reasoning: 	<ul style="list-style-type: none"> Self-awareness 	<ul style="list-style-type: none"> Independent lifelong learners. Motivated to engage within the learning as inquiry process and contribute to the information creation environment 	<ul style="list-style-type: none"> Tasks require learners to explore role definitions, especially how they relate to the why and how of their practices in their field 	<ul style="list-style-type: none"> Learner-centred tasks that prompt learners to reflect on their roles and practices. Group and pair work, as well as scenarios, simulations and problem-based methods.
	<ul style="list-style-type: none"> Taking initiative Employing field-specific reasoning to solve problems Showing decisiveness in action Taking firm decisions 	<ul style="list-style-type: none"> Being pro-active 		<ul style="list-style-type: none"> Problem-based tasks and novel reasoning to solve problems. Forward planning is often required as learners envisage solutions to project tasks 	<ul style="list-style-type: none"> Project- and problem-based learning tasks Methodologies such as simulations, scenarios, group and pair work.
	<ul style="list-style-type: none"> Developing time-management skills Committing to deadlines and appointment times Showing motivation to completing tasks Taking responsibility Owning decisions and actions 	<ul style="list-style-type: none"> Commitment 		<ul style="list-style-type: none"> A diversified time-management approach is used to replicate learner skill at meeting deadlines and being socialised for the workplace. 	<ul style="list-style-type: none"> Setting deadlines and plotting processes, often as part of managing small-scale projects. Establishing and maintaining trades-related role definitions and practices related to the world of work
Relational and Connections:	<ul style="list-style-type: none"> Contributing and participating Engaging in team-based problem-solving Exhibiting solution-centred reasoning and problem-solving in context. 	<ul style="list-style-type: none"> Team player 	<ul style="list-style-type: none"> The ability to transition between educational, social, and professional environments. Able to manage information, communicate knowledge, and apply it to the academic and workplace environments. Ethically aware members of society. 	<ul style="list-style-type: none"> Systematic integration of pair and group work into simulations of fields of specialisation, including scenarios. 	<ul style="list-style-type: none"> Learner-centred activities and shared problem-based learning Specific group methodologies such as SCRUM
	<ul style="list-style-type: none"> Contributing to group discussion Collaborating and leading groups to solve problems Networking with others in the field 	<ul style="list-style-type: none"> People skills 		<ul style="list-style-type: none"> Learners are socialised for inside and outside the workplace with good communication skills. 	<ul style="list-style-type: none"> Group activities and simulations that require socialisation for the learner in their future context of work
	<ul style="list-style-type: none"> Active listening and reciprocal communication Responding to feedback and communicating Responsive to culture Aware of the benefits of technology 	<ul style="list-style-type: none"> Integrity 		<ul style="list-style-type: none"> Building relationships of care in socio-cultural context Engaged in technology-based activity to build competence 	<ul style="list-style-type: none"> Group activities and simulations are designed which expose learners to these skills Work placement
Sense-making:	<ul style="list-style-type: none"> Recognising patterns and connections – identifying repetitions and linkages Novel thinking – thinking outside the square Adaptive/design thinking – creative solutions 	<ul style="list-style-type: none"> Problem-solving 	<ul style="list-style-type: none"> Intuitive critical thinking skills that allow them to evaluate and navigate the information landscape. Flexible and able to adapt their understanding and skills of the discovery, creation, and application of information from secondary education to the tertiary environment and beyond. 	<ul style="list-style-type: none"> Inquiry-based learning to ensure learners are socialised for their roles as problem-solvers and solution-centred thinkers 	<ul style="list-style-type: none"> Learner-centred activities and shared problem-based learning Specific group methodologies such as SCRUM
	<ul style="list-style-type: none"> Coping with changes and challenging circumstances Finding solutions and deal with problems 	<ul style="list-style-type: none"> Flexibility and responsiveness 		<ul style="list-style-type: none"> Deliberate design of tasks that require solution-centred thinking 	<ul style="list-style-type: none"> Simulations, scenarios, role plays, group challenges and work-related dilemmas

[Text Wrapping Break]

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Appendix I: The Impact of COVID-19 on Libraries

The next thing to consider when understanding the complexity of what makes a distinctive Aotearoa-based library system is the themes and movements that are happening in the wider world. The main one that has shaped the world of today is COVID-19. As well as COVID-19 there has been many major events around the world. These are: new ways of working; New Zealand politics and elections; high inflation; a war in Ukraine; climate change; low unemployment; and the possibility of a recession. These are all world phenomenon that have transformed the way we work and how libraries operate. These social factors have a direct impact on ākonga enrolments. Enrolments were low in the latter part of 2022 and Te Pūkenga had a budget deficit. All these themes have shaped and informed this inquiry.

In May 2022 a distressing inquiry came out of the New Zealand Qualifications Authority (NZQA) about how much these initial stages of Te Pūkenga had cost the government. This was in the political context of the lead-up to the next election. The ROVE (Reform of Vocational Education) reform came out of the newly elected Labour government and the changes are the result of hard work that happened throughout that time.

This all started back in 2020 when COVID-19 hit and started a chain reaction to where we are today, towards the end of 2022. The COVID-19 pandemic became known in every corner of society and forced people, companies, businesses and institutions to rethink how they do things to keep their kaimahi and customers safe. Libraries were no different.

Because of the COVID-19 pandemic, traditional in-house-based education providers became full-time distance educators. This change has meant that students have been given a taste of a different way of doing things. Some of them loved it, some did not, but what they all want is the flexibility to study their way (Zhou, 2021).

Academic libraries have had to adapt to face-to-face teaching, virtual and online teaching, and hybrid-style teaching where they will have some face-to-face ākonga and some virtual online students all at the same time (Martzoukou, 2021). This way of teaching seems to be the way of the future and the pandemic situation seems to be ever-changing. Now that the initial drive to move

everything online quickly has ended, educators and librarians can start improving the technology they had begun to experiment with during and before lockdown.

Zhou's (2021) article examined academic libraries in China and Italy still deliver their services to their users in unprecedented times, and how they adapted to online teaching. All over the world, COVID-19 changed the way we perceive, deliver, and think about the services we offer in libraries. Libraries - especially academic libraries - had to adapt quickly

It was seen in China that libraries with good electronic resource collections were able to move online quickly and continue to support their students during the pandemic (Zhou, 2021). Those that didn't struggled. After a while, libraries were able to adapt again by implementing contact-free deliveries by using courier systems (Zhou, 2021). Other libraries around the world such as in America brought 'state of the art' lockers that are used by supermarkets, to provide students and researchers access to print material (Patterson Pope, n.d.).

Italy - the second country to be affected by COVID-19- was a completely different story from China. "The insufficient quality of library staff and limited funding led to the situation where Italian libraries had not enough equipment to move onto the web" (Caselli, 2020a., & Casilli, 2020b as cited in Zhou, 2021, p. 3). But even they adapted, and relied heavily on traditional services such as delivery services of print collections with extended loan periods and interlibrary loans (Zhou, 2021). After a while, they offered more eBooks and training programs on how to use them, and virtual events such as art history talks, musical concerts, and theatre (Zhou, 2021).

Aotearoa would sit somewhere in the middle. Most academic libraries in Aotearoa have been moving to more electronic collections, so when the pandemic came, ākongā were able to adapt easily. Only the technologically hesitant struggled, and Librarians were on hand to help guide and support these ākongā through zoom or library chat.

What the Wintec library found at the end of their lockdown in 2021 was that ākongā were calling out for a place to study that was not their home. One of the first things to reopen on campus with extended hours to support the final push of the year towards completion. In today's world, homes are becoming smaller and more crowded for ākongā. Whether it is flatting, living with your parents,

or older mature students balancing parenthood and work, home is often not conducive to productive study (Cox. et al, 2021).

Now that civilization is moving into the age of living with COVID-19, libraries need to look back and decide what adaptations should remain from the last two years (Cox. et al, 2021). Cox gives four ideas that will revolutionize the future of academic libraries from lessons they have learned from the pandemic.

One big thing that the pandemic has taught us is that we can achieve a lot online, and work continued with very little disruption. It also taught us that we as a species value being in a community, and a workplace or educational institution for many that becomes their community (Cox. et al, 2021). So what employees and ākonga both are asking for now is flexibility.

Appendix J: Assigning Value to an Academic Library

Librarian roles over the years have been very closely associated with value. “Academic libraries have spent decades assessing their value through a wide range of methodologies” (Missingham, 2021, p. 386). Usually, these are the usage of the library, the collection and the library kaimahi. Libraries are slowly moving away from this as the only way to show libraries value, adding more of their role and value in an institution or community.

One new way to assign value and role in society is to match them up with UN SDGs as seen in Section 1.1. “This methodology reflects concepts of national and international outcomes that create a sustainable world where knowledge is part of the powerhouse for economic and social transformation” (Missingham, 2021, p. 386). This idea is to put all libraries' services, help and access to information under the umbrella of the “theory of change”.

The role of academic libraries is also to be a part of the global knowledge society. In this instance, it will be Te Pūkenga. Libraries are an essential asset in a higher educational institution. “Academic libraries are a vital element of the infrastructure of a modern university, built on centuries of practise and theory” (Missingham, 2021, p. 386). The academic library provides the best resources for their ākongā and key stakeholders, they find an easy way to access the information and use it ethically and they teach ākongā and key stakeholders how to interact with it to get the best out of their resources. They are the human face of critically acclaimed information that connects the user to the right information. Especially in a world full of data and self-service.

Over the years academic libraries have evolved and learnt from the changing methodologies to understand their value in a higher educational setting. They have pivoted and adapted their services and educational tools to suit the needs of their ākongā, and to show the value of libraries. “Given the limitations of the major assessment tools used so far to establish value, there is a need to continue to review new methodologies. The emergence of the UN SDGs provides an opportunity to view the academic library services from a different theoretical and developed methodology” (Missingham, 2021, p, 389).

Appendix K: Alternative Management Styles

Ubuntu Management Style

Tworek et al. (2017) research paper introduces the concept of Ubuntu as a management style. The Ubuntu philosophy originated from Africa and the main idea is that all decisions are made that benefit the group. “Ubuntu can be described as the African cultures’ capacity to show compassion, reciprocity, dignity, humanity, and mutuality in building communities with justice and mutual caring” (Tworek et al., 2017). It’s a different way of thinking. The Ubuntu philosophy inspires people to think of the group as a whole, rather than yourself, and how your job empowers the group and helps the group function effectively.

A leader in the Ubuntu style of leadership would allow their teams to self-govern and get on and do their jobs. Because each team member understands how their job affects the team as a whole and how the team as a whole affects their jobs individually. A well-oiled machine.

Maori Leadership style

Is there a distinctly Aotearoa style of leadership and management and would it work for Te Pūkenga libraries as a whole? The Māori culture in Aotearoa is unique and original. The Te Pūkenga libraries need to sit comfortably in this culture and the practices that go with it as the Te Pūkenga librarians will be serving ākonga from both the Maori and Pacifica backgrounds and it is a mandate from the Minister of Educations expectation on the future of Te Pūkenga. Ākonga success, especially for Maori, Pacific peoples, and those that have disabilities. For many years these groups have not been looked after or protected in higher educational settings. Their values and cultures have not been seen in higher education and this has made them feel alienated and disenfranchised from the whole system.

Would a management style that has a distinct te Ao Māori (the Māori world), attached to it help with keeping Te Pūkenga libraries on track to fulfil the Minister of Education's expectations on learner success?

Many Māori organizational management structures are quite similar on paper to any western-styled management structure but what differentiates them is its... “Māori working with Māori using Kaupapa Māori models” (Eketone, 2002, p. 2). Now Te Pūkenga can never be true because we have many different cultures working together but we can try and be as close to that as possible given our limitations. So that all people can feel comfortable at work and study.

Eketone (2002) visualizes a waka to represent a distinctly Māori organizational structure. The vision of a waka is used a lot by the support services at Wintec. We say the ākongā are in the waka rowing to get to their academic success. The tutors are at the front of the waka steering the waka in the right direction and the support services are the support boats on the side picking up any tauira that fall out of the waka or get tired of rowing. A very holistic approach. With Tōia Mai we also acknowledge that cheering on the side in other wakas are Iwi, whānau, and other support that all contribute to the success of every ākongā. This should be the same for kaimahi.

Eketone (2002) refers to every function of the waka as a part of an organization and without one part or the other, the waka won't move. All are important and all have to role in place to achieve success.

According to Wawatai's (2019) master's thesis called Ngā Hau Āwhio o Kaihautū: The swirling winds of Māori leadership. He likens Māori leadership to the fantail (pīwairaka) and the different aspects of a fantail's personality. A fantail flits dodges and adapts to any changes in its environment. Just like a good leader.

Wawatai (2019) goes on to talk about the traditions of “leadership through oral traditions” (p. 14). The idea to use stories about histories, nature, and environments to convey thoughts, ideas, and direction, has been a part of the human tradition from the beginning of time. In management, it is now called Leadership Storytelling. Choy (2020) defines leadership storytelling “as the strategic sequencing of facts and emotions” (para. 4). Esther Choy teaches leadership storytelling and writes for Forbes magazine.

Wawatai (2019) describes it as “a direct and immediate relationship with listeners” (p. 15). According to Māori tradition, the natural world starts with an explosion of energy. Then kore is nothingness and chaos, which is then formed into Po. Po is a time of creation. When the universe was formed.

Whakapapa is how everything in the world is interconnected (Wawatai, 2019). All things are connected. Just like in the concept of Ubuntu, where one person cannot stand alone but whatever one worker does relate to the other workers and have rippling effects on the whole organization.

Appendix L: Analysis Word Tables and Miro Board

[Keyword analysis table](#)

[Data analysis](#)

[Miro Board](#)

Appendix M: 2022 Design Factory Gala Presentation

[Powerpoint slides](#)

My name is Dawn Carlisle I have had the privilege to work in both public and academic libraries for over twenty-three years. One way to describe me is that I am an idealist and that is why I am drawn to this project. I love libraries and am passionate that Library professionals have a lot to offer both academic, private study and leisure in the world of tomorrow. Now the Library world is in a state of flux, and this is the time we need to seriously look at what we do and how we can do it better. New technologies are coming that will make many of the tasks that libraries do redundant so I want to explore the important tasks that the world of academics can't do without. And I think this can relate to public libraries too.

The exciting thing is that in New Zealand, in April 2020, tertiary education had a pivotal moment in history. All the ITPs Institutes of technology and polytechnics merged to become one entity called Te Pūkenga. This is the perfect backdrop for my project. It is the perfect time for Te Pūkenga Libraries to make lasting changes that will impact the future of academic librarianship. Te Pūkenga will become one of the largest academic library systems in the southern hemisphere.

Te Pūkenga Libraries have a chance to lay the foundations for a world-class, innovative Library system that will serve the world of academia for many generations to come. And I want to play my part in that. I feel like I am strategically positioned to give objective, rational, thoughtful, evidence-based research to those foundations. To outline a possible roadmap to that future.

The reason I am strategically positioned is that I am a Liaison Librarian at the Waikato Institute of Technology an early mover into Te Pūkenga. As of June the first, 2022, Waikato Institute of technology ceased to be a subsidiary of Te Pūkenga but became Te Pūkenga proper. Alongside Toi Ohomai in Tauranga and Rotorua, they were the first to move into this new environment and under the direct leadership of Te Pūkenga.

A Liaison Librarian is the link between the library and academia. We liaise with faculty to make sure their students and researchers have the right resources to do their work. We also teach Information

Literacy in classrooms, making sure that every student has the soft skills they need to know how to research effectively, use and find quality resources, and reference their work to avoid plagiarism and to ethically use other people's ideas and thoughts to enhance their own.

I believe the educational Librarian Kaitiaki Pukapuka role, is the future of Libraries. This is because their role cannot be done by the emerging technology of the Industry 4.0 movement.

While many of the circulation tasks in the library are moving more and more to automation and self-service. But the role of the educational librarian in connecting people to the right resources and teaching them how to use them effectively and ethically is a very human-centred role that requires **empathy, compassion, and patience**. Things that the technology of the Industry 4.0 movement cannot offer.

To discover this potential roadmap, that could be a guiding document for the future of Te Pūkenga Libraries I have carried out several surveys of our stakeholders, Akonga (students), Kaimahi (Staff), interviews with library professionals, a literature review, and some case studies of other libraries that have made similar moves to us. All these avenues of information should produce a clear picture of the future of libraries, the future of work in academia, and what our stakeholders are looking for in library service to enhance their studies and research.

As a New Zealander, I believe that any job in New Zealand needs to uphold Te Tiriti and the Treaty of Waitangi provisions in their everyday work. But I have my limitations as a pakeha New Zealander to truly understand the need to change the culture of New Zealand to truly uphold the provisions of the Treaties.

So, to change the Te Pūkenga Library culture because we are very much Eurocentric and shaped according to a western paradigm. This paradigm doesn't reflect the culture of Aotearoa, now and in the future and the treaties that were signed in good faith in 1840. The New Zealand culture should reflect more the culture of the first people of the land. The Tanga Te Whenua. It is a unique mixture of the two that will be what makes a library in Aotearoa different from any other library system in the world. To do this well the Te Pūkenga library needs to be in partnership and learn to listen to,

the iwi, hapu and whanau of the land and nation on which each library dwells and uphold the four provisions of both the treaties, the English and the Māori versions.

So, part of my research and outcomes will reflect the provisions of both treaties with the acknowledgement that I am a product of my culture and upbringing so the only thing I can truly recommend is that we learn to listen to the Māori community and open our hearts to their culture, heritage, and the history of Aotearoa with humility.

This project will suggest ways in which the library system can learn to listen to Mana Whenua and a foundation to start from. The innovations and direction will come from all aspects of each library as they work together with their iwi's and hapus of the land and traditions in which their libraries dwell.

And a voice that can be heard on all levels of the library structure. We as a library service need to give honour to Mana Whenua and work in collaboration with Māori communities to achieve our outcomes to deliver equitable outcomes to our learners.

Te Rōpū Whakahau and LIANZA the library associations of New Zealand have been working towards shaping libraries into a treaties-based profession for many years. Their commitment to equity, diversity, inclusion, bilingual signage, Māori subject headings in catalogues and Tikanga in all library meetings and conferences has been an inspiration to all librarians. Te Rōpū Whakahau the Māori Librarians association is active in guidance and advice and is very valued by the librarians everywhere in Aotearoa. But there is more we can do.

Libraries have always endeavoured to be an equaliser of people. Especially public libraries. They are committed and dedicated to the concept of lifelong learning. Where anyone regardless of who they are can enter a library and gain information and knowledge. And in many cases, this has led to an improvement in life and work expectations. You only need to go on to YouTube to get countless stories of how a library has done this. A library is a sanctuary and a place of self-lead learning of a new skill or knowledge. Or a space to pass the time, a quiet place to process life, or a place to meet with friends.

Libraries in the computer age have tried to populate the internet with good information that is backed with evidence to help filter through the information that is more opinion based. Libraries are an anomaly in this very corporate, capitalistic world.

Especially a public library it is free, it is open to all people and it's for the betterment of mankind with no hope of ever making a profit, but it has an altruistic value that is unquantifiable.

In the future, I feel more people will be looking at the altruistic value of things alongside the more traditional value of things.

In conclusion, when people think of libraries, they think of books. *"Where can I get the book or information, I want"*. But those that know the true value of libraries and their place in history and the future know that the type of resource is irrelevant. Originally the Library of Alexandria had scrolls, then in the 1800s, mostly books, and nowadays we have a mixture of both books and electronic resources.

Technology continually progresses.

The problem is that with the increase of technology and might I say COVID-19 the world has seen an increase in loneliness. The psych central weekly newsletter written by trained Phycologists, discusses the importance of human connections as more meetings, celebrations and social gatherings are done online.

Now I don't think there is anything wrong with this, but people still go out of their way to choose the human connection in many cases. Human connections, it is believed.... help with overall well-being and health.

So, what is the real purpose and essence of libraries and why have they stayed relevant throughout the millennia?

I believe it is this: Libraries connect an individual with the right information.

Libraries and Librarians are the **connection** between people and the right information. It is what sits in that ambiguous space that is hard to define. It doesn't matter what format the information is in. The value of libraries lies in that hard-to-define space. Who knows what the format of information will be in the future? It could be holographic crystals but there will still need to be that connection between people and the exact information they are looking for and sometimes they may need some guidance, encouragement, and support to find it. And that is where Kaitiaki Pukapuka (Librarians) come into play. Again, it is the experts, the people that are important in the process,... and always will be because we are human, and the connection is what makes a human. "Humans are, after all, inherently social beings" (Cacioppo., & Patrick, 2008, p. 5).

Appendix N: 2022 Library Managers Forum Presentation

[Powerpoint slides](#)

Library Managers Report

Before I start. Could I get you to do a little post-it notes exercise while I am speaking? Pink post-it notes are things you like. Yellow post-it notes are things you don't like and purple is things you want to be added. As these notes will help with informing the last stage of this research.

Also apologies in advance I had an asthma attack last week and my breathing is quite back to normal so if I suddenly become breathless don't worry it will right itself.

My name is Dawn Carlisle and I have had the privilege to work in both public and academic libraries for over twenty-three years. One way to describe me is that I am an idealist and that is why I am drawn to this project. I love libraries and am passionate that Library professionals have a lot to offer both academic, private study and leisure in the world of tomorrow. Now the Library world is in a state of flux, and this is the time we need to seriously look at what we do and how we can do it better. New technologies are coming that will make many of the tasks that libraries do redundant so I want to explore the important tasks that the world of academics can't do without.

New Slide

My project is to develop a potential roadmap, that could be a guiding document for the future of the newly formed Te Pūkenga Libraries. I have done an initial literature review and carried out surveys of our key stakeholders, Akonga (students), general Kaimahi (Staff), and Library Kaimahi.

New Slide

As a New Zealander, I believe that any job in New Zealand needs to uphold Te Tiriti and the Treaty of Waitangi provisions in their everyday work. But I have my limitations as a pakeha New Zealander to truly understand how to do this effectively.

So, to change the Te Pūkenga Library culture because we are very much Eurocentric and shaped according to a western paradigm. A paradigm that doesn't truly reflect the culture of Aotearoa, now and in the future and the treaties that were signed in good faith in 1840. The New Zealand culture should reflect more the culture of the first people of the land. The Tanga Te Whenua. It is a unique mixture of the two that will be what makes a library in Aotearoa different from any other library system in the world. To do this well the Te Pūkenga library needs to be in partnership and learn to listen to, the iwi, hapu and whanau of the land and nation on which each library dwells and uphold the four provisions of both the treaties, the English and the Māori versions.

So, part of my research and outcomes will reflect the provisions of both treaties with the acknowledgement that I am a product of my culture and upbringing so the only thing I can truly recommend is that we learn to listen to the Māori community and open our hearts to their culture, heritage, and the history of Aotearoa with humility.

This project will suggest ways in which the library system can learn to listen to Mana Whenua and a foundation to start from. The innovations and direction will come from all aspects of each library as they work together with their iwi's and hapus of the land and traditions in which their libraries dwell.

And a voice that can be heard on all levels of the library structure. We as a library service need to give honour to Mana Whenua and work in collaboration with Māori communities to achieve our outcomes to deliver equitable outcomes to our learners.

New Slide

Higher educational libraries are undergoing a radical change.

New Slide

Children born today are digital and information natives. "The new generation is born into technology surrounded by an infinite number of digital devices keeping high expectations of technology-driven library services" (Missingham, 2021, p. 2). In the world today we are surrounded by technology and information. It can be very overwhelming. Especially when much of the information supplied on easy-to-access digital platforms that users of mobile phones can access with ease is opinion-based.

A famous librarian by the name of S. R. Ranganthan stated that there were five laws of library science, which were recently updated by Crawford and Gorman (1995). These read as

1. Libraries serve humanity
2. Respect all forms by which knowledge is communicated
3. Use technology intelligently to enhance service
4. Protect free access to Knowledge
5. Honour the past and create the future

(Chauddhari, 2017).

New Slide

This is a very good foundation for the value of libraries. On top of those five key laws of librarianship, I think we should lay the United Nations' 17 goals for Sustainable development. These 17 goals were adopted by all united member states in 2015 to “provide a shared blueprint for peace and prosperity for people and the planet, now and into the future” (United Nations, n.d.b., para. 1). The ones I think libraries can support are #4 quality education, #10 reduce inequalities, #11 sustainable cities, and communities, and #12 responsible consumption and production.

All the goals should be at the forefront of all citizens that call earth home but these four ring expressly true for Academic Institutes of Technology and Polytechnics (ITP) Libraries and should be taken into account in any research project that focuses on the future of library services.

New Slide

As part of this inquiry, I will created a scenario of what a distinctly Te Pūkenga Libraries could look like as informed by the following research. And also four Gantt charts showing a hypothetical timeline of Transformational Change, Possible Industry 4.0 technology that could be adopted, Future Research Projects, and possible Information Literacy tools to support Information Literacy at Te Pūkenga both face-to-face and online self-help. Finally, a Miro Board (electronic whiteboard), which I'm will try and show you today. Not sure if we have time. Showcasing the Affinity Mapping process of the Surveys, Workshops and Interviews that informed the critical analysis of the research. All these tools can be used as guiding documents. These are research-driven and aimed at future

decision-making. All these things I will gift to the Library Managers in November to use as they see fit.

This will be done in a Transdisciplinarity Research (TDR) framework and Constructive Grounded Theory, so that the data will be rich, unique, and go beyond a single discipline to create a tapestry of original findings on the many facets of a Library Service. I will use the technique Affinity Mapping for my data analysis.

I hope that this document will help shape Te Pūkenga Libraries into a distinct identity and role, that is truly Aotearoa / New Zealand based and follows the principles of Te Tiriti o Waitangi. My hope is also that it helps to create an equitable learning environment, and delivers quality resources and Information Literacy skills to the Ākonga (learner/student) of tomorrow.

My Journey so far....

On the slides are some of my highlights, research and pondering each year

2018 Reflections

I started this journey in 2018 but the thoughts for my initial project were how will the introduction of Industry 4.0 technologies could disrupt the Library industry. Especially focussing on the Wintec Library. I wanted to know the perceptions of the stakeholders of our library service. It was on the tail end of a trend in libraries to look for our relevance in the world of tomorrow, especially with the introduction of Industry 4.0 technologies.

2019 Reflections

Moving away from the word 'relevance' as it's undeniable that libraries have relevance, I now began to think about how and where we fit in society and the societies in the future? I began to research the role of libraries and what value we add to the world of academia.

I complete my post-graduate certificate in applied innovation and wrote my proposal for a master's project at the end of 2019.

2020 Reflections

At the beginning of 2020, I was all ready to embark on my research project and start collecting data from Surveys, Interviews and Workshops.

COVID-19 hit

Took a year off from study

2021 Reflections

2021 was another year of going in and out of lockdown but I thought it would be prudent to get back into my master's programme. Partly because I thought if I put it off for too long then I would miss the opportunity of the beginning stages of Te Pūkenga as this was the time things were happening.

I also began to ponder what it meant to be a decolonised library service.

2022 Reflections

So what can I say about 2022

At this time I was asked a pivotal question by one of the supervisors in my paper on a community of practice days. I was asked what makes a distinctly Aotearoa/New Zealand academic Library service as opposed to any other library service around the world? So I began to ponder this and research what this means and what it could look like.

So a lot of data...

That was just to show you the evolution of my project and where I am now.

New Slide

Survey Findings

I have already got some initial findings from my survey results but it is a work in progress. In two weeks I will be doing some more training on Affinity mapping and Thematic analysis so that I can truly understand the survey, workshops, interviews and lit review results and write up some insights.

I have come up with ten initial catalogues as part of the Constructive Grounded Theory method. These will continue to be refined.

These are:

New Slide: Cataogories

This may seem like a large project but remember my research topic is a complete ITP Academic library service and as we all know that is quite complex and has many facets.

So some initial data from my surveys

New Slide

Participants

I got 66 survey entries. 30 from Library Managers and Library Kaimahi; 13 from general Te Pūkenga Kaimahi and 16 from Ākonga with a short survey and 7 Ākonga entries from a long survey conducted with Spacial Design and Architectural Design akōnga from Wintec who had just finished a project on designing a new academic library for Wintec. It is a bit longer and more in-depth.

New Slide

One major limitation of the research is that I only got a 6 self-identifying (it was optional to answer) Māori and Pacific Peoples' voices in my two ākonga and one general Te Pūkenga Kaimahi survey. It is a limitation as they are our priority Ākonga.

New Slide

Another aim of my research was to get as many voices from all over the 16 Te Pūkenga subsidiaries and for them to feel safe and completely anonymous while answering the information so I made that certain section optional. This makes it harder to figure out whether or not I got a wide representation from all the subsidiaries. Those that choose to indicate which institution they were from are as follows:

New Slide

A limitation of my data is that it is quite heavy on postgraduate ākongā. But then postgraduate ākongā are very invested in their studies and library services and resources will have an impact on how they achieve their studies. And post-graduate ākongā are more likely to use a library service as they have been studying for a while and have the support and promotion of library service from their supervisors.

New slide

Here is the breakdown of Kaimahi job titles

New slide

I also asked why they used the library. As you can see there are many reasons. 'Professional Research', 'to Research information for my assignments', and 'to refer my students that are struggling' were the most ticked categories combined for both kaimahi and ākongā. This indicates to me that Te Pūkenga stakeholders value the resources and the role of libraries being the place to find information for their research.

Overall there are some limitations to the breakdown of my participants. But the main aim of my research is to hear the tapestry of the voice of my stakeholders and I believe I have achieved this in a very general way. More in-depth research into each stakeholder group would be beneficial for future research projects. It would have also been nice to get a larger number of participants and to

have a voice from every subsidiary of Te Pūkenga and not have such a large voice of Wintec staff and students.

New slide

The Role of Libraries, COVID-19 and Te Pūkenga

What I have learned from running my surveys is that each subsidiary is vastly different from another. And each library service is vastly different. To get some sort of consistency will require a radical transformation, patience, and compromises from all subsidiary libraries and if we can do this then the outcome will be truly amazing.

New Slide

Decolonisation, Equity, and the Treaties of Waitangi

All five of my surveys asked questions about equity, the Treaties of Waitangi and whether or not participants felt cultural safe in their libraries. I wrote the surveys before I went to a Treaty of Waitangi training offered by my institution to further kaimahi knowledge of the history of Aotearoa. So, my questions are based on the three Ps. If I could do it again, I would base it on the provisions of both the treaties and I now understand the three Ps is a watered-down version of the treaty. But I must go with the information I gathered, and it is a good start as many New Zealanders understand the three Ps.

New Slide

The main themes that came out of these questions are:

New Slide

Some quotes from the survey: Sorry a bit small

New Slide

Access, Circulation, Collection Management and Copyright

The next main category that has come out of my surveys is Access. Circulation, Collection Management and Copyright. First I wanted to look to see what the ākonga and general Te Pūkenga kaimahi answered about our resources and access to them. Then I went on to ask Library Kaimahi how they think it could look. There were a lot of thoughts and comments in this section that still need to be properly anglicised. But what I have so far is that most Library Kaimahi is keen on centralisation as they believe it could provide equity of service to all our Ākonga and greater access and use of our resources. It could also mean that any ākonga from around NZ could go into any one of our libraries and get the help and support they need regardless of where they study. Geography is no longer a barrier to ākonga success.

New Slide

The Teaching Librarian, Information Literacy, Embedded Support and Academic Support

Mostly so far from this section I got a clear list of Information Literacy classes run by libraries in Te Pūkenga is as follows. There was a lot of data here that still need to be analysed and wonderful suggestions to go forward with.

New Slide

Library Spaces

The belief that library spaces are no longer important as all information will be online doesn't reflect in the findings of these surveys. Stakeholders of Te Pūkenga libraries have a lot to say about the library space. Now this section will only relate to fifteen of the subsidiaries as the Open Polytechnic of New Zealand is based mostly online and most of their interactions are with ākonga and kaimahi based around the country. When it comes to the best practice of online services then the Open Polytechnic will lead the way for other subsidiaries to follow.

Surprisingly the mention of a reference desk comes up a lot in the Library Staff survey when asked for comments. I know many of you still have reference desks but the worldwide library trend is to

move away from them. This is because Librarians reach more ākonga and kaimahi in classrooms and meetings than they do at the reference desk.

Sadly though this I believe has a direct impact on the use of library spaces as many students used to pop in to see a librarian quickly between classes or on the way home to get some help now they have to send an email and hope their librarian is available to help before their assignment is due.

The new services do reach ākonga but require ākonga to be good with time management and allow no last-minute help on the day. It is also true that statistics for reference desk enquiries have decreased over the last ten years. So is it time for a rethink and a reimagining?

Ākonga and general Te Pūkenga kaimahi also had a lot to say about space but that was concerning the next ten years and what they want to see in library service.

To conclude from all these questions the things participants want in their Library Spaces are as follows:

New Slide

Research and Libraries

One of the biggest limitations of my research is that I didn't do a Te Pūkenga researchers survey. Researchers are one of our biggest stakeholder groups, but their support comes second to ākonga as we are a ākonga-centred service and always have been.

Again here we can see that each subsidiary library does very different levels in its support and service to the research office of each subsidiary

New Slide

Services and Online Help

Since libraries are service-based professions there were a lot of questions in these stakeholder surveys about services and online help tools. Industry 4.0 also has a direct impact on this section and from the comments, many ideas for future services and online help tools have come through.

New Slide

Online help offered by the library

So with this information, we can create a limited list of what non-Library Kaimahi-related online self-help services are available to students at the moment at many of the subsidiaries' libraries.

New Slide

Well, I'm here can I ask you all a question? What online help tool are you the proudest of that your library has produced? Can you write it down on a post-it note for me?

To keep the categories consistent I will add Library Talk Channels to Library Kaimahi-related services as seen below. I have also added social media to both lists as you can contact a librarian via social media as well as use it for finding information about the library. Library Kaimahi services on a whole offered at Te Pūkenga libraries now are:

OPACs and Self-check machines will be added to services in a library space.

New Slide

There are some great ideas here for online help resources and service libraries that could start to develop in the next ten years and ways to improve what we already have. Chats, help desks and good quality instructional videos are the main ones to come out of this question.

New Slide

The Next Ten Years

In all of the five surveys conducted the question of ‘what would you like to see in the next ten years’ or “Do you have a vision and can you articulate how you believe Te Pūkenga Libraries will look in 10 years? What are some key characteristics that make it distinctly Te Pūkenga Libraries as opposed to any other academic library around the world and NZ?” was asked. I still need to do a more in-depth analysis using affinity mapping for this section that will be supported by all the additional information found in the secondary data and previous research that this research is based on.

New Slide

Roles and positions to consider

New Slide

Library Kaimahi

The final category this research is divided into is Library Kaimahi. And this section can be divided into three parts. The working for Te Pūkenga and how staff feel about it, Career Librarians, and Teaching Librarians.

Next, I asked Kaimahi what they would like to see from the library to support their well-being during this time. Nine said they wanted good communication from Library Managers. Four said they wanted frequent check-ins with their library manager. Two said they wanted monthly newsletters. Six said they wanted similar roles networking and meeting. Four said they wanted state of the nation zoom meetings with all Library Kaimahi and eight said they wanted all of the above.

Show the Miro Board Briefly – you are welcome to look at it in your own time and add notes if you want.

New Slide

My scenario now but will change when new data is added

So far I have an ever-evolving scenario/recommendations for the next ten years. There are seven main parts titled from the Te Pūkenga values and a couple of extra values added in. As of today, this is what it looks like:

Scenario: A Transformational Future

New Slide

To become a design thinking organisation. As Te Pūkenga is trying to do but to engrain it into the very fabric of work-life in the library.

New Slide

How an organisation becomes a design thinking organisation

New Slide

This research aims to articulate a distinctly Aotearoa-styled academic library service, that can work for Te Pūkenga libraries and the geographical challenges it offers. To make sure we don't lose any valuable, knowledgeable staff members with skills and strengths that are hard to find but to pivot and take advantage of the opportunity that has been given us to make a world-class, innovative and future-proofed service that can carry Te Pūkenga libraries into the Industry 4.0 age.

To create one library service that has all the benefits of being one of the largest academic library systems in the southern hemisphere such as buying power with vendors so that akōnga, Kaimahi, Kaiako and Researchers will have a great range of databases and resources to use. To be able to carry out joint projects with expertise from all the different Te Pūkenga Libraries to create exciting new resources and educational tools. A collective website and Library Management System (LMS) so that our students can issue and return physical resources from anywhere. A larger pool of Kaimahi to give world-class customer service to our akōnga for longer periods. Also to help Kaiako with copyright on their moodle pages.

But on the flip side to also maintain 16 distinct personalities so that all our libraries still reflect the community in which they dwell and serve. So physically each library will reflect the Iwi, land and history on which it resides. My eighth recommendation is to put business cases in to redesign each main library space to truly reflect the land it sits on and the community it serves over the next 20 years. Each main library should be modern, functional, beautiful and future-proof, a landmark within its parent institution. As the Open Polytechnic library delivers online services so discussion with their local manager will be able to determine if it is needed.

This theme was very clear from the survey results. Most people saw the benefit of centralization but didn't want to lose any level of individual service to their akōnga, kaimahi, kaiako and researchers.

New Slide

Kaitiakitanga - Leadership

Traditionally libraries are governed in a Eurocentric, corporate style of leadership where you would have an overarching manager or in the library world chief librarian. My proposal is that because the nature of work is evolving, and the large geographical distance between libraries that the new Te Pūkenga library is more away from that style of leadership and more towards a collective style of leadership as mentioned in sections 2.11 and 2.12. "Develop sector leadership to support succession planning" (LIANZA., & Te Rōpū Whakahaui, 2015, p. 15)

This new collective style of leadership would answer directly to Te Pūkenga executives. It would be made up of all 16 Local Library Managers, a new Centralization Manager, and two Maori and Pacific peoples advisors from inside the organization. Each local library manager would still manage their regional library and advocate for their unique communities but would also work towards the one library service goal.

This precedent for a council-styled, collective leadership method is taken from Aotearoa History from a time just after the Treaties of Waitangi were signed. In 1835 34 northern chiefs signed 'He Wakaputanga o Te Rangatiratanga o Nu Tirenī'. This document in English is known as the Declaration of Independence of the United Tribes of New Zealand (NZ History, 2021). They were a council of Rangatira (Kings and Queens). I propose a council of Library Managers model themselves on that

example. There by maintaining industry knowledge and expertise through the change to Te Pūkenga but also allowing for innovation and transformational change through collective knowledge to the Library ITP industry.

I also recommend a rotating chair. Similar to the style of leadership of LIANZA and Te Rupo Whakahau. Every two years an acting chair is appointed with an incoming chair ready for the two years beyond and a backup chair just in case there are personal changes. “LIANZA Council is made up of regional councillors elected from each of our six regions” (LIANZA, n.d. para. 2). Eighteen people is a large number for a council but I believe as time goes on the numbers will shrink due to attrition and the merging of libraries in similar areas.

In addition to a rotating chair, I recommend a Library Secretary that works with the chair and provides a consistency and knowledge base that the incoming chair can rely on and promotes a smooth transition. The incoming chair will be voted on by the library council.

To uphold our obligations as a treaty partner, I propose two additional seats on the Library Managers Council that is representative of the Māori and Pacific communities at Te Pūkenga. They will be there to give advice, direction and knowledge of how Te Pūkenga Libraries can best serve these two communities.

Manawa Ora - Kaimahi Structure

Kaimahi is the greatest asset that Te Pūkenga library has. Without the Kaimahi Te Pūkenga Libraries would cease to function.

Te Pūkenga is a transformation, an upgrade in service and future-proofing the organisation. I don't want to call it a restructure, because it brings up too many emotions from previous experiences so I recommend we could call it a transformation. The highest priority of this change is to make sure Kaimahi feel looked after, supported and communicated to. Also that we don't want to lose any of the expertise and knowledge that we have now but to build on it. Redundancy is not the aim. Cost savings is not the aim. High-quality, future-proofed, world-class equitable service is the aim.

This transformation will be a system that truly represents what an Aotearoa academic Library could look and feel like and runs according to the four provisions of both English and Māori versions of Te Tiriti o Waitangi and equity models. A new world-class library system that is a bit different in its approach. Moving away from the Eurocentric style of the last 200 years and moving into a new era of library services.

The next level is the Regional Library Level.

And any of the smaller regions that may now only have one or two staff will be an exception. Their region will be supported by the regionally closest larger library centre with online support and offering the same services as the other main centres.

The regional library is where most of the kaimahi is based. The roles in blue can have multiple staff with the same job title depending on the needs of the Regional Library.

New Slide

Then with the Regional Libraries, there will be a centralisation team. The Position and roles proposed for this team are as follows

The function of the centralized team is to have an overarching role over the whole of Te Pūkenga libraries. They will do most of the back-of-house functions to free up the local *Kaimahi* (staff) to focus on taura, *Kaimahi* (staff), and researchers.

New Slide

Manawa Nui - Library Spaces

Each library represents the land and the people in which they dwell. Each library needs to create a land acknowledgment statement and the space needs to become a physical representation of that land acknowledgment to the first people of the land. We need to link our libraries to the Iwi and hapu that have dwelled and lived on the land on which they allow us to stand on it in partnership and friendship. This is a minor first step in decolonizing our libraries.

Each local library will be individual according to the community it serves. Its interior design, artwork, collections, and building design will truly represent the history, present, and future of the land on which it sits and the ākongā it serves. It will be a place to showcase student work. Another quiet place to study when their home life is too loud, a collaborative space to generate new ideas and thoughts. Each local library needs to feel like a village owned by the ākongā (student), *Kaimahi* (staff), and researchers that work there.

The structure for the local library will be created so that it focuses on the local activities in a library.

Branding and the different types of spaces will be consistent with every library but the look and feel will be different depending on each library.

New Slide

There are many benefits to focus groups in an organization. It turns the organization into an innovative organization, where they are continually focused on improvement. “A project can provide an opportunity to lift the library staff’s gaze out of the day-to-day work and engage with a vision of developing services. In collaborative projects, the staff is exposed to a wider pool of ideas, knowledge, expertise, and ambitions from other departments or institutions” (Atkinson, 2021, p. 185). It can also give them a greater sense of confidence, and change of mindset and inspires continually innovation and flexibility (Atkinson, 2021).

“A team approach will ensure a diversity and breadth of input” (Atkinson, 2021, p. 187).

New Slides

Auaha - Industry 4.0 Technologies

We need to start to implement Industry 4.0 technologies into our libraries

New Slide

Manaakitanga - Reflective Practices

New Slide

Manawa Ora - Library Apprenticeship Programme

In the year 2000, I started my career at the Hamilton City Libraries. I was employed as a part-time trainee librarian in the reference department on the third floor of the central library. It was a fantastic start to my career. I was encouraged to learn every part of the profession, get involved in the various projects and serve at the reference and help desks on all levels. It was for two years and at the end of the two years, I was offered a full-time job in the reader's advisory department on the second floor. As part of the entry requirement for the job, I was expecting to be studying and achieve a library qualification by the end of it.

I recommend a similar programme at the transformational Te Pūkenga Libraries. The main reason for this is that Te Pūkenga is by its very nature a vocational educational provider and through the Open Polytechnic of New Zealand they train future librarians.

I think these apprenticeships would work very well with that programme and build the academic library profession.

One of our aims is to also encourage more Māori and Pacific People into the profession.

I propose that each subsidiary branch of Te Pūkenga Libraries offered two apprentice positions. One for anyone of Māori or Pacific background and another one open to anyone. This position may not always be filled but can be offered to anyone studying to become a professional librarian.

This would be a Tuakana-Teina model. “The Tuakana-Teina model is a buddy-system model. An older or more expert tuakana (brother, sister or cousin) helps and guides a younger or less expert teina (originally a younger sibling or cousin of the same gender)” (Lemanu, 2015, para. 4).

Appendix O: 2019 Certificate in Applied Innovation Artifact

[What will the ITP library look like in an 'Industry 4.0' world?](#)

Appendix P: 2019 Design Factory Presentation

[Powerpoint slides](#)

A Transdisciplinary approach to the future of libraries – A time to pivot

Slide two: What is Transdisciplinary Research?

Understanding of transdisciplinary (the rationale for the approach, the underlying principles for a theoretical perspective and the ethical guiding principles required in this domain).

My understanding of Transdisciplinary research is that its primary goal is to solve complex social problems or 'wicked problems that occur in the "Life World". By using many disciplines as a general baseline and moving the 'wicked problem' into the transformative realm that could be seen as abstract or subjective. It also involves a range of stakeholders to help contribute to solving the 'wicked problem'. It focuses on the human/ environmental relationship, which is where all the different disciplines, stakeholders, knowledge producers, and users are bridged to create some practical and sustainable solutions.

Slide three: The Library World and transdisciplinary Research

Clear reason for using it in your broad area of investigation and tell us what the current thinking is around the use of this approach in your area of interest

I feel that the transdisciplinary research approach will work well for this project as the issue is in the abstract realm. And it explores the relationship between human interactions with the environment. Not the nature environment but society as an environment.

Even though Library Science is a discipline in its own right, I feel that its values and ethics relates very well with the nature of transdisciplinary research. The Library has always transcended and supported all disciplines. In the past it was like a physical representation of housing all the knowledge produced by the different disciplines. So it only seems right to allow all the different disciplines to feed into

the discussion and help find some innovated ways of changing the perception of people and showing them the relevant purpose of libraries in an Industry 4.0 world.

The above painting is Michelangelo's painting of the school of Athens, but some have romanticised that what if it was a hypothetical representation of the library of Alexandria. A physical space where great minds from the different disciplines, with immediate access to data and information come together to discuss and hypothesises the complex problems of the world. It could also represent transdisciplinary research.

Slide 4: A quick history of libraries

It has been clearly recorded that modern librarianship was born out of the Enlightenment movement. Before the 19th century, the only qualifications you needed to be a librarian was "That of a well-educated gentleman" Weissinger, 2003. "To be a librarian one did not need to study or go through any special preparation, but rather one had to be qualified as a gentleman or a scholar."

After the enlightenment then the term professional librarian came in and it focused on standardising the tasks and techniques associated with librarianship. So in the scheme of things the history of the profession of the Librarian is a very short but the history of libraries and people who worked in libraries dates back to the beginning of time. Slight exaggeration.

Here is a picture of the Library of Alexandria one of the first reordered library. Interesting historical fact. Alexandria in Egypt was a port and any ship that wanted to trade in the city had to give up any manuscripts or scrolls to the library that they owned or they weren't allowed to trade. That's one great way to do collection development.

Slide 5: My Perception cycle

There is a modern theme of thinking out there that maybe we the library world could claim the new renaissance of information and this time it will transcend the physical space. Still trying to achieve our original goal which is to match people with relevant, up to date and accurate information that they need to achieve their goals.

But with the changes in technology and big companies providing quick and easy access to information the world of libraries is under threat. There are many issues that feed into this threat but I feel that the main problem is “societies perception of relevance when all the information they could ever want is freely available on the internet and its easy and quick to get”. Out of this comes the limited and decreasing budgets and this means that Libraries have to limit their access to good quality information, so when students and researchers search for the information they want they can’t find it and this feeds the misconception of relevance. Or they have clumsy out of date technology that makes the information that is needed hard to access. Time is a precious commodity to people and anything that requires too many clicks and a complicated process will be ignored. Thus also feeding the misconception of relevance.

Then we come to the issue of what information people are finding on the internet. Do they have the skills to distinguish between good information and information that has no substance behind it? Read an article this week from a lecturer of critical thinking talking about his experience being duped by that the YouTube video of that plane’s landing and being thrown around the tarmac. Truth and fiction are sometimes very hard to distinguish between. Take a moment right now to imagine a future where a major of people don’t know how to critically analyse information. What would the future of academia and research look like, not to mention the general population?

Luckily the library world has been working on this for a while and has been digitising many of its collections to make good information freely available and easily accessible for a worldwide population. They have been slowly and steadily working behind the scenes to help this future we now live in.

So I think that to really address the complexity and to come up with some unique practical solutions we have to go outside of the library science world and their traditional thinking, to engage with other disciplines and many different groups of stakeholders and I think that transdisciplinary research will take library world as a whole one step further in changing societies misconception and show that the library offers so much more than just a storehouse of books.

Slide 6: How do you Change Perception?

Changing society's perception takes time but I believe we as a profession have been slowly

Slide 7: Behind Closed doors – What the library has actually been doing for the last ten years

Not that the library has been sitting on their hands waiting for perceptions to change. Instead we decided to take over the internet instead and start curating it from all around the world. Libraries are the biggest advocates for eBooks, they have been slowly curating all their special, archival and heritage collections. Look at any public library site and you will be surprised to see what is there. Lately I just was a ted talk from a Librarian at the Dublin university library talk about her 5 year project to digitise the oldest New Testament in the world. The reason it took so long was that it was in 4 different parts in 4 different parts of the world and it was in Greek. So it needed to be translated, they also found out what animal the material was made of. For the first time in nearly 2 thousand years thanks to librarians the manuscript is complete and as the librarian mentioned the day before they launched on the library website she had been one of 12 people in the world to read it. After it was launch anyone anywhere can read it and see it in its entirety.

Slide 8: “The library is a growing organism

Just a nice quote.

Slide 9: Can you articulate the needs of the client/owner and those that will be impacted broadly?

So bringing it all back to the Wintec and the Wintec library. So the needs of Wintec as most of us will know is. I emailed the library management and asked them and this is what I got back.

- OUR GRADUATES ARE HIGHLY SOUGHT AFTER BY EMPLOYERS
- WE HELP BUILD THE ECONOMY AND STRENGTHEN COMMUNITIES
- WE ARE A LEADER IN INTERNATIONAL EDUCATION, ON-, AND OFF-SHORE
- WE ARE A MODERN AND FINANCIALLY SUSTAINABLE ORGANISATION

- OUR RESEARCH AND COMMERCIALISATION DELIVER REAL-WORLD SOLUTIONS

Slide 10: Aristotle

The library has always aspired to lofty ideals and Aristotle expresses them well.

Slide 11: Results from a quick email survey to management on what they think is the major issues facing the Wintec library

I also asked them what issues they believe they are facing the Wintec Library and it seem to align with what I have been reading and my own thoughts on the matter.

Slide 12: What has been done already @ the Wintec library?

It probably pays to have a picture of where we are now. And it would be on par with other institutional libraries in NZ. Last year we launched and was approved by the Deans office the Wintec Information literacy policy. This is to go alongside the AKO teaching strategy. The aim is to make sure all students at Wintec have a degree of information literacy by the time leave Wintec.

We are slowly becoming embedded into schools, where we teach critical thinking, research, APA referencing and how to find resources.

We are starting to create more online educational tools that can be used by teaching staff to add to their Moodle pages.

We are continuously working on the research archive to showcase Wintec's staff research to the world. Still a work in process but we are getting more and more enquires on this.

Next year we hope to launch the first ever institutional library app.

Slide 13: What has been done already in the wider library community?

Here is a brief list of other things the wider library community is working on. So as a team we are already working hard to move the library service to meet the needs of our stakeholders.

Slide 14: And why is it still an issue? Industry 4.0 changes everything

So why is it still an issue? All of this is great and it shows that libraries have pivoted and adapted to any change that comes their way over the centuries. Now Industry 4.0 is just around the corner and students are expecting a different kind of service from their library. This new technology provides an amazing opportunity for libraries to streamline how they connect people with information. How they make information accessible and how they teach the fundamental skills of information literacy. I think this is the perfect time to stop and think and start to plan where we want to head in the next ten years rather than get swept away by the wave of new technology.

Slide 15: questions so far

So I have come up with some questions to start heading me in the right direction.

1. What New technologies should ITP libraries be planning to implement in the next 10 years?
2. What sort of staff are needed for the future library?
3. Are the soft skills we are teaching today relevant for the world of tomorrow and why?
4. Can Libraries continually access the resources needed for staff and students legally when staff and students can get a wider range of resources outside the library system?
5. What do students expect in their library building? A study space? A collaborative space? A social space? A learning space?

Slide 16: Who else needs to be part of the discussion?

So who needs to be part of this discussion? These are all our stakeholders. And I feel all their voices should be heard.

Slide 17: Who will I get to work with me to shift the situation towards the innovative outcome for the common good?

I want to bring all these people on the journey with me.

Slide 18: What methods would you use and why and what are the first steps to be taken?

Slide 19: Reflect on my learning right now – where am I confident in my knowledge

I am confident in my knowledge that libraries haven't changed. That their core purpose doesn't change even when technology does. We are here to help facilitate learning, to create new knowledge and to enable innovation by providing equal access to information.

These are the five key areas I plan to focus on as I think they are all key issues that will give a clearer picture of where we need to head.

We need to adapt and run with Industry 4.0 technology that will make the library experience easy, fluid and natural.

We need to think about the skill set our librarians of the future need.

The library needs to focus on teaching these key skillsets

1. Critical thinking
2. How to Research
3. Information Literacy skills

We need to find a way of making access stemless and easy. And affordable and actually be able to deliver. We need to get into partnerships with other institutions to be able to provide the range of resources needed for our stakeholders.

And finally Library is a space. Because as much as the library of the future will be mostly in the cloud and virtual, people still want a space to come to. I think the library as a space will be a growing need of students of the future. What that will represent itself as will be determined by the community it caters for. But as always the physical library is only the tip of the iceberg.

Slide 20: where do I have to do more research?

There is still a lot to do.

Slide 21: what do you image the future will look like

So what will the library of the future be? They will use such smart-world technology that it becomes almost invisible, it is so intuitive.

This will free the Librarian to focus on collection management, teaching the soft skill set of research skills, critical thinking and information literacy, providing one on one human help with students, creating educational tools that will aid in their learning. Libraries would once again be about human betterment, and helping people reach their fullest potential, whatever that may be.. Instead, society needs people who like to think, people who question authority, and people who can identify threats and opportunities and act in the best interest of society. Librarianship is a unique profession. There are librarians in every level of society, from kindergarten to Research I universities, from some of the most disadvantaged neighbourhoods and communities to the heart of corporate competitive intelligence divisions. Technologies--be they books, electronic serials, or augmented reality reading commons--do not make a library. What makes a library is a place that shows you what information is good for whatever situation you need it. Teaching the skills of wading through the murky waters of endless information to find the true gems buried deep and providing that easily to you the user.

Slide 22: Reference List

- **Angulated reality – Searching for a book on the shelf with your phone.**
 - **A vertical pop up of information for New Books**

Appendix Q: 2021 Design Factory Presentation Slides

[Te Pūkenga Library: The next ten years](#)

[Divination Class: What will the ITP library look like in an 'Industry 4.0' world?](#)

Appendix R: Design Factory Sponsors Event Poster Presentations

[2019 Libraries in a 4.0 World](#)

[2019 Institutional Libraries in an Industry 4.0 World](#)

[2021 Te Pūkenga Libraries: Moving from Regional to National](#)

Appendix S: Low Risk Human Ethics in Research Application Form

[Ethics Application](#)