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**To Stand, Belong and Flourish:  
Exploring the Belonging and Success of Aotearoa University Students**

A thesis presented in partial fulfilment of the  
requirements for the degree of

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## Abstract

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A sense of belonging has been described as a fundamental motivation for humans to feel accepted, valued and recognized by others and groups. While the importance of the need to belong has been extensively demonstrated throughout psychological literature, the importance of belonging in higher educational contexts – like universities – is not as clearly understood. Current research has shown that the stronger a student's sense of belonging is to their institution, the more likely they are to be successful in their academic achievement. However, the degree to which belonging plays a role in this, especially in an Aotearoa context, is unknown, as well as the lack of student voice in psychological literature, leading to the question of what students define as success. A particular group of university students who are more commonly associated with the concept of belonging are those who are first in their family to attend university. These students often face unique challenges when entering university when compared with their counterparts, with connection, belonging, and relationship satisfaction being identified as key protective factors in the retention of first generation students.

The current study explored the relationship between university belonging and student success through the experiences of First in the Family (FIF) and non-First in the Family (non-FIF) students. Two-hundred and thirteen Massey University undergraduate students completed an online questionnaire which measured their perceptions of academic success and feelings of belonging at university. This research found a significant and positive relationship between students' feelings of belonging and their feelings of university success. That is, the greater a student's sense of belonging to their university, the greater their feelings of academic success at university. It also found that students held multiple understandings of what success at university meant to them, as well as no overall significant difference in First in the Family and non-First in the Family experiences of belonging at university. The findings of this research will contribute to the sparse literature on university belonging and will provide an alternative pathway of understanding the concept, and will provide insight into how students define success at university.

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*Ehara taku toa, he takitahi, he toa takitini*

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## Research Background

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This research was inspired by my journey of navigating through experiences of success and belonging. Remembering my time at primary, intermediate, and high school, ‘success’ was never really thought about in my life. I was not told I could do anything I wanted when I grew up, nor did I feel supported in learning and growing in the skills I thought I was good at. The consistent stereotypes of Māori and Pacific people also affected my perspective of success. That is, most of us dropped out of high school, we had kids young, did not do well enough like our peers, and hardly if ever attended higher education. I do not know how I knew this, but it was just a ‘fact’ I was accustomed to. The absence of support, encouragement and constant identification with ‘failure’ lead to an ever dull passion for education. Why would I care about something that did not care about me?

In an act to not become another statistic, I enrolled at a university to study Psychology. This was a subject I liked the sound of, but I never pictured a future with. I was also the first in my family to do this, so I felt pretty alone. To make a long story short, a couple of the lecturers in my courses acknowledged me as someone who had knowledge. They engaged my peers and me in conversation, asked us about our thoughts, and supported us in our learning. This was quite a culture shock. After this, I met a diverse group of people, all of different ages, ethnicities, and backgrounds, who all liked to learn and help each other out. Again, I could not believe this. Then, I realised I could talk to lecturers and support services for help and choose courses I took an interest in. I could also hang out in spaces with food and hot drinks, couches to lay on, and a space I could always go to after class. I did not know this feeling; the only term I could think about was that I had ‘school spirit’. Unbeknownst to me, it was a feeling of a sense of belonging. One assignment in my first-year course asked us to detail our Tūrangawaewae, a place where we felt like we were accepted and belonged. After thinking about it, I, who had only just started university, put Massey as my Tūrangawaewae as one of the first places I felt accepted.

Now, five and a half years later, I am still in a place I never thought I would even step on. Being here is a huge success for students like myself, and I know I could not have come this far without feeling a sense of belonging to my university. So, while this research will be exploring the relationship between university belonging and success, it also hopes to illustrate the power of

fostering a sense of belonging with students and their university and hearing student voices about what success means for them.

## Chapter 1. Belonging and Success

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*“I am the best me I can possibly be, because I have a Tūrangawaewae”*

-Tāmami Cunningham (2019).

### **A Brief History of Belonging**

A great deal of the human experience is fueled by the desire to be valued and accepted. Forming meaningful relationships and being a part of groups are core human motivations, impacting how people think, feel and act to those around them. Belonging is inherent in this experience due to the fact that it involves an evolutionary and developmental need for safety, support, and connection (Keene, 2020). The environment early humans were located in was often complex and challenging to navigate, with individuals forced to rely on one another in completing tasks for survival (Levett-Jones et al., 2007). Those trying to find food, shelter, or defend themselves against an enemy were more likely to survive in a group than fending for oneself. These groups in which most early humans lived became the locus of critical behavioural activities (Lewin, 1993), with rejection from a community potentially resulting in one being deprived of basic needs or possible death. The influence of these social groups is also recognised in developmental origins, where through copying skills and practices from our peers, we learn to survive in our environment, and through cooperating with others, we can access food, shelter, and protection (Over, 2016). This early developmental interaction with our caregivers, peers and other adults exerts a great deal of influence over our cognitive abilities and motivation and may help explain why people tend to avoid exclusion from groups and have developed a strong need to belong (Levett-Jones et al., 2007). This evolutionary and developmental insight characterised early literature, with an understanding of belonging being a familiar point of theory and speculation for decades.

A general sense of belonging has been understood in many different ways, such as the need for affection between individuals (Murray, 1938), the need for positive regard and interpersonal connection (Rogers, 1951), a need for affiliation (McClelland, 1985), connectedness (Caxaj & Berman, 2010; Hill, 2009; Lee, 2007), perceived cohesion with a group (Bollen & Hoyle, 1990; Hurtado & Carter, 1997; Museus & Maramba, 2010), and the need for relatedness (Deci & Ryan,

1991; Ryan, 1993; Vallerand, 1997). Due to the subjective nature of this concept, there is a vast and, at times, vague understanding between researchers across disciplines. Mahar et al.'s (2013) work conceptualising belonging identified over 8000 abstracts from the SUMMON database across disciplines, with additional searches added such as OVID Medline, Embase, and Scholars Portal. They found that saturation of definitions was reached after 40 articles when no new conceptualisations were identified. Twenty of the 40 articles provided conceptual or operational definitions for a sense of belonging, and 22 of the 40 articles contributed qualitative results relating to a sense of belonging. As this contextual nature will be seen throughout the chapter, one consensus that is agreed upon throughout psychological literature is that it is conceptualised as a need rather than a desire. This emphasis on need means that failure to satisfy it can cause severe distress and long-term negative consequences (Over, 2016), where failure to satisfy a want or desire may not lead to as severe distress.

This emphasis on the 'need' for humans to have interpersonal contact was asserted in several ways by Freud (1930), although he tended to see the motive as derived from the sex drive and filial bond. Maslow (1968) emphasised the importance of the love and belongingness need, in which a person will hunger for relations with others so much, whether with an individual or a group, that they will strive with intensity to achieve this goal. He detailed that individuals underplay the profound importance of our connections to others and that we had primarily forgotten our deep animal tendencies to herd, flock, join, and belong (Maslow, 1987). While his insight on the belongingness need provides an interesting perspective, his theory was primarily based on clinical experience and not original research data nor review of previous findings. Exploring belonging further, Hagerty et al. (1992) work into belonging as a vital mental health concept proposed that it has two defining attributes: (1) the experience of being valued, needed, or important with respect to other people, groups, or environments, and (2) the experience of fitting in or being congruent with other people, groups, or environments through shared or complementary characteristics.

### **The conceptualisation of a General Sense of Belonging**

As noted above, the construct of a general sense of belonging can be hard to pin down. Various researchers and scholars describe similar constructs of belonging while often using different terminology. This ambiguous nature is still apparent through psychological literature; however,

the most well-known and well-used formulation of belonging is that of Roy Baumeister and Mark Leary. Their 1995 work has heavily impacted belonging research, with current literature still deriving from this conceptualisation (Arslan, 2020; ; Barnes et al., 2010; Cruwys et al., 2014; Gillen-O’Neel, 2021; McBeath, 2018; Slaten et al., 2018). Baumeister and Leary (1995) described the need to belong as the “pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (p. 497). Satisfying this need involves two criteria: First, the need for frequent, positive interactions with others, and second, these interactions need to take place in the context of a temporally stable framework of affective concern for one another (Baumeister & Leary, 1995). In their analyses, they detailed that the need for belonging is satisfied by an interpersonal bond marked by “stability, affective concern, and continuation into the foreseeable future” (Baumeister & Leary, 1995, p. 497). This relational context of interactions with other people is essential for satisfying the need to belong and comes from a perception of meaningful connections, quality and satisfaction, rather than participation with, or proximity to, others or groups. They also propose that people who are well-enmeshed in their relationships should have less need to seek and form bonds than those who are socially deprived. If their need for belonging has been met, it will not be a significant drive in their lives. Due to this, they will not express or display the need for belonging as firmly as those who have not met this need. However, it is essential to note that individuals differ in the strength of their need to belong.

As noted previously, Mahar et al. (2019) provided insight into the various definitions of belonging. While their review focused on a transdisciplinary and multidimensional understanding of the concept, it also provides intersecting themes that they consider central to the definition. These themes of Subjectivity, Groundedness, Reciprocity, Dynamism, and Self-determination help provide a deeper understanding of how meaningful this concept can be for one’s life.

*Subjectivity* involves how individuals perceive themselves to be valued, respected, and ‘fit’ into a membership, group or system. A sense of belonging is separate from social participation and instead allows for the inclusion of the individuals’ responses and interactions to group memberships, giving weight to the unique feelings that membership provides to a sense of belonging.

*Groundedness* requires a referent group that is provided to anchor the subjective feelings of belonging. One belongs to something and must specify an external referent that serves to ground the individuals' subjective perceptions. An example of this is education, where a referent group may be a university, school, classroom, or campus. On a broader scale, there are tools to measure a sense of belonging to the general community (Hagerty et al., 1995). This has been used to study belonging in mental health, sexuality and the context of domestic violence. However, it is acknowledged that a sense of belonging may be multifaceted, and depending on the external referent, a global measure might not have practical applications.

*Reciprocity* refers to the shared feelings, experiences or understandings between the individual and the external referent. This is beyond having similar physical, intellectual or behavioural characteristics. While having specific characteristics may be used to place an individual into a social group or even exclude them from a group, alone they lack the weight to engender a sense of belonging with others. One example is Bettez (2010) work with mixed-race women and their understandings of belonging. In her research, she interviews mixed-race women on their experiences with belonging and how you know when you do or do not belong. While shared characteristics were acknowledged as contributing to their sense of belonging, the shared feelings, experiences, and understandings created a sense of connection in their interactions and helped build a sense of belonging.

*Dynamism* details the social and physical environments that may contribute to or reduce an individual's sense of belonging. These environmental factors may be transitory, or they may permanently affect an individual's sense of belonging, resulting in dynamic tension. Examples of physical barriers include geographic area and a disability or illness that restricts access, interaction or complete concordance with a referent. Social barriers may include behaviours of a group toward an individual, prejudice and discrimination or the political or economic climate. The dynamic interplay between enablers and barriers needs to be recognised in any formal definition of a sense of belonging.

*Self-determination* involves respecting the autonomy of the individual to choose to interact with referents and their perceived power in the interaction. It is important to weigh a sense of belonging against whether or not an individual feels they can belong and whether or not they want to belong. Mahar et al. (2010) believe one has control over whom or what they belong to and the power to develop satisfying reciprocal interactions. It is important to acknowledge that elements of systemic power such as historical discrimination, social roles, norms or institutionalised discrimination can act as barriers to feelings of self-determination and belonging.

### **Issues of Conceptualisation.**

Due to the subjective and unique experiences associated with belonging, there are known issues with the nature of the term. Leary (2020), in his latest work, noted that he and Baumeister defined the ‘need to belong’ quite broadly. In everyday language, they stated that ‘belong’ connotes membership in a group, where people ‘belong’ to teams, workgroups, clubs, clans. ‘Belonging’ is not generally associated with one’s neighbour, best friend or romantic partner. In retrospect, they stated that ‘the need to belong’ may not have been the most accurate, precise, and unambiguous way to characterise what they meant (Leary, 2020). This semantic problem is also recognised when researchers began to use imprecise words to describe states in which the need to belong is not fulfilled in everyday life. Researchers have used terms such as social inclusion and social exclusion to refer to states of high and low belonging (Leary, 2020). Other terms such as exclusion, rejection and low belonging are also commonly used to refer to inadequate belonging. However, people can be excluded in ways that do not affect their feelings of belonging nor make them feel rejected. For example, being excluded from a restaurant because all tables are booked out might make a person feel frustrated but most likely not rejected or like they do not belong. Some individuals can feel rejected or that they do not belong even though they are not excluded. These terms do not accurately capture the fundamental feature of the phenomenon. Many articles have pointed out this inconsistent nature throughout research, describing possible reasonings such as reflecting elements of the discipline from which they originated (Jones et al., 2006), fluidity, evolution, passive or active experiences of belonging (Mahar et al., 2013), space and time (Baldwin et al., 2020) and infancy of research (Slaten et al., 2018).

For the purpose of this research, belonging will still be predominately understood through Baumeister and Leary 1995 work, with an added understanding of Leary's 2020 work around the semantics of the term. However, while these understandings provide a foundation for better insight into the conceptualisation, there will be an emphasis on belonging as a perception of meaningful connections, quality and satisfaction. How an individual perceives or even understands belonging may be different from one another. So, while the definitions stated above help inquire into the concept of belonging, it should have a layer of fluidity to incorporate individual differences.

## **The Impact of Belonging**

### ***Social Health***

As belonging has been linked to a need rather than a want or desire, it has been described as essential to health and well-being. Thus, as with the need for food and safety (Maslow, 1968), the need to belong has been associated with important emotional consequences, cognitive processing and behaviour. This need is applied to people from every culture and is associated with negative physical and psychological outcomes when it goes unmet. The absence of a sense of belonging is typically described as feelings of alienation, rejection, social isolation and loneliness, linked to negative proximal and long-term outcomes such as dissatisfaction, low self-esteem, depression, substance abuse, and suicide (Hagerty et al., 2002). Strayhorn (2018) also details that those who cannot satisfy their general need to belong tend to report more negative outcomes such as frustration, arrested development, unhappiness, and several mental health issues. Hagerty and colleagues have conducted a number of studies involving a sense of belonging and mental health. In 1996, Hagerty et al. examined 379 community college students and their sense of belonging in relation to several factors, including social support, loneliness, anxiety, suicidality, conflict, attendance in religious services and involvement in community activities. Their research found that a sense of belonging is closely related to indicators of both social and psychological functioning. Negative social support and conflict were related to a lower sense of belonging, particularly among women.

### ***Stress and Health***

Choenarom et al. (2005) explored the role of sense of belonging, social support on the relationship between perceived stress and symptoms of depression in 90 men and women. Their results showed

that increased perceived stress and lower sense of belonging had significant direct effects on the severity of depression that lasted over 9 months. Most recently, Kitchen et al. (2012) investigated the association between a sense of community belonging and health among settlements of different sizes across Canada's urban to rural continuum. Their research found a significant and consistent association between a sense of belonging and health, even when controlling for geography and socio-economic status. As Kelly (2001) notes, some individuals with lower belonging may be satisfied by few contacts, while others with greater belonging may need many more contacts. The lack of satisfaction with personal relationships relative to their need to belong puts the individual at risk of loneliness. Therefore, it is a complex and dynamic process for each individual, and it is key to remember that while belonging is understood as a fundamental human motive, one's understanding and desire for belonging can fluctuate across situations, time, and place.

### ***Identity and Culture***

While the above has described belonging concerning a more general health-related impact, belonging also significantly impacts other areas of life such as identity and culture. While belonging is understood as this psychological construct, a phenomenon deeply inherent in our developmental, evolutionary, and social contexts, it seems to miss out on detailing the voices providing the basis of this evidence. Especially so, the voices from those that are still trying to find or figure out their sense of belonging. One particular group of individuals that have long been associated with belonging is mixed ethnicity or mixed race. These individuals often face unique challenges due to the complexity of multiple identities, such as estrangement from family for being mixed race, not fitting the psychical identity of a certain race, and feeling like they do not belong or fit into their multiple ethnicities. The question of "Who am I?" often involves creating a sense of identification with others or subjectivities, grounding oneself in how they are placed in the world and their context. For some, this may be an easy task, with Cain et al. (2017) describing that it was once suggested that the English spent little time reflecting on what it meant to be English, and Arker (1948, p.195) stating that "English nationality is never reflective because it is so simply and obviously a fact". However, Bettez (2010) illustrates the struggle of participants being constantly asked by others, "What are you?" situating themselves as an 'other', can sever opportunities for belonging. Gloria Anzaldúa's well-known 1987 work titled 'Borderlands/La Frontera: The New Mestiza' explores her journey of belonging and how, because of her multiple identities, she does

not feel like she belongs to any one spot. The constant tensions and rejection she experiences due to her identity had led to her developing her own way of figuring out who she is and how she belongs in the world—needing to rid herself of the rigid boundaries sociality places on individuals to mould them into only fitting one context, forcing them to change in search of a sense of belonging. Through these examples, an understanding of belonging illustrates that the concept is a huge part of many lives, with some still searching for a sense of belonging.

### **Belonging in an Aotearoa Context**

When analysing belonging literature, it is clear that most research comes predominantly from an American-European perspective. While many findings are not representative of all populations, the overwhelming research involving a WEIRD (Western, Educated, Industrialized, Rich and Democratic) perspective saturate the concept's understanding to one particular lens. This knowledge saturation can cause issues when the need to belong is believed to be 'culturally universal' among humans. It is vital to note here that this 'universality' in the need to belong was initially understood to be found to *some degree* in all humans and cultures (Baumeister & Leary, 1995), and that there is to be expected individual differences in strength, intensity, and variations in how people express and satisfy the need. Even so, while belonging studies may hardly concur that their findings are generalisable, we can infer from how research portrays belonging that it is an inherent part of human behaviour and cognitive process. In these cases, it is essential to look at this concept through other contexts and that understandings of belonging may fluctuate across populations.

This can be evident when trying to understand belonging through an Aotearoa context. Māori are the tangata whenua- the people of the land and an indigenous group of Aotearoa. In their culture, there is no direct translation for belonging. Instead, other terms do incorporate the experience or feeling of what belonging has been described as. This can be seen in Māori words such as whānau, usually meaning family and extended family, 8hanaungatanga8anga, the process of establishing relationships and connection to others, and 8hanaungatanga, family-like relationships. These words capture aspects of belonging but are not synonymous with the term. Belonging can instead be felt through experiential connection, with words not necessarily being needed to illustrate the concept, rather stories, experiences or feelings expressed instead.

One Māori term that can be used to better understand belonging and place/space would be that of Tūrangawaewae. Tūranga, translated as a ‘place to stand’, and waewae, translated as ‘the feet’, is commonly understood as one’s right to be associated with a place, a place for the feet to stand (Mead, 2016). These places hold strong meanings to an individual and have been described as a place of strength and belonging (Groot et al., 2010), where one’s rights are not challenged, where one feels secure and at home. Tūrangawaewae is typically conceptualised in relation to papakāinga (ancestral home of Māori), whenua (land) and whakapapa (family genealogy), whereby one has a connection to a place through their ancestral roots. This is how tūpuna (ancestors) saw the world-one being interconnected with the land. Before arriving in Aotearoa, tūpuna came from Hawaiki, a number of places, both physical and spiritual, where they travelled and lived before making the journey here. This is a significant place in Māori culture and history where they once stood and made their home. Hawaiki is one of the first places Māori viewed as their tūrangawaewae. After arriving in Aotearoa, these significant places also included land within the territory of one’s iwi and hapū. These were marae, cemeteries, wāhi tapu (sacred spots of the hapū), and extended to rivers, forests, lakes and mountains (Mead, 2016). Throughout the ongoing process of colonisation in Aotearoa, the physical loss of these places, the papakāinga, and the loss of one’s evidence of tūrangawaewae through conquest in war or confiscation, was described as “one of the most traumatic experiences that one could be expected to endure” (Pere, 1994, p. 27). Losing one’s papakainga is not just about the physical loss of one’s home but also the loss of the people’s history and achievements. Losing a papakainga is also losing a part of one’s identity. Having a tūrangawaewae is not solely about the physical place or space itself but the relationship one has with that environment and the meaning and connection one holds for it. This understanding of belonging stretches beyond time. It includes everywhere our tūpuna has stood.

While tūrangawaewae is conceptualised in relation to whakapapa and papakainga, due to the process of colonisation, contemporary times, and the fact that there are diverse Māori realities, a sense of tūrangawaewae has resulted in an expanded understanding and conceptualisation of the meaning. Tāmami Cunningham (2019) describes it best as:

“Turnagwaewae does not have to be a place where you live. My friend Connor, his tūrangawaewae is up North in Rotorua, but he has lived in Christchurch for 15 years. My auntie Aroha, her tūrangawaewae, is cooking

in their kitchen for her whānau. It is just as simple as that. It is a place where you are you. Being Māori does not mean we are the only ones who have a tūrangawaewae, it is a place where you feel most connected. We all have a tūrangawaewae, you just may not know it yet”

Mead (2016) also continues this understanding by stating that the concept of tūrangawaewae will always be important not only for Māori but most modern citizens. Land will always be an important part of how one defines themselves, and we all need a place for our feet to stand, a place to call our own. Carter et al. (2018) describes that over time, people can develop strong connections to places and spaces and form identities based on these connections. People can also have strong bonds with the biophysical features or the social relationships within these places. So for many, a tūrangawaewae is a considerable part of one’s life and how they view themselves in the world.

Another reason why tūrangawaewae helps to explore belonging is that belonging has been described as conducive with place as a socio-spatiotemporal event (Marques et al., 2020). That is, the concept encompasses the action of locating oneself within a physical space (identifying the spatial); the act of standing in that physical location at any time in the past, present and future (identifying the temporal); and identifies the action of locating oneself in a physical space as occurring in accordance with kinship ties (whakapapa) that may encompass both people and the environment around them (the social”).

It is crucial to point out here that the conceptualisation of tūrangawaewae is in no way a translation or replacement of the term belonging. Instead, the concept has been a fundamental foundation for this research in conceptualising the influence, reach and power it can hold. While belonging studies have detailed the impact on the emotional, cognitive and behavioural bonds it has on individuals, tūrangawaewae allows for a deeper understanding of the relationship between place, space and individuals. It also highlights that the need to belong needs to be differentiated from elements of universality and uniformity. This understanding of belonging and place is essential to acknowledge as belonging to a university, which will be discussed below, involves multiple contexts that are not solely relational. While positive social interaction has been described as fundamental requisites for a sense of belonging (Baumeister & Leary, 1995), researchers such as Ahn & Davis (2019) and Slaten et al. (2018) have found that there are also other significant domains involved in university

belonging. This includes aspects such as surroundings and locational references (physical environments), university cultural contexts, intrapersonal factors such as balancing social and academic lives, self-identifications and many more. Belonging to a university, in general, cannot be understood as pure human relationships, as it ignores the multitude and depth of a student's experience. This is why this study's understanding of belonging acknowledges the fluidity of the concept.

### **The Importance of a Sense of Belonging in an Educational Context**

A sense of belonging in an educational context has been argued as critical for maintaining motivation and succeeding in academic institutions such as schools (Gillen-O'Neel, 2021). The most commonly cited definition of school belonging in literature is offered by Goodenow (1993) and Hoffman (2002), in which a sense of school belonging refers to a student's feelings of affiliation and identification with their institution and the extent to which students feel personally accepted, respected, included by and supported by their institutions and social environments. Other understandings of school belonging have incorporated constructs including a sense of community, student engagement, positive interactions with others and social identity (Goodenow, 1993). Many educational researchers agree that the need for belonging is one of the most important needs of all students to function well in all types of learning environments (Connell & Wellborn, 1991; Deci & Ryan, 1991; Finn, 1989; Osterman, 2000), and has a strong influence on students motivation. One example is that perceived support, and the sense of belonging are expected to increase students' beliefs in their success and increase their academic motivation. Osterman (2000) revealed that students who experience a sense of belonging in educational environments are more motivated, more engaged in school and classroom activities, and more dedicated to school.

### **Belonging at University**

Belonging has been extensively researched at the school levels of kindergarten to 12<sup>th</sup> grade in American terms; however, researching the experience of university students has been described as more complicated. This is due to the institution having multiple contexts and sub-contexts in which a student can interact (Ingram, 2012). The university campus itself is a complex social system (Hurtado et al., 1998), with a student having multiple interactions with academic contexts such as classes, disciplines, lecturers, social contexts with their peers, institutional contexts such as clubs,

student support, and organisations. A student may describe a sense of belonging to their institution; however, does this belonging only attribute to a particular part of that campus, say a specific space and people they surround themselves with, rather than the campus and university as a whole? The complications of this contextual nature do appear when trying to define what is belonging in higher education. Most studies focus on this definition through a subjective and individualised state, referring to a university student's sense of belonging as "subjective feelings of connectedness or cohesion to the institution" (Maestas et al., 2007, p.239), a "students' view of whether he or she feels included in the college community" (Hurtado et al., 1997, p.325), or a student's perceptions of "valued involvement" in that university (Hoffman et al, 2002, p.229). This subjective focus aligns with individuals' differences and understanding of the concept; however, it does mean that the definition in itself is quite broad and, at times, fails to address a number of questions. Which poses the question, what is defined as the 'university community? Can a student find a level of 'connectedness' to a certain community in a university, but not the institution itself? As Ingram (2012) states, a more multifaceted definition is needed to better understand factors that affect belonging and outcomes of student belonging. Ingram also describes that a more differentiated approach to studying belonging may be helpful to practitioners.

### ***University Belonging Measures***

Measures of university belonging are also quite broad and nonspecific. As noted above in measures for a general sense of belonging, university measures also incorporate the 5 item Likert scale. University belonging is often measured through questions relating to a student's own perception of feeling a part of their institution, such as "I feel like I belong to this university" (Arslan, 2020, p.22), "I feel at home on campus" (Slaten et al., 2018, p.640), "I see myself as a part of the college community" (Ingram, 2012, p.40). These items are generally adapted from previous general belonging research, with researchers adding in the institutional elements of place.

Other studies have expanded on what can be considered as belonging by including factors such as staff relationships with a student (Slaten et al., 2018), satisfaction with their institution (Johnson et al., 2007) if they feel like others care for them (Arslan, 2020), and pride in belonging to their university (Freeman et al., 2007). Hoffman et al. (2003) developed a measure of belonging that included five factors: perceived peer support, perceived faculty support/comfort, perceived

classroom comfort, perceived isolation, and empathetic understanding. Ingrahm (2012) argues that there are multiple dimensions of university belonging, with her study producing three reliable and independent measures of belonging: social belonging, academic belonging, and perceived institutional support. Slaten et al. (2018) work, which this study will use, developed a measure based on three factors of University Affiliation, University Support and Acceptance, and Faculty and Staff Relations. These three factors were also based on their conceptual model outlining the construct of university belonging. These included Valued Group Involvement such as feeling affiliated/member of an organisation on campus, Intrapersonal Factors such as opportunities for self-awareness, Meaningful Personal Relationships such as having healthy relationships with staff, and Environmental Factors such as the importance of diversity and inclusivity.

While future research may continue to identify aspects of what makes up university belonging, the scale by Slaten et al. (2018) is one of the best measures for this study as it differentiates the aspects of a student's university experience. It helps demonstrate that university belonging is multifaceted and is based on both quantitative and qualitative research, whereby student interviews have been used to help provide the conceptual model and factors that are based on them. The scale also provides strong validity and reliability and includes elements that other scales have not utilised, such as the understanding of university affiliation. However, it will be noted that while this scale is suitable for the context of university students, it may not be relatable from an Aotearoa perspective. At this time, there are no known Aotearoa University belonging scales or even general belonging Aotearoa scales. While this literature review emphasises the importance of an Aotearoa perspective and acknowledges a te ao Māori world view, it does not facilitate the two worlds (original scale and NZ) together. It should also be clear that while the wording of the scale items were changed or removed to better fit the Aotearoa perspective, which will be discussed below, further in-depth belonging research needs to be taken into consideration of this issue. However, it is hoped that telling the story of belonging through a te ao Māori perspective and the results of the study will contribute to the need for more diverse research on the topic and provide an argument for the creation of scales, measures, or even qualitative work to be done in Aotearoa.

### **First in the Family Students**

An interesting takeaway from this literature is that while a student's sense of belonging has been argued as having a significant influence in their studies, what effects does belonging have on different types of students? Students are not a homogenised group, and the characteristics of students should be noted when understanding how belonging plays a factor in their lives at university. Different characteristics such as whether or not they are internal (on-campus), distance (online learning), mixed-mode (both on-campus and online learning) can affect their relationship with belonging and the role it may play in their achievement throughout university. This study will explicitly look at two particular groups of First in the Family (FIF) and non-First in the Family (non-FIF) students at university.

The definition of First in the Family students traditionally refers to having parents who do not have university experience (McConnell, 2000). However, various definitions have ranged from at least one parent with/without a bachelor's degree to parents with some university or an associate degree. It is important to note that a 'family' in these cases falls under the typical nuclear western structure, with parents playing a prominent role in a FIF status. A student first in their family to attend university may be considered differently in various cultures, and each university has its ways of selecting a FIF status. It is important to understand that despite a large amount of research into first-generation students, the requirements for what constitutes this status can vary. Due to the differences in how this definition is understood, this study will be aligning its terms and understanding from Wolfgramm-Foliaki and Santamaria (2018) work with New Zealand (NZ) First-Generation students. The term 'first in the family' will be used instead of the more commonly used term 'First Generation' as it encompasses more of the contexts of a student experience. As Wolfgramm-Foliaki and Santamaria (2018) state, some students are the first in their immediate families; others are the first in their extended family, church community or the broader community. Simply, personal identification of being first in their family will be used, instead of only having parents who have not attended university.

Throughout literature, FIF students have commonly been described by the disadvantages they face at university. Students who are first in their family to attend a university have been seen to start at a stark disadvantage compared to their peers in terms of social support, academic expectations, academic preparation, and access to resources (Schelbe et al., 2019). FIF students are twice as

likely to drop out of four-year institutions in their second year (Choy, 2001), and lower-income FIF students are four times more likely to drop out after their first year; therefore, contributing to lower retention rates (Engle & Tinto, 2008). According to Pike and Kuh (2005), FIF students are less likely to persist, graduate and move onto postgraduate studies. They are also more likely to report feelings of low confidence and isolation, feel more unfamiliar with the coursework expectations in a university environment, and lack exposure or mentoring to prepare for university (Schelbe et al., 2019). Most first-generation literature has reported that low-income and ethnic minority students are also frequently the first members of their families to attend a university (Katreovich et al., 2017).

Numerous researchers have also asserted that some students are more vulnerable to questioning their sense of belonging in college contexts than others (Hurtado & Carter, 1997; Maestas et al., 2007; Walton & Cohen, 2007). Due to these challenges FIF students face, it is fair to assert that they may feel less likely to belong on their campus compared to their non-FIF peers. According to Strayhorn (2012), FIF students experience a sense of belonging differently than traditional college students in that they need to belong can be more significant for their university experience. Stephens et al. (2012) found that higher education institutions adhere to individualistic standards that require students to work and achieve independently, often bringing forth feelings of competitiveness. This study found that working-class and collectivist cultures can be in direct conflict with this type of environment which tends to value more togetherness, sense of belonging, and family first. Where Strayhorn (2012) has identified these feelings as a lack of sense of belonging, students usually voice these concerns as culture shock (Crozier & Clayton, 2009). Just like distance students, FIF may experience factors of support and acceptance differently than their peers.

An element that is notably absent from this literature is the awareness of how First in the Family students are depicted. Many valid insights come from first-generation research, and, understandably, many of the disadvantages noted provide better context and information for universities. However, there should be caution when grouping FIF students as commonly low income and minorities. There have been many historical barriers to higher education for low income and minority students, yet much research focuses on the student themselves and ultimately

what they cannot achieve compared to their non-FIF peers. Research detailing their lower grades, lower critical thinking skills, poor academic integration (Katravich et al., 2017), lower levels of academic motivation and self-efficacy and lower academic success (Frogge et al., 2018) recognises these disadvantages from an individual standpoint. It compares them to students who do not experience the same barriers. This is crucial to identify before describing the situation through a New Zealand context, as Māori and Pacific students who are more than likely to be FIF students (Theodore et al., 2016) have also been historically viewed through a deficit manner in education. In a similar understanding, Bell & Santamaria (2018) state that these first-generation students of Māori and Pacific descent often fail to be recognised as pioneers and leaders in their families and communities. Instead, there is a common use of deficit lenses when examining the experiences of these students.

In a New Zealand context, a 2011 Graduate Longitudinal Study New Zealand (GLSNZ) surveyed 8,700 final year students from across New Zealand's eight universities. These students were then resurveyed two years later. This study found that Māori and Pacific students were more than likely to be first in their family to attend university, with nearly half of Māori students (48.4%) being the first member of their immediate family to attend university, and half of the Pacific students (50%) being the first in their immediate family as well. The exact reasons why these groups are more likely to be first in their family were not mentioned. However, disadvantages they face were described such as less access to role models who have attended and completed higher education, support in gathering information and help when making educational choices did arise in the challenges these students face. (Theodore et al., 2016). To date, there is a lack of research around FIF students in New Zealand. When investigating the relationship between belonging and FIF, it is also vital to acknowledge

### **Student Success**

Several studies have shown that a student's sense of belonging is known to be strongly associated with academic achievement and a successful life at their institution (Ahn & Davis, 2020; Becker & Luthar, 2002; Goodenow, 1992; Thomas et al., 2014; Pickford, 2016) and has also shown that it can affect a student's degree of academic adjustment, achievement, aspirations, or even whether a student stays in school. This diminishes motivation to engage and persist in university, with

Strayhorn (2018) stating that the feeling of failure can be internalised to the point that it becomes their identity. Students ask fewer questions in class, study less often with others, and avoid office hours (Orenstein, 2015). As a result, their work and grades can suffer. A lack of belonging can contribute to numerous setbacks and challenges for students, leading to one feeling like they cannot succeed. In contrast, students who felt like they belonged to their university reported feeling safe, respected, and comfortable interacting with their peers, staff, and faculty members both on-campus and generally within their larger profession (Strayhorn, 2018). While research has shown that an increased sense of belonging for students can contribute to student success, the question is, however, to what degree does this belonging influence success, and who gets to define what this success consists of?

As research has shown, those who report higher levels of belonging have more successful lives at university (Hoffman et al., 2002). What constitutes this success and who decides what success is comes into question. The concept of success at university has generally been associated with the attainment of a high GPA (Grade Point Average) (Chaney & Lake, 2020). High assessment grades reflect that one has obtained educational objectives, has an adequate grasp of knowledge, and therefore leads to the success of the student and their institution (Cachia et al., 2018). This view of success focuses on institutional measures of academic achievement, student retention and qualification completion. While this view is valid, it does hold a limited way of defining and understanding university success. The term has frequently been debated in psychological literature due to its amorphous identity (York et al., 2015). What one person values and understands as success may not resonate with others, leading to even more ambiguity associated with the definition. While the literature has often used the term as a catch-all phrase, commonly citing student success as educational attainment or achieving the desired degree, it is vital to instead break apart the term from two perspectives: an institutional perspective and a student perspective.

### **Institutional Perspective on Success**

It is important to note here that the term ‘institutional perspective’ is used instead of a more commonly used understanding of academic success. While aspects of academic success are integrated into the institutional perspective, such as academic achievement and attainment of learning outcomes, the institutional perspective acknowledges the overarching rules and

expectations within a university. Many articles state that understanding success depends on the student, which is true. However, it is fair to point out that despite their perspectives, they will not be able to get their degree without passing courses. They will not be able to pass their courses without passing their assignments, tests, and exams adequately. The degree to which GPA and grades are involved does depend on the student, but doing well, wanting a distinction on their degree, or obtaining some scholarships depend on high grades. The rules and expectations an institution has can and will influence how success is conceptualised, so it is essential to note this perspective rather than incorporate it with academic success solely.

Institutional perspectives on success often use the ‘traditional methods of exam results, education grades, degree completion rates and other depictions of a students’ academic performance (York et al., 2015). Moallem (2013) noted in her work on school belonging and academic success that the majority of studies use a student’s grades or grade point average (GPA) to assess a student’s academic performance. Other studies Moallem states used standardised tests, self-reported academic records, student records, and a small number of them asked teachers to answer questions relating to the student’s performance and how well those students performed on those assignments and tests. A common theme seen throughout these studies is that while there are various measures and assessments they use to obtain a student’s academic performance, ultimately, the performance comes back to the student’s grades and scores. It is important to note here that while a student’s performance is crucial to the students themselves, it is also crucial in providing success for the university. Increasingly, there is a competitive nature in the education sector and pressure from government and educational funding for public universities to continue to increase their success rates. What these success rates are can depend on the institution and context they are in. It can also be dependent on the conditions and expectations from funding providers.

### ***Influence on Institutional Perspective***

Looking at this perspective through an Aotearoa context, it is vital to be aware of the wider societal influences that affect how universities examine success. As all New Zealand universities are public, the Ministry of Education and, in particular, the Tertiary Education Commission (TEC) both impact how universities conceptualise and understand student success outcomes. Between the two departments, several objectives, strategies, plans, and frameworks have been structured

over the years to help support tertiary students and their institutions. Throughout these reports, ‘success’ is never explicitly explored; however, key statements such as ‘ensuring success’ ‘succeed in education, ‘successful outcomes’ and ‘successful student’ have been used frequently (Tertiary Education Commission, 2020). This lack of definition is not unusual to see, as defining success would mean the need for specific narratives and interventions that may not be possible to fulfil with such a diverse population. However, when exploring strategies and plans specifically targeted towards Māori and Pasifika students, we start to see a clearer approach to what success may mean for these groups. Tim Fowler, Chief Executive of the TEC, described in his 2018 opinion piece that the TEC had “yet to effect the necessary system change to achieve parity of participation and achievement for Māori and Pasifika learners with other learners”. In response to this narrative, the TEC enacted a five-year goal to achieve patterns of participation and achievement for Māori and Pasifika that are “on par” with other learners (e.g., non-Māori and non-Pasifika) (Tertiary Education Commission, 2020).

From this, the Learner Success Framework was created, where several intentional & holistic approaches are implemented to enable and lift learner success. This framework is a great way to explore their perspective on increasing Māori and Pasifika success. However, what should also be focused on is the various statements provided by the TEC that Tertiary Education Organizations (TEO) are needed to show how they will have regard to the goals or priorities outlined in the framework (Tertiary Education Commission, 2020). TEO’s commitment and progress need to be measured so TEC can see a consistent picture of what is happening and if they are achieving the targets that have been set out. This progress in itself is measured through Educational Performance Indicator (EPIs) reports, which are designed to help TEOs manage and monitor their own performance and to deliver on their agreed tertiary education services. Using their methodology, performance information includes first-year retention rate, cohort-based qualification completion rate, course completion rate and progression rate (Tertiary Education Commission, 2020). If a TEO fails to deliver good learner outcomes, funding will be shifted to provision with better learner outcomes. While these measures are understandable, it does provide multiple angles of success from this perspective, one of them from a more neoliberal orientated context. This is to be expected, as York et al. (2015, p.1) describes,

“The proliferation of studies concerned with identifying constructs that promote academic success is likely connected to the overall assessment movement and increasing pressures for institutions to evidence student learning and development”

It is clear that throughout the TEC plans and frameworks, they are focused on ensuring success for all students, and over a number of years, they have been exploring different avenues on how to break down some of the barriers students; specifically, Māori and Pasifika students face. However, the reason for this inclusion is to illustrate that institutions themselves are only just one layer in how success is operationalised. As universities come under increasing scrutiny regarding successfully educating students, tangible measures are needed to provide evidence that educational outcomes are being achieved. The question is, to what extent do these tangible measures reflect the realities of the students? Matapo and Baice (2020) state that many institutional ‘success’ strategies are initiated from a deficit positioning to respond to these barriers of participation, academic progression and student completion. They also state that for Pasifika students, success from an institutional perspective is defined as academic achievement rates on par with their Pakeha counterparts. This has also been described for Māori students where the continuous state rationalisation of Māori educational under-achievement illustrates the deficit understanding of what it means to succeed. That is, success for students is constantly compared with those students who are at the ‘forefront of success already, most notably, non-Māori and Pasifika students. It is noted that framing student success through this perspective often overlooks the psychological and psychosocial value of student experiences and behaviours (Picton et al., 2018). Performance is heavily weighed on outcomes specific to educational experiences, leading to a limited-term and application. This perspective neglects its subjective aspect and risks assuming students experience success in the same way.

## **Student Perspective**

Student perspectives towards success are primarily absent from literature. Piction et al. (2018) state that despite the large body of literature on higher education success, they were unable to find research that explicitly asked students what they believed constituted success at university. This absence of voice is not uncommon due to the fact that student experiences in themselves are difficult to measure (Kuh et al., 2006). The psychological and psychosocial processes of learning and development have always been complex; however, such measurement is made increasingly difficult when the concept of success can vary among different understandings (York et al., 2015). Kuh et al. (2006) found that student success considered aspects such as satisfaction with university experience, how comfortable one feels in their learning environment and relationships with their peers and staff. Theodore et al. (2017) found in their study of Māori university graduates that tamariki (children) were a source of motivation for participants who were parents. Graduates highlighted their desire to be role models of success for their whānau, especially those who were first in their family to attend a university. Matapo and Baice (2020) found that while defining success for Pacific students in higher education is complex; there was a collective nature of how success was visualised (inclusion of family, peers, community). One student stated that “success for Pasifika needs to be defined by Pasifika people” (p. 31). This highlighted the collective nature of how success was visualised (inclusion of family, peers, community), but also recognised the stereotype threat where Pasifika have been deemed as “less intelligent” and “academically” disengaged (Hunter et al., 2016, p.198) in comparison with other ethnic groups.

Yazedjian et al. (2008) and Delahunty and O’Shea (2019) have both noted that success for students often involves multiple aspects that go beyond institutional understandings, with Sullivan (2008) arguing that institutions need to adopt diverse definitions of success that acknowledge the complexities of the student experience. Yazedjian et al. (2008) found in their research that even students who were high achieving in their grades still had multifaceted perceptions of success. However, many felt that their preconceived ideas of success before entering university had to be amended to match the expectations when arriving at university.

While there are few journal articles on student voices and what they determine success to be, there are various pieces of work online written by university students about their university experience (Mandamin-Shawanda, 2016; Mejia, 2010; Thomas, 2019). Many of them are first in their family

to attend university, have children, or were brought up in an environment where higher education was not expected of them. A common theme throughout is that they never considered going to university, with Mandamin-Shawanda (2016) stating that she never considered herself as one of the ‘smart’ kids and so never thought university was an option for her. Thomas (2019) states that higher education was not something she knew or even considered for herself when she was younger, and Mejia (2010) detailing she never imagined she would attend college, especially not while raising her son. All of them in their online pieces encourage students that despite their backgrounds and upbringings, attending university can be done. Even stepping onto a university campus or online course being a huge success in itself. The common understanding of a student perspective is that while grades are important, success is not necessarily confined to academic performance and that there are different ways of understanding success.

### **The Current Study**

This study aims to investigate the relationship between university belonging and student success through the experiences of First in the Family and non-First in the Family students. This study hopes to contribute and further increase the literature pertaining to university belonging, especially through an Aotearoa/New Zealand context. This study hopes to provide a deeper understanding of what it means for a student to succeed at university and how belonging plays a role in this understanding. This study will also look into First in the Family students who are often overlooked in belonging and success literature and will explore the effects of the first-generation status on the relationship between belonging and success.

It is hypothesised that there will be a positive relationship between university belonging and student success. That is, the greater the sense of belonging a student holds towards their university, the more successful that student will be at their institute. It will also be hypothesised that first-generation students will have a higher positive relationship with belonging and success than non-first generation students. Belonging will be measured through the University Belonging Questionnaire (Slaten et al., 2018), and student success will be measured through this project’s academic success subjective scale and open-ended questions.

This exploration of the relationship will also be answered through the following research questions:

- What does success at university mean to students?
- Do these understandings of success differ between First in the Family and non First in the Family students?
- What is the factor structure of the Belonging measure?
- How do feelings of university belonging compare between First in the Family and non First in the Family students?

## Chapter 2. Method

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The following chapter presents an overview and description of the current study's methodology. It includes details about the study's participants and recruitment method, design, measures, procedure and data analysis.

### **Participants**

A total of 213 participants were recruited for the study. The majority of participants identified as female (89.2%), with a mean age of 31.92 years old ( $SD = 11.21$ ) and identified as New Zealand European/Pākehā (52%). Full demographics details are provided in Table 2.1. Te Pokai Tara Universities New Zealand (2018) reported 175, 240 university students in Aotearoa. Based on this approximate population, a statistical power analysis recommended a sample size of at least 164 participants (80% CI=1.28,  $E = +_5\%$ ).

### ***Recruitment***

Participants were recruited through a variety of channels. To start, print advertisements of the study (see appendix A) were made that included a short description of the research (including eligibility of participation), the contact information of the researcher, and an online link and QR (Quick Response) code which directed students to the survey. These advertisements also mentioned that students who took part in the study could go into the draw to win 20 \$40 gift vouchers, which would be drawn at the completion of the research. These print advertisements were then displayed throughout Massey University Manawatu and Auckland campus buildings frequently accessed by students (e.g., library, dining hall, hallways of classrooms). These print advertisements were also used as posters in online advertisements, which targeted Massey University student-related Facebook pages. Pages such as Māori@Massey, Pacific@Massey, BASE+ (Bachelor of Arts Student Engagement) and Massey@Distance accepted the promotion of this research. The researcher also contacted multiple Massey University lecturers via email who were teaching undergraduate courses. They were asked if the study could be promoted to their students and were given a blurb about the research, an information sheet for participants, and a survey poster. Lecturers who did accept the promotion of the study included the information and links in their courses stream site (online learning community) or suggested the researcher come into their

internal courses to promote to the students. Finally, the study was promoted via word of mouth from the researcher and various Massey University students.

A convenience sample of 273 participants initially attempted the survey. Based on the exclusion criteria of the study, participant data were excluded if they were under the age of 18 (n=11), was not a current Massey University student (n=5), and was not an undergraduate student (n=13).

**Table 2.1**  
***Sample Characteristics of Participants***

Sample Variable	Frequency (%)
<b>Gender</b>	
Woman	190 (89.2%)
Man	18 (8.5%)
Transgender Woman	1 (.5%)
Transgender Man	1 (.5%)
Non-Binary	2 (.9%)
Did not answer	1 (.5%)
<b>Ethnicity</b>	
New Zealand European/Pākehā	111 (52%)
Māori	47 (22.1%)
Pacific*	22 (10.3%)
Asian**	12 (5.6%)
Other***	21 (9.9%)
<b>Living Situation</b>	
University Hall	3 (1.4%)
By myself	23 (10.8%)
Flatting	49 (23%)
Whānau/Family (e.g., Spouse, partner, siblings)	126 (59%)
Parents	24 (11.2%)
<b>Full time or part time study</b>	
Full-time	128 (60.1%)
Part-time	85 (39.9%)
<b>Mode of study</b>	

Sample Variable	Frequency (%)
Internal	53 (24.9%)
Distance	154 (72.3%)
Other*****	6 (2.8)

\* includes participants who identify as Cook Island, Samoan, Tongan and Pacific. \*\*includes participants who identify as Filipino, Indian, Chinese, Thai and Korean. \*\*\*includes participants who identify as Latin American, Canadian, Scottish, Jewish, Hispanic, South African, African, British, Dutch, South America, Arabic, Brazilian. \*\*\*\* identified their Children, Partners as a part of their family who have attended university. \*\*\*\*\* included participants who identify their mode of study as mixed. Doing both internal and online courses.

## **Design**

The current study used a cross-sectional design through an online survey. The main variables of interest were university belonging and student success, with a specific focus on comparing First in the Family and non-First in the Family university students. This was a quantitative study with a qualitative element consisting of one open-ended question participants could answer.

## **Measures**

### ***First in the Family Status***

Participants for this survey were asked if they were first in their immediate family to attend university. Due to the differences in how a family unit may be conceptualised in Aotearoa, compared to previous first in the family literature from America, this question allowed for participants to identify for themselves if they are first in their family, rather than stating what constitutes the status (e.g., only parents having attended a university). Those who did not identify as first in their family were asked a follow-up question of who in their family did previously attend university.

### ***Student Success Measures***

Perceptions of success were measured through three fixed choice questions and one open-ended question. Each question appeared on a separate screen for participants. The first question asked participants, “In the last year, how academically successful did you feel at university?”. This is measured through a five-point Likert scale, ranging from Not at all Successful (1) to Very Successful (4). The next question was open-ended, asking participants to write what they think success means for them as a university student. They were given 1 minute to write full sentences or keywords that define success for them. The third question asked, “In the last 12 months, what was your most common course grade at Massey University?”. Participants could choose from five options: A range, B range, C range, D range, and other. Finally, participants were provided with a list of 9 common understandings of university success from success literature. They were instructed to click as many that apply to their perspective and experience. Options included Completing your degree, Making Friends and Social groups, GPA, Finishing assignments, Being able to attend university, Grades, Feeling happy and supported at your university and Passing your courses.

### ***Revised University Belonging Questionnaire***

The degree to which participants felt they belonged at their university was measured with the University Belonging Questionnaire (UBQ) by Slaten et al. (2018). This scale was chosen for the study as it acknowledges the different sub-factors pertaining to university belonging, rather than broadly defining it as a single construct. Results from Slaten et al. (2018) Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) also provided evidence of strong reliability and validity of the UBQ and its three subscales. Originally this questionnaire consisted of 24 items divided among three factors of university affiliation (n=12), university support and acceptance (n=8) and faculty and staff relations (n=4). However, in this present study, only 21 out of the 24 items will be used, with the items divided in the modified scale as university affiliation (n=10), university support and acceptance (n=7) and faculty and staff relations (n=4) (see appendix B).

In the original UBQ scale, the first subfactor of university affiliation comprises 10 items that measure the degree participant's associate their personal identity with their university, with higher scores indicative of a strong sense of university affiliation. The second factor of university support and acceptance has seven items measuring participants' sense of support and acceptance from their university. This support is the university's ability to provide supportive resources and opportunities for students' personal growth. Higher scores are indicative of a strong sense of feeling accepted and supported. The last factor of faculty and staff relations comprises four items and measures participants' sense of connection to university faculty and staff, with higher scores indicative of a stronger sense of connection.

The three questions that will not be used in this survey are "I take pride in wearing my university's colours", "I attend university sporting events to support my university", and "My University provides opportunities to have diverse experiences". It is clear that while the UBQ was better suited in exploring the complexity of University Belonging, Trowler (2010) notes that there are different traditions in the US vs the UK (and NZ) in educational research. In Brogt & Comer (2012) study of AUSSE and the US National Survey of Student Engagement (NSSE) data for 2009 and 2010, they found that many items on NSSE/AUSSE that load on the different engagement scales are biased towards the US educational and cultural context. This was no surprise to them as the

instrument was developed there. Their examination of the differences between US and NZ universities is noted throughout this section; however, they suggest that given the instrument bias, direct comparisons across different educational systems should be treated with extreme caution.

The question of “I attend university sporting events to support my university” was not included in the study as it did not relate to the context of a New Zealand University student experience. Brogt and Comer (2012) has stated that the ‘college experience’ is considered an important part of US social, cultural and academic life, whereby US universities depend on more external sources of funding than NZ. This experience includes activities such as intercollegiate athletics (particularly US football or basketball), homecoming events (where graduates return to campus), and elaborate graduation ceremonies. These types of extracurricular activities are absent in NZ. While University sporting events do still happen, the degree of importance it holds for Aotearoa students is not as substantial as the US.

“I take pride in wearing my university’s colours” was not included in the study as again there are noticeable differences in the US and NZ university experience. Brogt and Comer (2012) has described US universities as promoting a strong bond between the institution and their students, with the idea of ‘university branding’ have been said to be “Made in the USA” (p.723). Paul Fussell (1983) has also noted that “You can drive all over Europe without once seeing a rear-window sticker reading Christ Church or Université de Paris ... [Yet] there is hardly an artefact more universally revered by US of all classes than the rear-window college sticker” (p.86). The significance of this difference in US and NZ universities is not yet explored. However, when investigating the relevance of this question with Massey University student peers, one student stated that the idea of wearing her university colours was “kind of embarrassing. Not just at my university, but really for any university in Aotearoa...America just seems more intense on those sort of stuff [wearing university material] than us here” (Deanna Haami, New Zealand, personal communication, August 2nd, 2020).

The question of “My University provides opportunities to have diverse experiences” was also not used in the study as it was not made clear what the terms “diverse experiences” were referring to.

The idea of diverse experiences may have many different understandings, and overall, the question was vague in interpretation. Due to this, the question did not seem useful for this study.

Examples of the questions that were presented to the participants were “I am proud to be a student at my university”, which represented factor one of university affiliation “My university provides opportunities to engage in meaningful activities”, which represents factor two of university support and acceptance; and “I feel that a faculty/staff member has appreciated me”, representing factor three of staff and faculty members. The Cronbach’s alpha for Slaten et al. (2018) University Belonging Questionnaire was  $\alpha=.93$  for the total score,  $\alpha=.89$  for university affiliation,  $\alpha=.85$  for university support and acceptance, and  $\alpha=.88$  for faculty and staff relations. For the modified UBQ used in the current study, internal reliability for the total score was  $\alpha=.888$ ,  $\alpha=.824$  for university affiliation,  $\alpha=.790$  for university support and acceptance and  $\alpha=.820$  for faculty and staff relations.

## **Procedure**

Before recruitment of the study commenced, this research was subject to the online human ethics submission process. After discussion between the researcher of the study and their supervisor, the project was submitted as a Low-Risk Notification. The project was evaluated by peer review and judged to be low risk.

After participants clicked into the study link or used the QR code via their own device, they were presented with an information sheet that briefly detailed what the research was about (see appendix C). This sheet also included who could partake in the study, what they were asked to do, their rights as a participant, researcher contact information and ethics approval notice. After initially reading the information sheet and consenting to the survey, participants were asked a series of questions to see if they were eligible to partake in the research (see appendix D). The first is if they were a current and enrolled Massey University student, over the age of 18, and an undergraduate student. If they stated that they were not enrolled, under the age of 18, or not undergraduate students, they could still participate in the survey, but their data would be excluded from the study. Participants were asked 11 demographic questions about age, gender identity, cultural identity, type of learning and mode of learning. After this, they moved onto the student success measures and then on to complete the Modified University Belonging Questionnaire (MUBQ).

When the MUBQ scale was completed, participants were provided with a debriefing (see appendix G). They were given further information about the hypothesised relationship between university belonging and student success, as well as the potential benefits of this research. They were also given a link to another Qualtrics page to provide their email contacts to either receive the research findings or go into a draw to win one of twenty gift vouchers. As they were directed to a new page, their university belonging and student success survey answers would not be identifiable with the emails they included. A comment section box was also provided if a participant had any questions or concerns about the survey. Contact details for the researcher and their supervisor were provided again. On average, the questionnaire took approximately 11 minutes to complete.

### **Data analysis**

The current study uses both quantitative and qualitative methods. Research Question one was measured using a Thematic Analysis. Research question two was also measured using thematic analysis and a Chi-squared test. Research Question three was analysed through an Exploratory Factor Analysis (EFA), and research question four was measured through an Independent Sample t-test. Hypotheses one and two were analysed through Pearson's correlation coefficient.

### ***Quantitative Analysis***

Quantitative data for this research was analysed using the Statistical Package for the Social Sciences (SPSS). Univariate statistics were conducted to produce descriptive statistics such as total frequencies and percentages, means, standard deviations and response ranges. Data normality was assessed through the Shapiro-Wilk test and Kolmogorov-Smirnov (KS) test. Reliability was measured using Cronbach's Alpha. This is the most frequently used measure of internal consistency, with the criteria stating a scale should have a minimum Cronbach's alpha value of .7 (Brace et al., 2005). For this study, the statistical significance level was set at  $p= 0.05$ , a standard value of significance in statistical analysis in psychology (Brace et al., 2005). To analyse the differences in mean scores between variables and their associated groups, an Independent Samples T-Test and one way ANOVA were conducted. Bivariate correlations such as Pearson's  $r$  correlation coefficient was conducted to test the strength and direction of the linear relationship between variables. An exploratory factor analysis (EFA) was also conducted to examine the structure of the university belonging scale items.

### *Qualitative Analysis*

Data was analysed using Thematic Analysis. This analysis method is used to identify, analyse, and report themes and patterns within data (Braun et al., 2006). This process involved six phases involving Familiarising with the data, Generation of initial codes, searching for themes, Reviewing themes, Defining and naming themes, and Producing the report (Braun et al., 2006). Phase one began by reading through every open-ended response to grasp and familiarise the overall content thoroughly. Common ideas or meanings were noted down in this process; however, there was no attempt to analyse the data. In phase two, open-ended responses were carefully reviewed, and data extracts are coded, helping to organise them into meaningful groups (Tuckett, 2005). Visual representations can also be used in this stage to help sort the different codes into themes such as mind maps or tables. An excel spreadsheet was used to help place the codes next to the responses. Full and equal attention is given to each data item.

These codes were then sorted into potential themes in phase three, collating all relevant coded data extracts within the identified themes. To visually help this process, an initial thematic map (mind map) was made online (see appendix F). The relationship between the codes, themes, and different levels of themes (overarching and sub-themes) are also considered in this stage. Phase four involves the refinement of those themes, which also includes two levels of review. Level one involves reviewing the coded data extracts at the level and considering whether they appeared to form a coherent pattern. Level two involves a similar process, but the themes' validity was considered in relation to the data set. Phase five defines and further refines the themes for the analysis. This process helps figure out the meaning behind each theme (and the overall theme) and determines what aspects of the data each theme captures. Phase six is the final opportunity for analysis.

## Chapter 3. Results

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### Organization of the Chapter

This chapter details the results of the study described in Chapter Two. To begin, how the raw data of the study was prepared is discussed, as well as a brief description of the First in Family variable. Next, results pertaining to the first and second research questions related to perceptions of university success will be presented.

- RQ1: What does success at university mean to students?
- RQ2: Do these understandings of success differ between First in the Family and non-First in the Family students?

Next, the results for the third and fourth research questions related to belonging will be presented.

- RQ3: What is the factor structure of the Belonging measure?
- RQ4: How do feelings of university belonging compare between first in the family and non-first in the family students?

Finally, results pertaining to the two hypotheses for this study are presented.

- Hypothesis One: there will be a positive relationship between university belonging and student success.
- Hypothesis Two: First in the Family students will have a higher positive relationship with belonging and success than non-first generation students.

### Data Preparation

Raw data for the survey was collected via the online website Qualtrics. This was then transferred to SPSS Statistics 26.0, where data was prepared for analysis. Demographic variables of gender and ethnicity were coded into numbers as the question allowed participants to answer in an open-ended format. Variable names were also renamed in SPSS for easier identification. A missing value analysis procedure was conducted via SPSS on the survey, identifying 31 participants who had incomplete scale data. Those missing more than 10% of the scale data were excluded from the study (n=16), and those who had under 10% missing values (n=14) were replaced using the series mean function in SPSS. Series mean is a type of imputation method in SPSS whereby missing values are replaced with the mean for the entire series (Cokluk & Kayri, 2011). An overall score total for the belonging questionnaire was calculated for each participant, as well as their overall

score total for each of the three subscales. Participants were also excluded from the data if they violated the attention check placed in the survey scale (n=1). Data from 213 participants were analyzed for the research.

### **First Generation Variable**

Of the 213 participants that completed this study, 77 (36.2%) stated that they were first in their immediate family to attend university, 134 (62.9%) stated they were not first in their immediate family to attend university, and 2 (.9%) did not answer the question. Table 3.1 displays what members of a non-first in the family student have previously attended a university. The open-ended text of ‘other’ allowed for further understanding of what family members have attended a university. These mainly included children and partners (e.g., husband or wife).

**Table 3.1**

*Family members that have previously attended a university among non-First in Family participants*

Family Members	a=134
Sibling	76 (35.7%)
Cousin	60 (28.2%)
Mother	55 (25.8%)
Aunt/Uncle	53 (24.9%)
Father	50 (23.5%)
Grandparents	17 (8.0%)
Other*****	14 (6.6%)

### **Success**

#### ***Research Question 1. What does success at university mean to students?***

The following qualitative findings explore identified participants' responses to the open-ended question “Please share what success means for you as a university student”. A thematic analysis identified the common themes – topics, ideas and patterns of their responses (see method for

details). Overall, three overarching themes were found pertaining to what students considered as success at university. These themes were institutional factors, interconnected elements of success, and personal/holistic factors. These themes also had a number of sub-themes that help identify the elements students noted as vital to them in their responses. Although these sub-themes were separated into categories, it is vital to note that these themes are inherently interconnected and impact one another.

**Institutional Theme.** The Institutional theme incorporates the set expectations universities use to measure success. These include the sub-themes of grades, passing courses, finishing assignments, attaining a degree and postgraduate studies.

**Grades.** Participants described grades as an important attribute towards success. However, there were also different understandings of what each grade letter meant to them. Many participants did identify an ‘A’ as a successful grade. However, the grades of B and C were also identified as successful grades to others.

“A ‘A’ student is a successful student” (Participant 1, see appendix G)

“Success is passing all assessments with a B average or above” (Participant .2., see appendix G)

“Passing the papers. Anything more than a c is a bonus” (Participant 3..., see appendix G)

**Passing Courses.** Participants overwhelmingly described the sub-theme of passing courses as an element of success. This sub-theme is separated from grades as although some may interpret passing in association with a C grade (C- is the lowest grade one can get to pass the course in their specific institution), passing was also interpreted as simply completing the course, regardless of the grade attached to it. This can be seen in participant quotes where passing the course is acknowledged first, then grades or other institutional aspects continue after they believe they have passed the course.

“Passing my courses and getting good grades” (Participant 4..., see appendix G)

“Passing. Getting C’s or above on assignments” (Participant 5..., see appendix G)

“Passing. Getting assignments in on time” (Participant 6..., see appendix G)

***Finishing Work.*** Finishing Work was identified as a sub-theme as the nature of completing assignments, more specifically completing assignments on time, was a prominent aspect of participants' responses. While grades were mentioned through responses, there was also a clear distinction that completing or finishing work was a success regardless of the grade attached to it.

“Success for me means completing courses to the best ability that I can”  
(Participant 7 ..., see appendix G)

“Success means being able to finish everything, even if it means you have to sacrifice a few things like social life” (Participant 8 ..., see appendix G)

“Success for me is completing an assignment, feeling good about it, submitting It on time.” (Participant 9 ..., see appendix G)

***Attaining a Degree.*** Participants acknowledged that getting the degree itself was considered a success as a university student. Attaining the degree was also acknowledging the journey that was attributed to it. The hard work and time put into their study and sacrifices that had to be made to focus on university work were all were a part of getting a degree. So, while attaining a degree may be a more pronounced understanding of success, the context and meaning provide a deeper acknowledgment of what participants had to go through to attain it.

“My idea of success for university is to complete my degree. Whilst my grades are important to me, and I want my academic transcript to look good, my main focus

is to graduate, and be able to prove that I can do it.” (Participant 10..., see appendix G)

“I want to prove to myself that I can get a degree” (Participant 11..., See appendix G)

“Getting the degree” (Participant 12..., see appendix G)

**Interconnected elements for Success Theme.** This theme was created due to the large number of participant responses overlapping institutional and personal/holistic factors. While there will be interconnected ideas throughout all responses, these specific understandings meant that one aspect of success from an institutional theme was clearly associated with another personal and holistic theme. An illustration of this is participants describing attending university as a role model for their culture or family, attaining a degree would help in better career options or providing for their children, getting assignments in on time helps them maintain a work/life balance. These are factors that participants felt that they needed to apply across both contexts in order to succeed. The sub-themes are learning/attaining knowledge, time management, opportunities and application, connection with others.

***Learning and Attaining Knowledge.*** Participants clearly defined the difference between learning university material and meaningfully understanding that material. Understanding course content was a large part of participant responses, with participants wanting to feel engaged, absorb and retain information, and not just learn for the sake of getting through the course. They were also clear that by meaningfully learning course content, they could then share knowledge with their family or friends, feel passionate about their studies, and have a good learning experience.

“Not just rote learning information for the sake of passing a test, rather absorbing and retaining knowledge. Also being able to apply that knowledge to real life experiences and expanding my world view” (Participant 13 ..., see appendix G)

“Success means that I am able to retain, understand and articulate the content of the course. It possibly means that I am interested in the concept of thinking outside my current sphere” (Participant 14..., see appendix G)

“Fully immersed in the material with a good understanding of course material” (Participant 15 ..., see appendix G)

***Time Management.*** The balance between work, study and family was critical in many of the participants' responses. Keeping on top of study and dedicating time to university work was necessary to make sure participants could look after and spend time with their family, feel better in themselves for not falling behind in work, and keep an active social life.

“Success means balancing life responsibilities as a solo mum with the time needed for study in order to maintain my grades” (Participant 16 ..., see appendix G)

“Success is more than grade, but being able to keep on top of readings makes me feel successful. While my grades are excellent, I often do not feel successful if i am behind on readings, or end up having to skip weeks in favour of assignments. Which happens around the end of every semester” (Participant 17 ..., see appendix G)

“Balancing having good grades and having an active social life. I struggle socially and struggle with academic pressure to performed well” (Participant 18..., see appendix G)

***Opportunities and Application.*** Participants noted that the institution they attend provides immense benefits for their own lives. Many saw attending university and obtaining the subsequent degree as a way to get better job choices, strive for their dream career, network with others in their fields, and use opportunities for personal growth. Participants also acknowledged that they want to apply the knowledge and skills they learn from university into areas of their lives, whether at home or work.

“Success means attaining a degree that leads to a good job” (Participant 19..., see appendix G)

“Success for me means learning new and interesting content that I can then apply in real life at home or at work. Getting good grades will also help me to pursue my education further to post-grad” (Participant 20..., see appendix G)

“Graduating Learning Finishing with skills and capabilities that support me Networking” (Participant 21..., see appendix G)

***Connection with Peers and Staff.*** The university staff and peers were also a noticeable element in how participants understood success. While they were never mentioned as the main element in participant responses, being able to talk to their classmates, engage in academic conversation, have support from their lecturers, and make connections were part of how they perceived success at university.

“Receiving critical feedback on assignments. Having a strong sense of connectedness to other students via social media, zoom and forums” (Participant 22..., see appendix G)

“...probably some praise from my lecturer!” (Participant 23..., see appendix G)

“Succeeding academically in terms of grades but also making connections with staff, learning from other students and taking advantage of opportunities offered” (Participant 24..., see appendix G)

***Community and Family.*** This sub-theme of Community and Family has been categorised under the theme of interconnectedness due to the apparent ecological lens in responses. While providing for one's family and community is inherent from a personal perspective, participants believed their university education was the tool or pathway to achieve this. Not only were participants succeeding in their own lives by attending university, but they were also able to

provide or give back to their families and communities from the skills, knowledge, opportunities and degree that they earned.

“Success means learning and sharing my knowledge from my courses Success means gaining my degree being a role model for my baby sister Being a role model for my future children Being financially stable eventually To eventually own a home” (Participant 25..., see appendix G)

“Being a role model for my family. Getting my degree and having a job that can provide for them” (Participant 26..., see appendix G)

“Success to me would mean completely my degree and using my skills to give back to the community or society” (Participant 27..., see appendix G)

**Personal/Holistic theme.** This overarching theme was created due to the many personal and fluid ways participants understood success as a university student. Many noted that success was not just one aspect; instead, success was a multitude of equally important factors, regardless of how small or big they seemed. The most considerable aspect of why this theme is distinct from the other two themes is that these responses focused on individualistic interpretations of how success mattered. The sub-themes were fluidity of success, personal satisfaction and self-worth and cultural contexts.

**Fluidity of Success.** This sub-theme was identified due to the importance participants placed on success being multiple factors. Success to them was attaining good grades and getting a degree, but it was also being able to get through the day, asking for help, and connecting with the course content. While there were many answers in a participant's response, there was no distinct separation of one being better or more valuable than the other. Instead, each had its own important elements that came together for the participant at university..

“...success is a lot of things. It is not giving up, even though or if you feel like it's a good option. It's asking for help or clarification if you're unsure about something.

It's about helping others if you understand and they don't. Success depends on your mindset, but in my opinion, doing anything towards achieving a goal is success" (Participant 28..., see appendix G)

"I believe success as a university student is a myriad of things. Sometimes success for me being a uni student is having the courage to wake up and keep going in my studies even when I am not having a mentally strong day. Sometimes success is achieving the best possible grade for one of my assignments, sometimes success for me is stepping out of my comfort zone" (Participant 29..., see appendix G)

"Success is a lot of different things. I usually think of it as grades and getting my degree. Sometimes just getting through the day" (Participant 30 ..., see appendix G)

***Personal Satisfaction and Self Worth.*** Participants noted that enjoying their time at university, feeling happy and gaining satisfaction from their work were also elements of success.

"Success isn't just measured by my IQ, but also my EQ and CQ. I try not to let my grades define me as a person. Success is happiness" (Participant 31..., see appendix G)

"Success to me means being able to engage with content that stimulates and intrigues your mind, because you have succeeded in finding the tools to carve your own path" (Participant .32..., see appendix G)

"As a student, my mindset towards success is honestly doing my best at whatever my course asks of me. If I failed then at least i tried" (Participant 33..., see appendix G)

**Cultural Context.** Participants who were of Māori and Pasifika culture noted the importance of their time at university. Many were aware of the importance of their role at university and what it will contribute to their whānau and community.

“Trying to complete a degree is a success in itself I think and I hope that with all the support and self motivation I am able to see myself to the end. Not only for myself but also to raise the statistics for Pasifika and to be a role model for the generations to come” (Participant .34..., see appendix G)

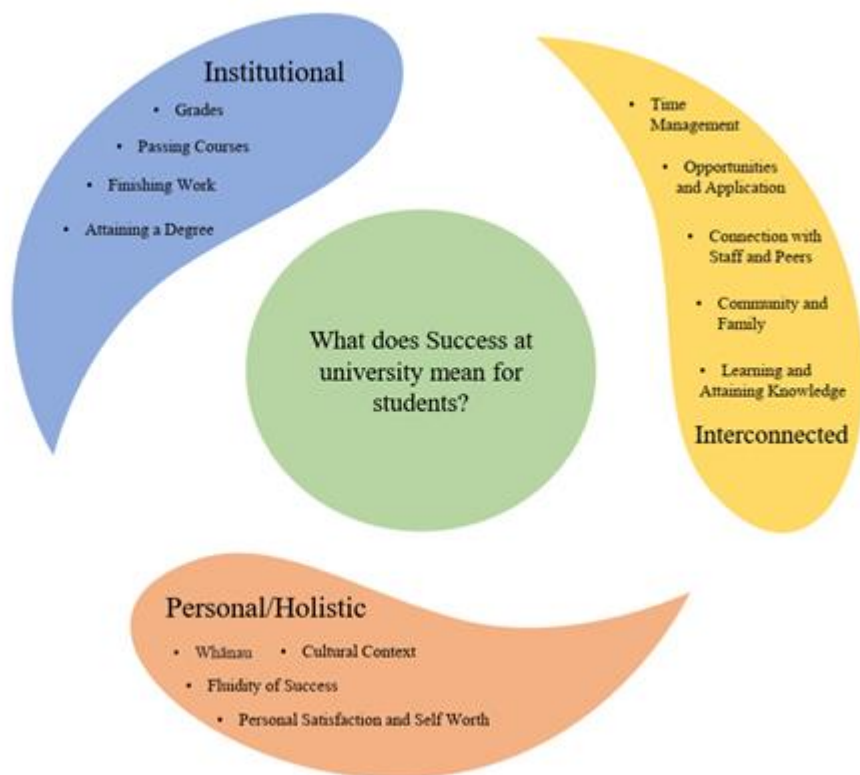
“As a university student, success means breaking stigmas and stereotypes. Success means opening pathways for my unborn mokopuna. Success means setting an example, success means, broadening our horizons and opening myself up for more opportunities to be more resourceful for my iwi, my hapu and my whānau. More importantly, when Māori succeeds everyone succeeds. Why? Because we are a culture of oppression, systemic racism and bias” (Participant 35..., see appendix G)

“...Seeing more brown faces in leadership roles in the workforce and academically” (Participant 36..., see appendix G)

Overall, success was expressed through many different understandings. While aspects such as grades and passing were some of the most common answers throughout, participants did provide various ideas about what success means for them. To visualise how these responses play a part in a student’s life, a figure was produced to illustrate the interconnectedness of each of the three themes (see figure 3.1)

**Figure 3.1**

*Overarching Themes of what Success Means to University Students*



***Research Question 2. Do these understandings of success differ between First in the Family and non-First in the Family students?***

Another thematic analysis was conducted by splitting the responses into their two respected FIF and non-FIF status groups. The same themes were seen throughout each group; however, there was a noticeable difference in what both groups focused on. First in the family students tended to focus more on multiple aspects of success that included more personal and whānau oriented ideas.

“Success means the ability to support my whānau. They’ve been supporting me throughout my entire journey, so I see my success as their success. Not only that but I feel as a Māori/Samoan student, I need to be successful in my studies to break those racial stereotypes about us” (Participant 37..., see appendix G)

“Success to me means achieving my goals and surviving the semester” (Participant 38..., see appendix G)

“Being able to attend university is my heart's dream. I feel so lucky”. (Participant 39..., see appendix G)

Non-first in the family students and their responses also had similar themes of family and personal goals. However, their responses focused more on institutional factors of success such as grades, passing, completing assignments, and interconnected aspects of skills and application.

“Success is defined by good grades, but also proper in depth understanding of what the course is supposed to teach. It's also defined by how or of the study gets you employed in a field you could not have entered without the qualification or study” (Participant 40..., see appendix G)

“Balancing having good grades and having an active social life. I struggle socially and struggle with academic pressure to performed well” (Participant 41..., see appendix G)

### **Notions of success**

Participants were also asked three other questions relating to perceptions of success. These questions were “In the last 12 months, what was your most common course grade at Massey?”; “In the last year, how academically successful do you feel you have been at university?”; “Below are some common ideas of university success. Click as many that applies to your own understanding and experience as described on the previous question”. Table 3.2 below shows the complete results for each question.

**Table 3.2***Participant responses to perceptions of success questions*

Perceptions of Success	FGS		NFGS		$\chi^2$ (2)	<i>p</i>
	<i>n</i>	%	<i>n</i>	%		
<b>Common Course Grade</b>						
A	23	11%	50	23.8%	.986	.321
B	42	20%	72	32.3%	.073	.787
C	2	1.0%	5	2.5%	.174	.676
D						
<b>How Academically Successful Do You Feel?</b>						
Not at all Successful	3	1.4%	1	0.5%	2.688	.101
Somewhat Successful	19	9.0%	38	18.1%	.244	.621
Neutral	10	4.8%	17	8.1%	.014	.906
Moderately Successful	27	12.9%	51	24.3%	.106	.745
Very Successful	17	8.1%	27	12.9%	.165	.684
<b>Common Ideas of Success</b>						
Completing your degree	70	90.9%	127	94.8%	1.272	.259
Finishing Assignments	62	80.5%	114	85.1%	.851	.356
Grades	63	81.8%	113	84.3%	.155	.694
Passing your courses	66	85.7%	112	83.6%	.122	.726
Feeling Happy and Supported	48	62.3%	79	59%	.437	.509
Grade Point Average (GPA)	31	40.3%	71	53%	3.354	.067
Being able to attend University	45	58.4%	65	48.5%	1.850	.174
Making friends and Social Groups	26	33.8%	35	26.1%	1.624	.203

## **Belonging**

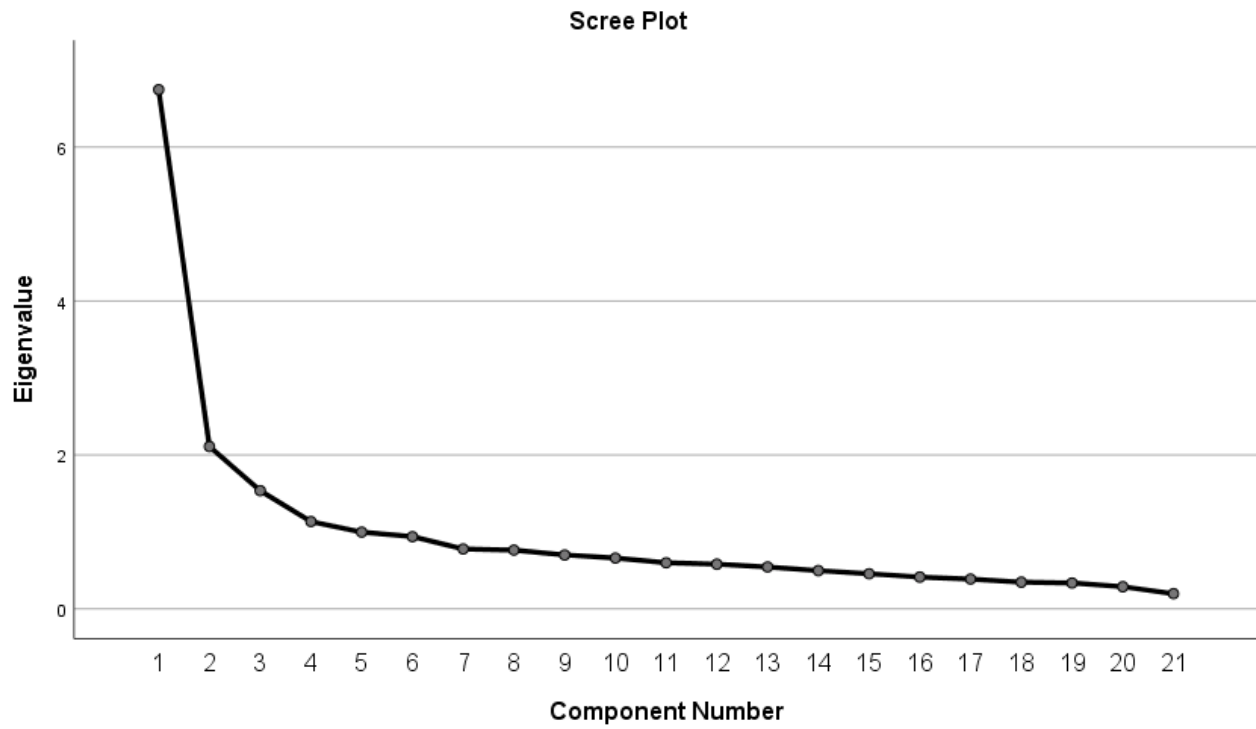
### ***Research Question 3. What is the factor structure of the University Belonging Questionnaire measure?***

An exploratory factor analysis (EFA) was conducted on the university belonging questionnaire to examine the underlying structure of the 21 scale items. Bartlett's test of sphericity, which compares an observed correlation matrix to the identity matrix, had an overall significance of ( $p = .000$ ). The Kaiser Meyer Olkin measure of sampling adequacy indicated that the strength of the relationship among variables is adequate ( $KMO = .87$ ). Values less than .5 or .6 are considered inadequate, whereas values greater than .9 are considered “marvelous”, and values 0.80 to 0.89 are “meritorious” (Dodge, 2008). Both Bartlett's test of sphericity and KMO suggest that the variables are significantly correlated. A three-factor solution was conducted in order to get the same number of fixed factors as the original UBQ scale.

The first factor had an eigenvalue of 6.74 and accounted for 32.12% of the variance in the data. Factor two had an eigenvalue of 2.10, which accounted for 10.04% of the variance. Factor three had an eigenvalue of 1.53 and accounted for 7.31% of the variance. In total, three factors explained 49.47% of the variance. None of the 21-items of the UBQ were eliminated as all met a minimum criterion of having a primary factor loading of 0.3 or above. Having all the commonalities above a 0.3 threshold confirms that each item shared some common variance with other items. As seen in Table, the scale items for this survey all have relatively high loadings (lowest .574, highest .953). This is the same for the factor loadings from the original survey by Slaten et al. (2018) (see appendix H). However, there are noticeable differences in the placement of the loadings, as seen in table 3.2.

**Figure 3.2**

*Scree Plot Produced During Factor Analysis of the Modified 21 University Belonging Items.*



**Table 3.4***Exploratory Factor Analysis Results of the Modified University Belonging Scale*

Scale Items	Factor Loading		
	1	2	3
<b>Original UBQ Factor 1: University Affiliation</b>			
I tend to associate myself with my university			.677
One of the things I like to discuss with others is about my university			.565
I feel a sense of pride when I meet someone from my university off campus			.563
I would be proud to support my university in any way I can in the future	.528		
I have university-branded material that others can see (pens, notebooks, bumper sticker, etc.)			.532
I am proud to be a student at my university	.613		
I feel “at home” on campus			.595
I feel like I belong to my university when I represent my school off campus			.741
I have found it easy to establish relationships at my university			.559
I feel similar to other people in my degree			.566
<b>Original UBQ Factor 2: University Support and Acceptance</b>			
My university provides opportunities to engage in meaningful activities	.485		
I believe there are supportive resources available to me on campus	.582		
My university environment provides me an opportunity to grow	.477		
My cultural customs are accepted at my university	.554		
I believe I have enough academic support to get me through university	.631		
I am satisfied with the academic opportunities at my university	.757		
The university I attend values individual differences	.665		
<b>Original UBQ Factor 3: Faculty and Staff Relations</b>			
I believe that a faculty/staff member at my university cares about me		.831	
I feel connected to a faculty/staff member at my university		.793	
I feel that a faculty/staff member has appreciated me		.630	
I feel that a faculty member has valued my contributions in class		.604	

\*1= University Affiliation, 2= University Support and Acceptance, 3= Staff and Faculty Relations

The scale was then reduced into 3 sub-scales by summing the scores of each item that loaded onto the respective factor. Descriptive statistics and reliability analysis was conducted on each subscale (see table 3.5). Using the new scoring of the modified University Belonging Scale, Cronbach's alpha figures demonstrate the overall scale had acceptable reliability by standard psychometric criteria (Bland & Altman, 1997). Each subscale also had a high and acceptable reliability. Inspection of skewness, kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk statistics indicated the assumption of normality was normally distributed.

**Table 3.5**

*Psychometric Properties for UBQ Scale and Subscales*

Scale and Subscales	Min	Max	Total Mean (SD)	Cronbach's $\alpha$
Modified University Belonging Questionnaire (21 items)	25	84	56.90 (10.622)	.888.
University Affiliation (10 items)	11	40	24.94 (5.95)	.824
University Support and Acceptance (7 items)	9	28	20.93 (3.88)	.790
Faculty and Staff Relations (4 items)	4	16	11.00 (2.95)	.820

***Research Question 4. How do feelings of university belonging compare between first generation and non first generation students?***

An independent Sample T-Test was conducted to examine if there is a statistically significant difference between the means of FIF and NFIF students and their scores on the modified UBQ scale. For the overall belonging scale, no statistically significant difference was found between the two groups and their feelings of belonging ( $t(209) = 1.18, p = .449$ ). This indicates that overall the relationship between belonging and first generation status is similar for both groups. For the two first sub scales of University Affiliation ( $t(209) = 1.209, p = .961$ ) and University Support and Acceptance ( $t(209) = .515, p = .860$ ), there was no statistically significant difference between first generation and non-first generation students. However, for sub scale three of Faculty and Staff relations ( $t(209) = 1.167, p = .050$ ), there was a statistically significant difference between first generation (m 11.35) 2.68 and non-first generation students (see table 3.6).

**Table 3.6***Independent sample t-test of FIF and NFIF modified UBQ scale scores*

Scale and Subscales	FIF		NFIF		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Modified University Belonging Questionnaire (21 items)	58.03	10.71	56.22	10.62	1.18	.449
University Affiliation (10 items)	25.60	6.17	24.57	5.85	1.209	.961
University Support and Acceptance (7 items)	21.07	2.91	20.79	3.86	.515	.860
Faculty and Staff Relations (4 items)	11.35	2.68	10.85	3.11	1.167	.050

**Hypothesis 1. There will be a positive relationship between university belonging and student success.**

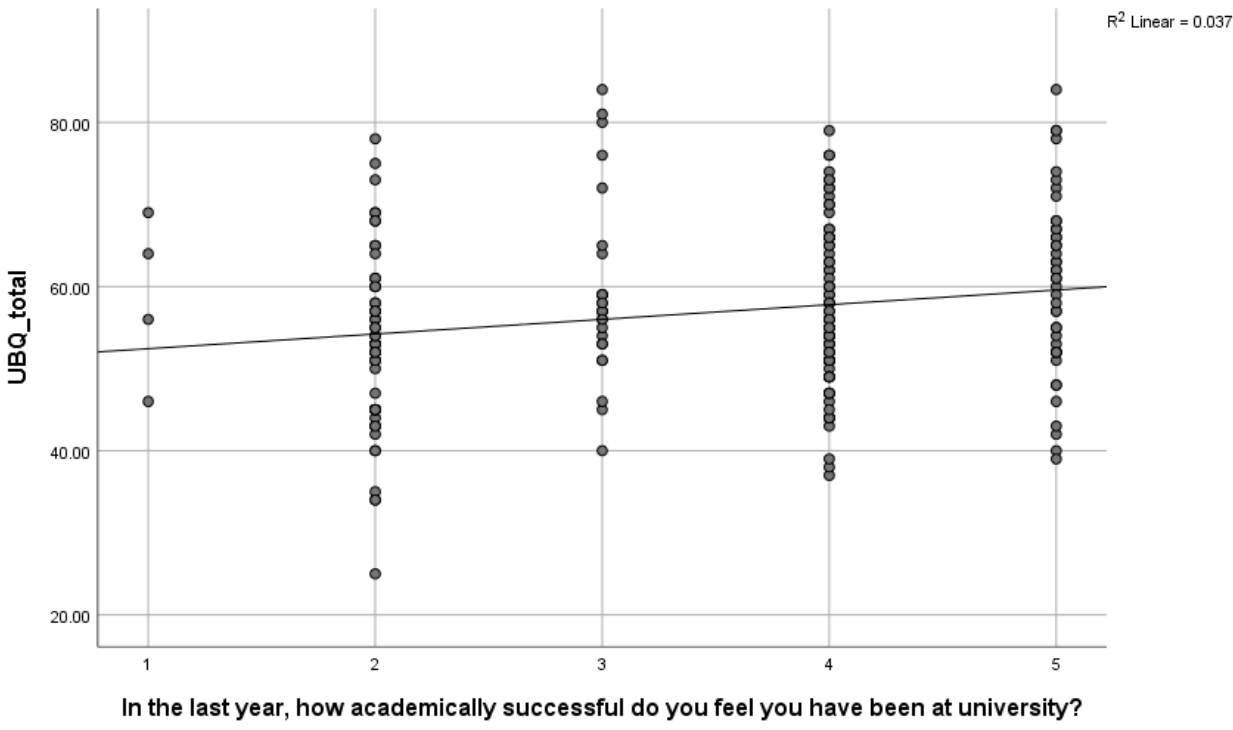
Using Spearman's Rho Correlation coefficient, results for the question "How academically successful do you feel you have been at university in the last year" shows a significant and positive relationship with the university belonging scale ( $r_s = .184$ ,  $p = .007$ ) (see figure 3.7). This indicates that as belonging increases, so does a student's feeling of their academic success (see figure 3.8). Results for participants' most common course grades over the last year showed no statistical significance relationship with the university belonging scale ( $r = .001$ ,  $p = .993$ ). This indicates that there is no correlation with participant grades and their belonging.

**Table 3.7***Spearman's correlation between MUBQ and Success among all participants and by FIF status*

	<b>N</b>	<b><i>r<sub>s</sub></i></b>	<b><i>p</i></b>
All Participants	213	.184	.007
First in the Family	76	.193	.096
Non-First in the Family	133	.174	.044

**Figure 3.3**

*Scatter Plot of the Relationship Between University Belonging Scale Scores and Results from how Academically Successful a Participant Felt in the Last Year.*



**Hypothesis 2. First generation students will have a higher positive relationship with belonging and success than that of non-first generation students.**

A multiple linear regression examined the moderating effect of First in the Family status on the relationship between participants belonging scores and their feelings of academic success. Table X displays the full results. The main effect of First in the Family status shows that, when condition was held constant, first in the family status does not moderate the relationship between belonging and success.

**Table 3.8**

*Unstandardized (B) and Standardized ( $\beta$ ) Coefficients for the Moderating Effect of First in the Family Status on the Relationship Between Belonging Scores and Feelings of Academic Success*

<b>Model</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math></b>	<b>t</b>	<b>p</b>	<b>95% CI for B [LL, UL]</b>
1 (Constant)	2.301	.425		5.412	.000	[1.46, 3.13]
UBQ total	.021	.007	.192	2.824	.005	[.006, .035]
2 (Constant)	2.294	.427		5.368	.000	[1.452, 3.137]
UBQ total	.021	.008	.195	2.792	.006	[.006, .036]
UBQ x FIF interaction	-.001	.003	-.013	-.190	.850	[-.006 .005]

*First in the Family status dummy coded: 0=not first in the family, 1= first in the family.*

*B= unstandardized regression coefficient; SE B= Standard error of unstandardized coefficient;  $\beta$  = standardized regression coefficient; LL= lower limit; UL= upper limit.*

The model found an Adjusted R<sup>2</sup>= .028, indicating that the model explains only 2.8% of the variance in the relationship between belonging and success. An omnibus F-test revealed that the model's overall fit was significant, F

## Chapter 4. Discussion

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### **Summary of Key Findings**

This research aimed to investigate the relationship between university belonging and student success through the experiences of first in family and non-first in family students. As there was no significant relationship between grades of success, student's feelings of academic success was used in the relationship instead. Overall, the current study supports hypothesis one in that there is a significant and positive relationship between students' feelings of belonging and university success. That is, the greater a student's sense of belonging to their university, the greater their feelings of academic success at university. This current study does not provide support for hypothesis two in that there was no significant difference between first in the family and non-first in the family students and their relationship with belonging and feelings of success. These findings will be explored further in the discussion.

### ***Research Question One: What does success at university mean to students?***

This study explored participants' open-ended responses on how they viewed success as a university student. Overall, success is not necessarily defined to one aspect; instead, there was fluidity in how success plays a role in one's life. Three overarching themes were found in how they understood success. These were Intuitional Factors such as grades, finishing assignments and passing courses, Interconnected Elements of Success such as opportunity and application, learning and attaining knowledge, time management; and Personal/Holistic Factors such as personal satisfaction and self-worth, whānau and cultural context. From analyzing the responses, it is clear that while grades and passing seem to be most commonly at the forefront of students' answers, they all follow up those statements with further and deeper understandings of success. Student responses commonly followed the narrative of institutional and tangible measures of success first, followed by personal conceptualizations of family, learning, happiness, and other unique understandings. This focus on grades first and then expansion of ideas aligns with Yazedjian et al.'s (2008) findings from their focus group study with first-year students. Their study found that students had multifaceted perceptions of success that were frequently amended to match expectations upon arrival at university. Grades were sometimes understood as being a necessary task to accomplish in order to finish the course, rather than referring back to their efforts or abilities (Yazedjian et al., 2008).

There is no doubt that grades are an essential factor in how a student conceptualizes success. However, perhaps there is an implicit tension between what a university perceives as success and how students measure themselves. Just like Picton et al. (2018) states that grades are an unsurprising finding that parallels dominant views of success, it is understandable that grades are commonly touched on when it is the most used measure of success in institutional settings. Most students will comment on grades, GPA, or passing when the narrative of success has long been understood in those areas. Depending on the institution, entry into postgraduate studies usually involves attaining a set grade average. Those who do well in the top of their classes are often acknowledged for their hard work and achievement, and having a high GPA means they can graduate with titles such as first-class honours or distinction. It should never be surprising for researchers and institutions to see students focusing on these aspects when they are situated in a context where measures of success can be decided for them. This narrative is also seen through student responses where some state that success is more than just grades, or they try and not let grades define them as a person. Students acknowledged that grades are important but that there are also many other factors they wish to identify as success. So, while it is a crucial part of their responses, it is only a tiny part of how they conceptualize success at university.

Another theme analysed through the open-ended responses was varying levels of what was considered a success in terms of grades. While many students mentioned that getting the letter grade of an A was considered successful, others stated that B+, B average, C, and just passing is also considered success. Some students only hinted at success as getting 'good' marks, 'high' grades, or grades they aimed for, while others expressed getting grades that they were happy with, feeling satisfied with their grades, and feeling a sense of self-worth/belief. This variation of success in terms of grades aligns with Yazedjian et al. (2008), Delahunty and O'Shea (2019), and Picton et al. (2018) in that perception of a successful grade often depends on the students own expectations and individual factors. The variation in the definition is not completely surprising as what is considered success for one student may not be considered a success for another student. All conceptualization of grades is valid within a university, as well as the board definition of academic success itself. This insight illustrates that success is particularly motivated by individual perception; however, how students perceive the standard of grades should be further explored.

Another critical finding raised from the research is that student responses of success often countered the dominant notions of what being 'academically successful' means, particularly those Delahunty and O'Shea (2019) state as illustrated through university marketing and quality indicators. Many students in the study expressed that just surviving through the semester or getting through university itself was considered a success. Others mentioned that success was doing the best they could, getting through the challenges of university, or just becoming a better person at university. These responses support previous research that success to students can extend beyond the institutional scope (Delahunty & O'Shea, 2019; Kuo et al., 2004; Picton et al, 2018; and Yazedjian et al, 2008). While this may not be a new finding nor hard to conceptualize, it does help contribute to the idea of how complex success is. While different definitions of success may co-exist, they can also frequently "jostle uncomfortably" against each other (Delahunty & O'Shea, 2019, p. 2). There is a need to continue developing and recognizing more holistic notions of what being a successful student means and better recognizing the multiplicity of success for individual learners.

A critical section that also needs to be discussed is the Maori and Pasifika responses around success. The key themes from their statements involved aspects of wanting to succeed and open pathways for their whanau, challenge the systematic and racial bias in education, see more of those in their culture be in academician, and be role models for generations to come. Due to the systematic racism they continue to experience in academia, more profound research is needed to explore their notions of success, along with their experiences of university in general. At this point of the discussion, it may be suggested what kind of research methods, such as quantitative and qualitative, should be done to help explore notions of success. However, from analysing previous research, conducting this study, and looking at the results, it is not necessarily what needs to be done, but what are the intentions and what action can be taken. While it may seem that students progress in their studies is a cut and dry event, what we as researchers, academics and institutions do with those results, regardless of how subjective a research process may be, can play a role in how students, particularly minority students, are seen in an educational setting. This is why the research method of Kaupapa Māori is often used as it understands the history and nature of past experiences in research and is intended to benefit Maori. It is a way of understanding and explaining how we know what we know, and it affirms the right of Māori to be Māori (Pihama et

al., 2002). Deeper research would highly benefit from this framework, not just for Maori students but for all university students in general, because it places the participants' intentions first. Doing this would help place more value on the lived experiences of newer and current university students, where success can be considered as just getting through the day, asking for help from a lecturer, or taking away meaningful information from the content.

One of the last interesting takes from this research was that students expressed their desire to learn and attain knowledge. However, most students made sure to clearly state the difference between learning information and course content and learning information and course content *meaningfully*. Many of them identified the difference of learning to get a good mark, such as rote learning, which is described as a memorization technique (target study), compared to learning for their enjoyment with a clear understanding of the content. This divide of learning was not surprising to see. When searching for further information on the topic of learning processes, several articles found were dedicated to teaching students how they can better remember and retain course content or exam information, often focusing on tasks such as flashcards, acronyms and mnemonics (creating patterns and words from information one needs to remember), or visualizing information. DuDevoir (2018) states from her high school experience that a number of students are focused more on obtaining good marks rather than understanding some of the concepts being taught. This is due to what she sees as school systems prioritizing the importance of grades. With the pressures of doing multiple courses at once, assignments due around the same time, and wanting to aim for high marks, students may feel that to obtain satisfactory grades, they may need to retain the information first, with enjoyment and understanding seen as a lesser priority. The degree to how students feel about this needs to be explored further; however, it does provide insight into how even learning processes are understood as success.

***Research Question Two: Do these understandings of success differ between First in the Family and non-First in the Family students?***

Continuing with the open-ended responses, there was a noticeable difference in focus from First in the Family students and non-First in the family students. While both groups did have overlapping themes throughout their responses, Non-First in the Family students had a larger focus on success as intuitional factors such as grades, completing assignments and interconnected aspects of skills and application. First in the Family students focused on multiple aspects of success

that included more personal and whānau oriented ideas. This is also in line with the quantitative common ideas of success list, whereby FIF students tended to rate more for attending university, making friends, and feeling happy and supported at university, while NFIF students rated more for grades, finishing assignments, and getting a degree. The unique pressure in being first in their family may provide these students with a different angle of what success means, whereby success is not just their own individual goals of doing well and gaining knowledge, but to also carry the aspirations of their families and communities who have not had a chance to go down the same pathway (Jehangir, 2010). FIF students may also experience this different angle of success by the nature of even getting to university, whereby success was stepping on the campus in the first place. This is not to say that FIF students do not see grades and passing as necessary; instead, these students may have an added fluidity of the concept provided by their unique experiences.

There has been contention in the previous research where it has been noted that NFIF students encounter and struggle with many of the same challenges as FIF students (Savage, n.d). Marjorie Savage from the University of Minnesota reviewed Jeff Davis 2010 work on the First-Generation Student experience and noted that a lot of what FIF students have been known to experience is often due to "typical transition issues", whereby few students receive advice or practice on issues at university. Some adjust more to them than others, regardless of a student's background. This is a fair assertion. FIF and NFIF student's ideas of success did indeed overlap or had similar themes, and with the student experience at university, many will experience the same challenges along with their peers. On the opposite end, Savage and other researchers have also noted the constant detailing of what FIF students lack compared to their peers and that researchers should add more into their publications about what FIF students and their families can contribute to higher education. All make good points. However, while questions were not explicitly asked about FIF experiences, it is clear that they still focus on different areas of success. The inclusion of Savage review and constant comparison is that the responses in this study should simply be viewed as each group having their own unique experiences. The focus from one group is not meant to override the other on how they view success, but it also does not mean that both groups should simply be seen as the same.

***Research Question Three: What is the factor structure of the Modified Belonging measure?***

An exploratory factor analysis (EFA) was conducted on the modified university belonging scale to examine the underlying structure of the 21 scale items. Overall, the modified scale showed acceptable reliability, with each subscale also having high and acceptable reliability. However, out of all the 21 items in the scale, two particular questions did not load into the same factors. These were "I would be proud to support my university in any way I can in the future" and "I am proud to be a student at my university" (see appendix B). These two questions stayed in their original factor of University Affiliation, while the rest of the questions in that factor loaded onto Factor Three Faculty and Staff relations. From looking at the context of each question, it is clear that the nature of how proud a student feels towards their university did not relate to the rest of the eight questions. The concepts involved in the rest of the eight questions were association, pride when meeting other students, feeling at home, discussing university with others, and university branded material.

A possible reason for the separation of questions is that it may not have garnered the same understanding from NZ students. As previously stated in the justification for taking out three original scale questions, the concept of affiliation to a university may be generally different between the culture of NZ students and USA students. In the US, university culture, and university pride, is very much tied into the 'US college experience' that is packaged and sold by the universities – a package comprised of fraternities, sororities (both of which have university branded merchandise that only these groups have access to) and highly competitive sporting pursuits, to name a few (Brogt and Comer, 2012). Such communities and experiences greatly impact students, resulting in the specific college becoming an integral part of their identity. That same college experience may not exist in Aotearoa, as those same communities and pursuits do not exist to the same level as it does in the US. While there are clubs and sports, these are mainly additions to the university experience rather than essentials. Perhaps, affiliation for NZ students is identified differently.

***Research Question Four: How do feelings of university belonging compare between First in the Family and non-First in the Family students?***

Overall, the current study found no significant difference between First in the Family and non-First in Family student's feelings of belonging at university. However, when analysing the factors of the belonging scale, FIF students felt a stronger connection to University staff than non-FIF students. These were both surprising findings as they contrast the majority of previous first in the

family literature. Firstly, the lack of significant difference in perceptions of belonging contrasts the research and narrative that FIF students may feel less belonging at university than their counterparts. This is due to feeling unprepared for university, coming into an 'alien' setting, and lacking role models to help them through the university experience.

There could be several reasons for this difference. The first being that the culture of New Zealand university students may slightly differ from the vast overseas literature on first in the family status. It has been noted that the bulk of the first in family research comes from the USA (Splieger & Bednarek, 2013), with it being more than likely that they attract particular types of students that may produce different results than would research conducted in Aotearoa universities (Wilson, 2020). The majority of this study's understanding of FIF students has been taken from overseas studies, with only a limited amount of Aotearoa studies and insights. However, what is interesting in the Aotearoa perspective is that there are apparent differences and outlooks from Aotearoa FIF students compared to the majority of research. Wilson (2020) exploration on New Zealand First-Generation University Students experiences and outcomes found that in contrast to research, FIF students and non-FIF students were comparably satisfied with their experience at university, identified the same significant barriers and aids to the completion of their studies, had nearly equal employment and earnings outcomes, and exhibited similar levels of social capital, voting behaviour, and associations with groups. Wilson (2020) also found that in some ways, FIF students fared slightly better than did non-FIF students as they were less likely to report issues relating to their academic experience at university had hindered the completion of their qualification, more likely to recommend their university to others and more likely to place greater value on a number of perceived benefits of attending university (e.g., personal development, being a role model, developing leadership skills). FIF students did, however, report lower academic self-esteem, slightly higher academic disengagement (such as interactions with their peers), and less support from family during their studies.

Wolfgramm-Foliaki and Santamaria (2018) found that most students in their study, in both Māori and Pacific groups, spoke positively about their journeys at university. Being the first in their family to attend university was very important for them, and they recognised the opportunity to study as a privilege that had long been a dream for their families. All students noted the value of academic and pastoral support for Māori and Pacific students and described their peers as

invaluable to their university journey. Students did comment on particular learning barriers such as family members not understanding the university experience and the lack of university cultural capital in FIF student's homes and the wider community. This made these students feel alienated and out of place at university; however, they did not see it as a deficiency. Even though they acknowledged feelings of being in another culture that was very different from their own, this experience often prompted FIF students to re-examine their identities in relation to what it might take to succeed at university.

While neither study explicitly explored the student's relationships with belonging, due to the differences in narratives from the NZ studies around FIF students, perhaps there may be a difference in how NZ students understand belonging in general. The scale used for this study acknowledged the three factors of University Affiliation University Support and Acceptance and Faculty and Staff relations. While these three factors cover much of the literature understanding around university belonging, it is fair to assert that how these factors were conceptualized in questions may not have garnered the same understanding from NZ students. One example is that students in Wolfgramm-Foliaki and Santamaria's (2018) study detailing their feelings of being in an alien environment could be argued as similar to the idea of FIF feeling less belonging. However, their acknowledgment of not seeing it as a deficiency and that they feel a strong connection to others at university illustrates that it is not just as simple as stating they generally feel less or more belonging. Wilson (2020) also stated that academic disengagement from her findings might also be due to factors outside of the academic environment. Regardless of status, all participants in the study tended to score fairly highly on academic disengagement in general, with the absolute differences in scores small. As Marshall et al. (2012) found, belonging is "a complex, multi-layered concept with many facets of perception" (p. 135). In all, perhaps the lack of difference does not necessarily reflect their perceptions, rather, how they understood belonging from a different context.

Another consideration for why there was no difference in perceptions of belonging between FIF students and non-FIF students is that a large amount of research places a deficit and individualistic view on FIF students. The majority of research expects that FIF students are more disadvantaged and promptly reiterates the deficit narrative of how FIF students do less well than their counterparts. While the idea of belonging may be seen as different from dropout rates, participation

rates, or engagement rates, identifying a lack of belonging still positions FIF students as the lesser of the two. Results in this study may report that there is no difference between the two groups, but perhaps the difference is just not accustomed to the perspective of the research on FIF students. Rendon (1992) states that FIF students often need to endure humiliation, mistrust their experiences, and disconnect from their past in order to become academic success stories. The constant narrative of differences in traditional and untraditional students has led to an expected gap between the two groups, where perhaps it is not solely the individual influencing their perceptions of belonging but the institution and context they are placed in that help contribute to that gap. As Spiegler and Bednarek (2013, p. 15) suggests,

“Post-secondary institutions are sensitive to social background characteristics and that they value qualities which lie beyond individual academic merit... Ultimately, structural problems inherent in the organisation of education are camouflaged as cultural deficits of individuals”

Perhaps the lack of difference in perceptions of belonging is not directly influenced by the FIF status, but their experience of the university they attend, and what that university has or has not done in their transitioning and expectations of university. This line of reasoning also brings in the idea that the questioning of belonging (or not belonging) for students at university can often tell us more about the gazer than the one being gazed upon. Subversion happens when we “turn the gaze of the discriminated back upon the eye of power” (Bhabha, 1994, p. 35). Questions about FIF achievement are inverted to be questions about universities themselves and the power our roles hold.

An expected yet similarly unexpected finding from this study was that FIF students reported a stronger connection with university staff than non-FIF students. This finding was expected as it aligns with previous research that describes FIF students feeling a lack of support from their families, who also lack institutional knowledge about the experience of being at university. Making connections with staff is essential for FIF students as not only are they knowledgeable about the university structures and are experts in their field of learning, but they can also provide a sense of whanaungatanga (family-like relationships) to those who may not feel wholly connected to the university. What was unexpected about this finding was that FIF did feel a stronger connection to

staff compared to their non-FIF peers, in contrast to the narrative that they are socially less engaged, communicate with their instructors less than non-FIF, are less likely to discuss class-related or other matters with staff, and less frequently talk or ask questions (Engle & Tinto, 2008; Kim & Sax, 2009).

This finding of FIF students having a strong connection with university staff shows the importance of developing relationships between the two at the university and the value for students to feel a sense of acceptance and affirmed value from staff (Slaten et al., 2018). This is especially true for those FIF students who may have had limited exposure to the university culture or may have limited time for on-campus involvement due to their mode of learning, family, and work. What is also interesting about the factor, in general, is that each of the four questions asked participants if they felt a staff member at their university either cared about them, felt connected to that staff member, appreciated them, and valued their contribution in class. The fact that FIF students felt a stronger connection in this sense illustrates the considerable role university staff play in a student's experience of establishing belonging. Aligning with previous research such as Wiley-Stokes (2017), staff plays a role in helping students establish a sense of belonging by listening, providing advice, and connecting the students with resources on campus. It should also be noted that non-FIF student's connection to staff is also important as it raises the question, what is the process between staff and students that helps foster a connection? If we go back to the criteria that Baumeister and Leary (1995) state is needed to satisfy a sense of belonging, how many frequent and pleasant interactions do these students have with university staff members, and do these interactions endure a framework of mutual care and concern for each other. This is not an astounding find, that caring for student's means a stronger connection with them. However, for future insight into the process of how to foster a sense of belonging for students, there must be a level of frequent care from staff.

An interesting takeaway is that perhaps belonging for some students is not necessarily affiliated with their university, but with the staff and people inside the university. This contrasts with Slaten et al. (2018) as the scale used found that the concept of university affiliation was a significant factor of overall university belonging, suggesting that belonging is more than just relational. Their original study also found that peer relationships did not load in the final scale and theorised that although peer relationships are important to university students, perhaps they are seen as separate

from the sense of university belonging. While Wolfgramm-Foliaki and Santamaria (2018) did not specifically explore belonging, students noted the importance of their peers in their university journey. With the importance of the relationship between students and staff found in this study, peer relationships must also be acknowledged in an Aotearoa context.

### **Predictions Supported by findings.**

Hypothesis 1: This study found a significant and positive relationship between students' feelings of belonging and how academically successful they felt in their studies. This hypothesis is supported by previous literature and research (Hoffman & Marbeth 2002; Korpershoek et al 2020; Pittman & Richmond, 2007; Slaten et al 2017), which details a positive association between students' feelings of belonging and academic outcomes. Unlike previous research, this study did not solely focus on success as GPA or a student's performance. Instead, while students were asked about their most common grade in the last year, they were also asked how academically successful they felt in their studies. In contrast to previous research, there was no significant relationship between student belonging and their grades, yet there was a significant relationship between belonging and their feelings of academic success. While the prediction is supported in the association between belonging and success, success is not based on the common understanding and measurable aspect of grades. These perceptions of success from students are more in line with non-cognitive factors such as academic self-concept, which is the perception that a student has about his/her academic abilities (Ordaz-Villegas et al., 2014). Like research conducted by Van Gijn-Grosvenor and Huisman (2020), there is a significant and positive relationship between students' feelings of belonging and academic success. That is, the greater a student's sense of belonging to their university, the greater they feel in their academic studies.

### **Predictions Not Supported by findings.**

Hypothesis 2: The current study hypothesized that First in the Family students would have a higher and positive relationship with belonging and success than non-First in the Family students. This hypothesis was formulated from psychological research, which has commonly stated that First in the Family students tend to feel less belonging than their peers and are more likely to experience challenges navigating and engaging with their academic pursuits (Soria & Stebleton, 2012). In contrast to the psychological literature, there was no significant difference between the two groups

and their relationship with belonging and success. As previously stated above, there are a couple of factors why this prediction may not have been supported, such as cultural understandings of FIF experiences, students experiencing similar challenges, or university influence on students.

### **Theoretical and Practical Importance.**

While the topic of belonging has been extensively researched, there are numerous gaps in understanding belonging through an Aotearoa perspective. As most belonging research has been conducted on overseas samples, further research must be conducted in Aotearoa to explore how it may be contextualized and understood differently. This research hopes to illustrate these gaps in the belonging research, as well as contribute to the limited psychological literature around belonging from an Aotearoa context. It also illustrates that a sense of belonging is a vital element in our lives. It may be seen as an everyday experience, with little to no reflection garnered towards it. However, having a sense of belonging for some is a fundamental motivation, and the power it holds should be acknowledged. By producing this research around belonging, it can help start a discussion on creating specific belonging measures or scales based and implemented here in Aotearoa.

This research demonstrates how important the concept of belonging can be to not only university students, but to the institutions themselves. While further research needs to be conducted on this topic, this study can start a conversation for universities with how they provide or foster a sense of belonging for their students. As highlighted by Walton and Cohen (2011) and Arahanga-Doyle et al. (2019) in their research, brief social interventions have been found to help improve student's feelings of belonging. These types of interventions are brief reading and writing exercises, in which narratives are used to improve feelings of belonging in university students (Arahanga-Doyle et al 2019: Walton & Brady, 2017). For example, Walton et al (2011) brief intervention provided students with a narrative for understanding adversity in school which framed adversity as socially shared and short-lived. This encouraged students to attribute adversity not to fixed deficits of themselves, but common aspects of the university adjustment process. An example provided by Arahanga-Doyle et al (2019) described students reading a brief narrative in which former students shared their experiences of struggling to feel like they belong at university. These brief interventions would also be beneficial for student's achievement at their institutions. Miyake et al.

(2010) describes one intervention about Values Affirmation, whereby simple values affirmation exercises can positively affect student achievement. Before a course, students simply write about values that are important to them. Their achievement improves more than that of students who do not write about their values. Implementation of these interventions may positively affect Aotearoa university students and help them feel that concerns about belonging and the challenges one will face are a normal part of being a student. These brief interventions are just a small part of a bigger picture of universities fostering belonging. However

This study also shows the importance of university staff on student's sense of belonging. Staff are representatives of the university, and teaching content is not the only role they contribute to a student's experience. While boundaries and power dynamics between the two still need to be acknowledged, universities must recognize how the relationships between staff and students play a role in students feeling of belonging. Further research should explore the processes involved in building a connection with students, particularly, what steps do university staff members take to do this.

This research also contributes to literature around student success, particularly that success is a multifaceted concept that is understood beyond the typical institutional understanding of success. This study has shown that those aspects of success are vital for students in their conceptualization of success, and further research should explore how educational settings such as universities can acknowledge and incorporate them. Further qualitative research should be conducted with students as there needs to be more of their voices in psychological literature. As the majority of research on success is conducted on students, there is a need to conduct research *with* students and publish their voices and experiences. Giving them just as much validity as researchers with peer reviewed articles

### **Limitations and Future Research.**

The results and conclusions of the study should be considered in light of several limitations. Firstly, all participants were from a single institution, Massey University. The results depicted from this study may not be accurate for other samples at different universities and are not to be generalized. Another limitation of the study was that it was conducted through the events of Covid-19. During most of this time, students were at home and isolated and had to experience the changes in studying

at a university. Students who were internal and usually on campus were switched to a distance mode of learning and then to a mixed-mode of learning as the Covid level went down. As this study was about students' experience of belonging and success at university, the degree to which Covid-19 impacted their responses is unknown. The following limitation is that the scale is primarily based on belonging through the experiences of on-campus American university students. There may be some cultural differences between understandings of questions and experiences.

There is a noticeable gap in the literature around belonging through an Aotearoa context. While belonging itself has been understood to have universal characteristics, there will ultimately be an influence on certain individuals from the environments and cultures around them. Most research and measurement items, especially those investigating university belonging, are developed in American and European contexts. When analyzing scales for this research project, no identifiable quantitative measures accounted for a New Zealand university structure, such as the inclusion of distance and blended students or indigenous knowledge. There may be concepts and understandings from their work that do not accurately translate into an Aotearoa context or relate to an Aotearoa university student's experience. While previous research does note their limitations in that their studies are often dependent on particular populations and demographics, their work still dominates how belonging is understood in psychological literature. In general, there should be further research around belonging from an Aotearoa context.

### **Concluding Remarks**

This research aimed to investigate the relationship between university belonging and student success through the experiences of first in family and non-first in family students. This study found a positive and significant relationship between student's feelings of belonging and their feelings of success at university. This study also found that students' understandings of success at university consisted of multiple and fluid aspects of success and that there was no significant difference between first in the family and non-first in the family university students. These findings support previous research that has explored the connection between belonging and success, that being if students feel a stronger sense of belonging to their institution, they will have greater academic success at university. It also supports the idea that success is complex and that students at universities conceptualize success beyond the typical institutional understandings. As described above, this research hopes to provide important implications for the field of belonging research.

However, of equal importance, this research hopes to illustrate how meaningful the concept of belonging can be for some individuals and its role in other areas of one's life, such as success at university. As humans are acknowledged as "social creatures", interactions and connections with others may be regarded as a regular part of everyday life. Even in research, this understanding has been described as not eliciting more than a "psychological shrug of the shoulder" (Dijksterhuis, 2005, p. 207). However, for those still searching for their sense of belonging, feeling that they do not feel accepted, valued, or recognized by others, belonging cannot be taken for granted. While the purpose of this work is to contribute to the academic space in psychological literature and more simply to produce research according to a Master's thesis, what is hoped to be taken away the most is how impactful a sense of belonging can be for even just one person. If you have never had to question where you belong, where you feel the most at home, what connections you have with others, whether that be at work or school, then think about how your life may be different without any of that. What would your life look like without a sense of belonging? A whakataukī (Māori proverb) will close this thesis.

Hutia te rito o te harakeke,

Kei whea te korimako e kō?

Ka rere ki uta, ka rere ki tai.

Kī mai koe ki au,

He aha te mea nui I te ao?

Māku e kī atu,

He tangata, he tangata, he tangata!

If you pluck out the centre shoot of the flax,

Where will the bellbird sing?

It will fly inland, it will fly seawards.

If you ask me, what is the most important thing in the world?

I will reply,

People, people, people!

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## Appendix A: Advertisement

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### *1: Facebook Advertisement Blurb*

Kia ora everyone, I have created a survey for my thesis and would love to hear your thoughts! I'm currently completing my Masters of Arts (Psychology) and I am conducting research around student's feelings of belonging and university success. This research will also provide insight into how students define success at university. The research consists of a questionnaire which will take only 10 minutes to complete. To take part in the survey, you must be over the age of 18 and currently enrolled as an undergraduate student at Massey University. To show appreciation to those who take part, there is a prize draw for the chance to win 1 of 20 \$40 gift vouchers. Here is the link if you are interested <https://rb.gy/icoxzb>  
Thanks so much!

2: Print Advertisement



MASSEY UNIVERSITY  
TE KUNENGA KI PŪREHUROA  
UNIVERSITY OF NEW ZEALAND

## University Belonging and Student Success

Tēnā koutou!

This study is interested in exploring the relationship between your feelings of belonging and success at university.



Link: <https://rb.gy/icoxzb>



This anonymous survey will take just 10 minutes to complete. At the end you have the opportunity to go into a prize draw to win 1 of 20 \$40 gift vouchers.

To participate, you must be 18 years or older and currently enrolled as an undergraduate student at Massey University.

If you are interested in the study or would like to know more, please contact Courtney at:  
[C.Ngata-Turley@massey.ac.nz](mailto:C.Ngata-Turley@massey.ac.nz)

### Appendix B: Modified University Belonging Scale

Please indicate how well each statement describes your experience at Massey during the current academic year.

	Strongly Disagree 1 (1)	2 (2)	3 (3)	Strongly Agree 4 (4)
I believe there are supportive resources available to me on campus (UC1_2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One of the things I like to discuss with others is about my university (UC1_3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a sense of pride when I meet someone from my university off campus (UC1_4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My cultural customs are accepted at my university (UC1_6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with the academic opportunities at my university (UC1_7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to be a student at my university (UC1_8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I feel “at home”  
on campus  
(UC1\_9)

Please indicate how well each statement describes your experience at Massey during the current academic year.

	Strongly Disagree 1 (1)	2 (2)	3 (3)	Strongly Agree 4 (4)
I feel like I belong to my university when I represent my school off campus (UC2_1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have found it easy to establish relationships at my university (UC2_2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel similar to other people in my degree (UC2_3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My university provides opportunities to engage in meaningful activities (UC2_4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This is an attention check. Please leave this question blank (UC2_7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to associate myself with my university (UC2_16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that a faculty/staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

member has  
appreciated me  
(UC2\_17)

I would be proud  
to support my  
university in any  
way I can in the  
future (UC2\_18)

Please indicate how well each statement describes your experience at Massey during the current academic year.

	Strongly Disagree 1 (1)	2 (2)	3 (3)	Strongly Agree 4 (4)
I believe I have enough academic support to get me through university (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The university I attend values individual differences (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that a faculty/staff member at my university cares about me (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel connected to a faculty/staff member at my university (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My university environment provides me an opportunity to grow (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I feel that a faculty member has valued my contributions in class (8)

I have university-branded material that others can see (pens, notebooks, bumper sticker, etc.) (9)

## Appendix C: Belonging and Success Survey Information Sheet

# Belonging and Student Success Survey 2020

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### University Belonging and Student Success NGĀ KUPU WHAKAMĀRAMA/INFORMATION

#### What is this research about?

You are invited to take part in a survey exploring the relationship between feelings of belonging and success at university. You will be asked a broad range of questions about yourself, your involvement in and perceptions of university life. Further explanation about the study will be provided at the end of the survey.

#### Who can take part in this research?

To take part in this study you must be 18 years or older and currently enrolled as an undergraduate student at Massey University.

#### What will I be asked to do?

This study consists of an online questionnaire with several multiple-choice and open-answer questions. Your participation should take no more than 15 minutes. If you choose to participate, please complete all sections in one sitting. You will not be able to resume at another time from where you left off. Your answers will not be saved until you complete all sections of the questionnaire

#### What are my rights as a participant?

Your participation is voluntary and you have the right to refuse to answer any questions in this survey. You also have the right to withdraw from this study at any time without penalty. Your

responses to this questionnaire will remain anonymous, and no material will be used that could identify you as a participant. The anonymised data you provide will be stored indefinitely in a public, online repository.

If you decide to participate in this study, you will be given the opportunity to enter a prize draw after completion. At the end of the survey you will be directed to a separate raffle page where you may enter your contact details. This page is not directly connected to the main survey and ensures your survey responses remain confidential. You may also provide an email address which we will use to let you know about the findings of this research. Any contact details you provide will be held confidentially and will only be used for the purposes you select. If you wish to participate in this study and all of your questions have been answered, then please move to the next screen.

If you have any questions about this study, you may contact us using the information below.

**Contact information:**

**Primary Investigator**

Courtney Ngata-Turley  
School of Psychology  
Massey University  
Palmerston North  
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Email: C.Ngata-Turley@massey.ac.nz

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*This project has been evaluated by peer review and judged to be low risk. Consequently it has not been reviewed by one of the University's Human Ethics Committees. The researcher named in this document is responsible for the ethical conduct of this research. If you have any concerns about the conduct of this research that you want to raise with someone other than the researcher(s), please contact Professor Craig Johnson, Director (Research Ethics), email [humanethics@massey.ac.nz](mailto:humanethics@massey.ac.nz).*

## Appendix D: Belonging and Success Survey Questions

### Respondent Consent

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Thank you for your interest in this study. Your participation in the study implies that you consent to participate in the study as described on the previous page. You have the right to decline to answer any particular question, and you may stop participating at any time.

I have read and understood the information sheet for this study and consent to participate in this study.  
*(Please click on the 'Yes' choice if you wish to proceed.)*

Yes (1)

No (2)

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### Demographics

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How old are you?

---

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What gender do you identify with?

---

---

What is your ethnicity?

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Are you a current Massey University student?

Yes (1)

No (2)

Are you studying at an undergraduate or postgraduate level?

Undergraduate (1)

Postgraduate (2)

What is your current living situation?

University hall (1)

Living by myself (4)

Flating (5)

Living with whānau/family (e.g. spouse, partner, siblings) (6)

Living with parents (7)

Are you the first in your whānau or family to attend a University or a Wānanga?

- Yes (1)
- No (2)
- Don't know (3)

What members of your family or whānau attended a University or Wānanga?

- Mother (1)
- Father (2)
- Sibling(s) (3)
- Grandparent(s) (4)
- Aunt(s) and/or Uncle(s) (5)
- Cousin(s) (6)
- Specify others if you wish: (7) \_\_\_\_\_
-

Are you a full-time or part-time student?

Full-time (1)

Part-time (2)

---

What mode of study do you most strongly identify with?

Distance (1)

Internal (2)

Other (3) \_\_\_\_\_

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In the last 12 months, what was your most common course grade at Massey?

A range (1)

B range (2)

C range (3)

D range (4)

Other (5) \_\_\_\_\_

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### **Q32 Defining Student Success**

In this section of the survey we want you to think about academic success and what this means for you as

a university student.

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In the last year, how academically successful do you feel you have been at university?

- Not all all Successful (78)
  - Somewhat Successful (79)
  - Neutral (80)
  - Moderately Successful (81)
  - Very Successful (82)
- 

In one minute, please share what success **means for you** as a university student. You may write in full sentences or share key words that define success for you.

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Q52 Below are some common ideas of university success. Click as many that applies to your own understanding and experience as described on the previous question.

- Completing your degree (1)
  - Making friends and social groups (2)
  - GPA (3)
  - Finishing assignments (4)
  - Being able to attend university (5)
  - Grades (6)
  - Feeling happy and supported at your university (7)
  - Passing your courses (8)
-

Below are some of the Massey student support services. Please tick the service/s that you have used in the last 12 months, or comment one below (in the *Other* box) if the service is not in the list.

Counselling services (1)

BASE+ (Bachelor of Arts Student Engagement) (2)

Distance Advocates (3)

Te Rau Tauawhi (TRT) (10)

Centre for Teaching and Learning (11)

Pasifika @ Massey (12)

International Student Support (ISS) (13)

Chaplains (14)

Student associations (e.g Manawatahi, MUSA). (15)

Other (18) \_\_\_\_\_

## Appendix E: Survey Debriefing

Previous research has found that university students who experience stronger feelings of belonging to their institution are more likely to be successful in their academic studies. Students who experience less feelings of belonging towards their institution often experience negative academic outcomes. However, what is considered "successful" at university and how that depends on feelings of belonging is still relatively under-researched. This study will help us better understand the relationship between belonging and university success outcomes, as well as helping us better appreciate how students define success for themselves at university.

If you have any comments you'd like to share about this research or observations to share, you may do so in the textbox below.

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If you have questions about this research you may contact us:

**Primary Investigator**

Courtney Ngata-Turley

Email: C.Ngata-Turley@massey.ac.nz

**Research Supervisor**

Dr Michael Philipp

Email: m.philipp@massey.ac.nz

## Appendix F: Mind Map



## Appendix G: Participant Responses of What Success Means to them.

Participant Number	Age	Gender	Ethicity	Response
1	32	Female	Pakeha	A 'A' student is a successful student
2	42	Female	Pakeha	Success is passing all assessments with a B average or above
3	25	Female	Pakeha	Passing the papers. Anything more than a c is a bonus
4	24	Female	Maori	Passing my courses and getting good grades
5	31	Female	Maori	Passing. Getting C's or above on assignments
6	22	Female	Maori	Passing. Getting assignments in on time
7	31	Female	Pakeha	Success for me means completing courses to the best ability that I can
8	22	Female	Asian	Success means being able to finish everything, even if it means you have to sacrifice a few things like social life
9	33	Female	Pakeha	Success for me is completing an assignment, feeling good about it, submitting It on time
10	23	Female	Pakeha	My idea of success for university is to complete my degree. Whilst my grades are important to me, and I want my academic transcript to look good, my main focus is to graduate, and be able to prove that I can do it
11	41	Female	Other	I want to prove to myself that I can get a degree
12	35	Male	Maori	Getting the degree
13	43	Female	Maori	Not just rote learning information for the sake of passing a test, rather absorbing and retaining knowledge. Also being able to apply that knowledge to real life experiences and expanding my world view
14	42	Female	Maori	Success means that I am able to retain, understand and articulate the content of the course. It possibly means that I am interested in the concept of thinking outside my current sphere
15	40	Female	Other	Fully immersed in the material with a good understanding of course material
16	41	Female	Ethicity	Success means balancing life responsibilities as a solo mum with the time needed for study in order to maintain my grades
17	26	Transgender Woman	Pakeha	Success is more than grade, but being able to keep on top of readings makes me feel successful. While my grades are excellent, I often do not feel successful if i am behind on readings, or end up having to skip weeks in favour of assignments. Which happens around the end of every semester
18	25	Non-Binary	Other	Balancing having good grades and having an active social life. I struggle socially and struggle with academic pressure to performed well
19	23	Female	Other	Success means attaining a degree that leads to a good job
20	46	Female	Other	Success for me means learning new and interesting content that I can then apply in real life at home or at work. Getting good grades will also help me to pursue my education further to post-grad
21	35	Make	Other	Graduating Learning Finishing with skills and capabilities that support me Networking
22	28	Female	Pakeha	Receiving critical feedback on assignments. Having a strong sense of connectedness to other students via social media, zoom and forums
23	49	Female	Pakeha	probably some praise from my lecturer
24	24	Female	Pakeha	Succeeding academically in terms of grades but also making connections with staff, learning from other students and taking advantage of opportunities offered
25	18	Female	Pakeha	Success means learning and sharing my knowledge from my courses Success means gaining my degree being a role model for my baby sister Being a role model for my future children Being financially stable eventually To eventually own a home
26	31	Female	Pasifika	Being a role model for my family. Getting my degree and having a job that can provide for them
27	51	Female	Pakeha	Success to me would mean completely my degree and using my skills to give back to the community or society
28	24	Female	Maori	success is a lot of things. It is not giving up, even though or if you feel like it's a good option. It's asking for help or clarification if you're unsure about something. It's about helping others if you understand and they don't. Success depends on your mindset, but in my opinion, doing anything towards achieving a goal is success
29	27	Female	Pasifika	I believe success as a university student is a myriad of things. Sometimes success for me being a uni student is having the courage to wake up and keep going in my studies even when I am not having a mentally strong day. Sometimes success is achieving the best possible grade for one of my assignments, sometimes success for me is stepping out of my comfort zone
30	24	Female	Pakeha	Success is a lot of different things. I usually think of it as grades and getting my degree. Sometimes just getting through the day
31	25	Female	Pasifika	Success isn't just measured by my IQ, but also my EQ and CQ. I try not to let my grades define me as a person. Success is happiness
32	20	Female	Pasifika	Success to me means being able to engage with content that stimulates and intrigues your mind, because you have succeeded in finding the tools to carve your own path
33	18	Female	Maori	As a student, my mindset towards success is honestly doing my best at whatever my course asks of me. If I failed then at least i tried
34	25	Female	Pasifika	Trying to complete a degree is a success in itself I think and I hope that with all the support and self motivation I am able to see myself to the end. Not only for myself but also to raise the statistics for Pasifika and to be a role model for the generations to come
35	29	Female	Maori	As a university student, success means breaking stigmas and stereotypes. Success means opening pathways for my unborn mokopuna. Success means setting an example, success means, broadening our horizons and opening myself up for more opportunities to be more resourceful for my iwi, my hapu and my whanau. More importantly, when Māori succeeds everyone succeeds. Why? Because we are a culture of oppression, systemic racism and bia
36	39	Male	Pasifika	Seeing more brown faces in leadership roles in the workforce and academically
37	22	Female	Pasifika	Success means the ability to support my whānau. They've been supporting me throughout my entire journey, so I see my success as their success. Not only that but I feel as a Māori/Samoan student, I need to be successful in my studies to break those racial stereotypes about us
38	28	Female	Pakeha	Success to me means achieving my goals and surviving the semester
39	44	Female	Maori	Being able to attend university is my heart's dream. I feel so lucky
40	24	Male	Pakeha	Success is defined by good grades, but also proper in depth understanding of what the course is supposed to teach. It's also defined by how or of the study gets you employed in a field you could not have entered without the qualification or study
41	25	Non-Binary	Other	Balancing having good grades and having an active social life. I struggle socially and struggle with academic pressure to performed well

**Appendix H :Original Pattern Matrix and Factor Loadings for the University Belonging Questionnaire by Slaten et al (2018).**

**Table**

*Pattern Matrix for University Belonging Questionnaire (UBQ) Scale Items with Direct Oblimin Rotation.*

<b>Scale Items</b>	<b>1</b>	<b>2</b>	<b>3</b>
I tend to associate myself with my university	.84		
One of the things I like to discuss with others is about my university	.79		
I feel a sense of pride when I meet someone from my university off campus	.78		
I would be proud to support my university in any way I can in the future	.71		
I have university-branded material that others can see (pens, notebooks, bumper sticker, etc.)	.70		
I am proud to be a student at my university	.68		
I feel “at home” on campus	.65		
I feel like I belong to my university when I represent my school off campus	.61		
I have found it easy to establish relationships at my university	.45		
I feel similar to other people in my degree	.44		
My university provides opportunities to engage in meaningful activities		.74	
I believe there are supportive resources available to me on campus		.72	
My university environment provides me an opportunity to grow		.69	
My cultural customs are accepted at my university		.61	
I believe I have enough academic support to get me through university		.60	
I am satisfied with the academic opportunities at my university		.57	
The university I attend values individual differences		.50	
I believe that a faculty/staff member at my university cares about me			.89
I feel connected to a faculty/staff member at my university			.88
I feel that a faculty/staff member has appreciated me			.81
I feel that a faculty member has valued my contributions in class			.60

\*1= University Affiliation, 2= University Support and Acceptance, 3= Staff and Faculty Relations