

# Folauga: A Model to Support the Retention and Success of Pacific Students in Higher Education in Aotearoa New Zealand

Faafetai Sopoaga<sup>1\*</sup> , Shyamala Nada-Raja<sup>1</sup> , Tim Wilkinson<sup>2</sup> 

<sup>1</sup>Va'a o Tautai-Centre for Pacific Health, Division of Health Sciences, University of Otago, Dunedin, New Zealand

<sup>2</sup>University of Otago, Christchurch, New Zealand

Email: \*tai.sopoaga@otago.ac.nz

**How to cite this paper:** Sopoaga, F., Nada-Raja, S., & Wilkinson, T. (2024). Folauga: A Model to Support the Retention and Success of Pacific Students in Higher Education in Aotearoa New Zealand. *Open Journal of Social Sciences*, 12, 278-301.  
<https://doi.org/10.4236/jss.2024.128018>

**Received:** June 26, 2024

**Accepted:** August 18, 2024

**Published:** August 21, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.  
This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).  
<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

Education is an important social determinant factor that impacts on the health and wellbeing of communities. It influences employment, ability to earn an income with subsequent flow on effects on housing and basic amenities for living. Pacific peoples make up approximately 9% of the total population of Aotearoa New Zealand and is a youthful population with 50% aged 25 years or younger. They are disproportionately represented in poor health and education outcomes. Pacific young people are less likely compared to other ethnic groups to attend university or transition well into the tertiary environment. Tinto's longitudinal model of institutional departure is one of the very first models to highlight issues important for the retention and success of students in higher education. This research examined the relevance of Tinto's model for Pacific students in the tertiary environment in New Zealand. While all components in Tinto's model were relevant, additional areas were identified as important for Pacific students' success. We propose the Folauga model, an adaptation of Tinto's model incorporating additional components of culture, identity, health and well-being to support the retention and success of Pacific students in higher education in New Zealand.

## Keywords

Pacific Students, New Zealand, Tertiary Studies, Tinto's Model, Folauga Model, Equity

## 1. Introduction

### 1.1. Historical Context

Aotearoa New Zealand's past and future journey is integrally linked to the Pacific

ic Island region through its colonial history, location in the Pacific region, economic and border security matters, and an increasing proportion of its population with strong ancestral links to the Pacific Islands. Since the 1800s, there have been engagements and exchanges between New Zealand and the Pacific Islands through trade and religion including the interest of New Zealand to have influence over islands in the Pacific (Howe, 1984; Salesa, 2012). The Cook Islands, Niue and Tokelau were annexed and became New Zealand citizens in 1947 (Bedford et al., 2002). When Samoa gained its independence from New Zealand in 1962, a Treaty of Friendship was signed between the two countries (Bedford et al., 2002). During the 1950s New Zealand utilised a labour workforce from the Pacific Islands during the economic boom (Bedford & Gibson, 1986; Gibson, 1983). However, during the global financial crisis of the 1970s and 1980s, this Pacific labour workforce which was initially welcomed, was then blamed for taking up New Zealanders' jobs resulting in many being forcibly removed through dawn raids in an unfortunate period in New Zealand's relationship with Pacific peoples (Aanae, 2012). New Zealand has since continued to utilise support from the Pacific Islands for its economic development through the Seasonal Worker Scheme in the horticulture and meat industry (Friesen, 2018).

## 1.2. Pacific People in Aotearoa New Zealand

Pacific or Pasifika refer to people living in New Zealand, with ancestral links to one of the twenty two Pacific nations and territories in the Pacific Island region. Pacific peoples now make up approximately 9% of the total population, with Samoans making up 48% of the total Pacific population and Cooks Islanders and Tongans the next largest groups (Statistics New Zealand, 2018a). The Pacific population is youthful with at least one third aged less than 15 years of age, and 50% aged 25 years or younger. It is estimated that by 2043, 11% of the New Zealand population will identify with at least one Pacific ethnic group. Many migrated to New Zealand for better employment and education opportunities (Sin & Ormsby, 2019). However, they are disproportionately represented in poor social, economic and education outcomes compared to the New Zealand European population. The median annual income is \$24,300 compared to \$34,500 (Statistics New Zealand, 2018b) unemployment 5.4% compared to 2.9%, (Statistics New Zealand, 2022) school leaver with NCEA 2 or above 76.2% compared to 81.1%, (Ministry of Education, 2021) and severe housing deprivation (per 10,000) 245.5 compared to 41.2 (Viggers & Hoden-Chapman, 2021).

## 1.3. Education and Health

Socio-economic factors impact on the health and well-being of communities. Education is one of these factors as it impacts on employment, ability to earn an income with subsequent flow on effects on housing and basic amenities for living. The success of Pacific peoples in higher education is likely to have flow-on effects for the health and wellbeing of their communities. Factors that impact on

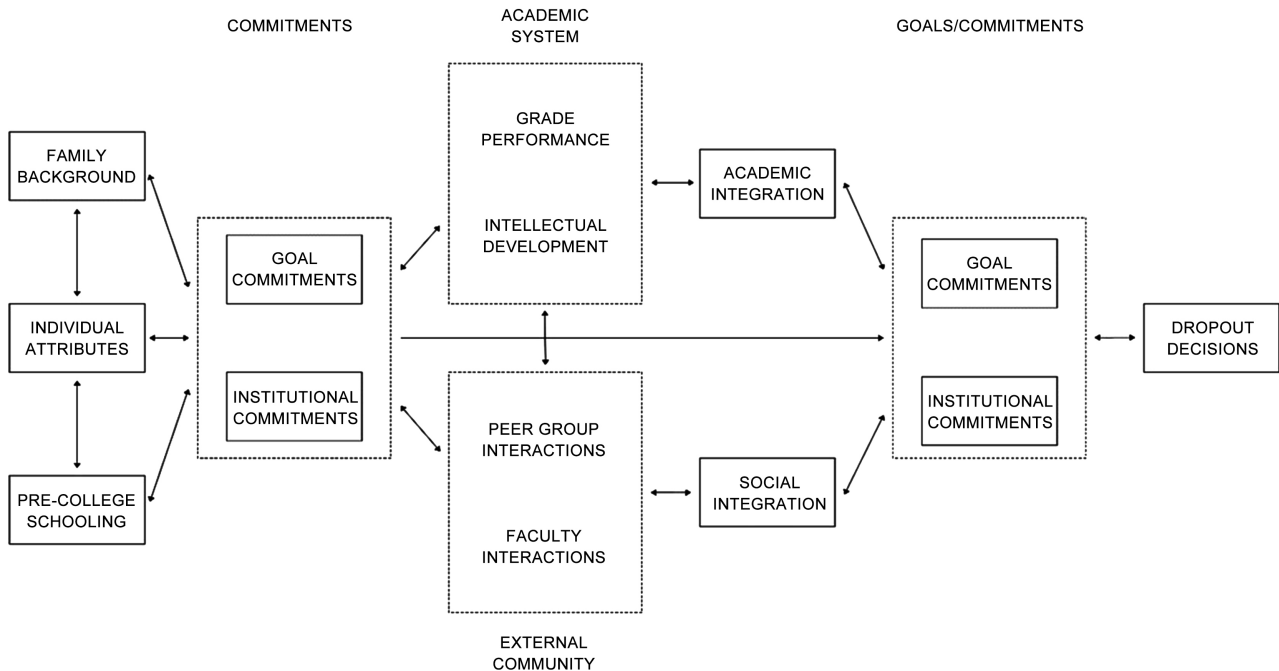
Pacific students' success in higher education are complex (Sopoaga & van der Meer, 2012). The New Zealand Ministry of Education Pasifika Education Plan (2020-2030), outlined areas to support education success including co-design with Pacific families and communities the development of education opportunities (Ministry of Education, 2020). Other research exploring education success has highlighted the importance of understanding the Pacific context (Reynolds, 2018), personal faith (Ng Shiu, 2011), peer support (Ane et al., 2001) and the valuing of the cultural capital Pacific students bring into the learning environment (Waiari et al., 2021). More Pacific students are now enrolling in tertiary studies but are over-represented in those completing lower level qualifications and fewer from university studies (Ministry of Education, 2019).

These concerns are not new and have been expressed over the years about inequities, the unequal access, participation and success of Pacific students in the New Zealand education system (Ane et al., 2002; Middleton et al., 2019). There is a need for a more coordinated approach from schools into the tertiary sector to better enable students to transition well (McKinley & Madjar, 2014). The critical role of families in supporting students' success, the importance of their sense of belonging as well as positive engagements with teachers in the learning environment are argued (Gorinski & Fraser, 2006; Hawk et al., 2002; Leach, 2013). There are examples where there has been some success in the efforts to increase the participation and success of Pacific students in higher education through investment in earlier years and lessons can be gleaned from these (Middleton et al., 2019). For example, the set-up of Health Sciences Academies in the Auckland region with a high proportion of Pacific students in 2011 with evaluation showing promising results.

There is international interest and research focused on factors that support the retention and success of students in higher education (Kuh & Love, 2020; Nelson et al., 2011). Tinto's longitudinal model of institutional departure (Tinto, 1975) was one of the first to be established which highlighted areas important for the success of students in higher education and had a specific focus on institutional responsibilities. He also proposed that there were a number of factors which determined students' persistence in, or drop out from, higher education institutions. These included the student's interactions with the institution's academic and social environment and the degree with which they were integrated within the system. He also highlighted the importance of family background, individual attributes and pre-schooling experiences including students' goals, career and educational expectations. His model is outlined in **Figure 1** below.

While the areas highlighted from international models, such as Tinto's model assist in our understanding of students' transition into the tertiary environment, these models have yet to be tested as to their impact and relevance for ethnic minorities in Aotearoa, New Zealand. Research was therefore undertaken to test the relevance of Tinto's model for Pacific students in the tertiary environment in New Zealand. While the results showed that all components of Tinto's model

were relevant, there were additional components identified that were important for Pacific students. This paper presents an adaptation of Tinto's model, called the Folauga Model to support the retention and success of Pacific students in higher education in New Zealand.



**Figure 1.** Tinto's 1975 longitudinal model of institutional departure.

Findings presented in this paper are part of the work undertaken for a doctoral degree to explore how best to support Pacific students to transition well into and achieve in higher education.

The aims of this paper are:

- 1) to examine the relevance of Tinto's model for Pacific students in higher education in New Zealand.
- 2) to propose Folauga, an adaptation of Tinto's model to support the retention and success of Pacific students in higher education in New Zealand.

## 2. Methods

### 2.1. Eligibility and Recruitment Process

We employed a qualitative interview-based methodology. All Pacific students enrolled at the University of Otago to undertake the Health Sciences First Year (HSFY) programme in 2015 were eligible to participate. HSFY is the first-year programme in Health Sciences at Otago to prepare students for entry into health professional programmes. The University also offers a Foundation Programme for those who need additional preparation prior to entering HSFY. Of 108 eligible Pacific students, 20 were randomly selected within gender and ethnicity strata to ensure overall gender representation and ethnic diversity in the cohort.

Thus, within each gender, for students from smaller Pacific ethnic groups, at least one member was selected, while for larger ethnic groups a pro-rated number of students were randomly selected for the remaining places proportional to the size of that ethnic group. Participants were recruited at the beginning of the year during the orientation period. Study information was provided to potential candidates, they were given opportunities to ask questions to ensure they understood the requirements, prior to obtaining written informed consent. Each participant was interviewed four times over the course of their first two years. The first interview was conducted prior to the start of academic year in 2015, the second six weeks into the first semester, the third within the first two weeks of the second semester and the last within the first six weeks of their second year at the University. Of the total 80 possible interviews, 76 were able to be completed.

## 2.2. Cultural Research Method and Methodology

The Talanoa method (Vaiotele, 2016) and the Kakala methodology (Thaman, 1992) were utilised as the method to collect data and methodological approach respectively, to ensure use of culturally sensitive approaches. Talanoa simply means to have a conversation. It is used for the sharing of traditional knowledge, stories or to discuss issues of importance to families or communities. Talanoa can be utilised in both informal and formal contexts. Prior to the Talanoa, the venue was organised to ensure the participant and the interviewer both felt comfortable within the setting. Talanoa started with an informal process consisting of general conversations usually not related to the topic, to develop connectedness and establish common ground. Once this was achieved, then the interviewer proceeded to the formal component which consisted of pre-prepared semi-formal questions related to the topic. Once this was completed, informal conversations ensued bringing closure to the data collection phase.

The Kakala is a metaphorical research framework which draws on the making of a garland (kakala). The making of floral garlands for special occasions is a tradition that is common across many Pacific countries. Kakala developed by Thelu-Haman consists of three components: Toli, Tui and Luva with further revisions proposed since then. All three stages are equally important, however this early phase is of particular importance as it involves careful preparation, consultation and the establishment of a safe space for engagements with the participants. Toli and Talanoa are both involved in this early phase. Toli refers to the gathering of flowers, and the careful determination of the types of flowers suitable for the occasion. This is the data collection phase of the research process. Talanoa likewise is the process in which data is collected for the research. Once the data were collected, the interviews were transcribed and participants were given a unique identifier, and fictitious names to ensure anonymity. Participants were given the opportunity to view and correct their transcripts before uploading into NVivo for data management and analyses.

Tui refers to the data analysis stage and in this metaphorical context consists

of the creation of the garland from selected flowers. This process is undertaken carefully, selecting the type and shape suitable to ensure the correct fit for the intended outcome. Data that were incomplete or were not aligned with the aims of the research were removed. Care was taken at this stage to respect all data including those that were not utilised, as they represented the generosity of all participants gifting their knowledge for the research. Both inductive and deductive analytical processes were utilised. The approach taken is similar to that described in the Framework Method for analysis of qualitative data (Gale et al., 2013). In the inductive approach, data were read multiple times to identify broad groups of ideas which were further analysed to identify key emerging areas across the four interview periods. These areas were then compared and contrasted using the deductive approach with Tinto's model, with a specific focus on the areas he highlighted as important for the retention and success of students in higher education. The results from the combined analytical processes identified additional components which were utilised to propose an adaptation of Tinto's model for the context of Pacific students in New Zealand.

Luva is the final stage of the research process and it includes the presentation of the kakala for the occasion to the designated guests. The value and worth of the kakala or garland, is determined by the combined processes the floral designer or researcher undertakes at all stages of the research, and the care with which each component of the Kakala methodology is undertaken. The most beautiful kakala designs are gifted to the important people in a formal function. The completion and dissemination of the data is part of the Luva process. It is important that the key stakeholders who are the participants, students, tertiary institutions, the Pacific community and decision makers, can appreciate its beauty, relevance and the value of the research outcomes. The gifting of the kakala is about reciprocity also and is an important and required part of the whole research process.

Ethics approval was obtained from the University of Otago Ethics Committee including the Māori research approval process.

### 3. Results

#### 3.1. Overview of the Participants

Most participants were aged between 19 - 20 years with one mature student who had already completed an undergraduate degree. The mature student was working in a different field but wished to retrain in a health professional career. Of the 20 students, half identified as male and the other half as female with representation from nine different Pacific ethnic groups. Eleven students identified with a sole Pacific ethnicity, and all except three stayed in a Residential College. Two were living with their families and one was flatting. Three participants entered university through the preparatory Foundation programme, two were from overseas and the rest entered university directly from New Zealand high schools. Five were from low decile schools, five were from high decile schools

and the rest were from mid-decile schools in New Zealand. Only one student was from the local area. Of the 10 who had religious beliefs, eight were Christians, one identified with the Muslim faith and the other with Hinduism. Of all students, 16 have since graduated, three withdrew from the University and one withdrew for some years and re-enrolled again in a Science degree at Otago in 2023, and is graduating in 2024. Of the three who withdrew from the University, one re-enrolled in another institution closer to his family in a different field, the mature student returned to his original profession and the other returned home where she is very involved in Pacific community work and intends to complete her studies at a suitable time.

### 3.2. Data Aligned with Tinto's Model

The deductive analysis found that all components of Tinto's model with regards to integration and retention as outlined below were aligned with and relevant to participants' experiences. We have presented the data related to enablers and barriers from participants' perspectives.

#### 1) Family background:

Enablers: it was evident that the influence of families, parents and those who the participants were close to, had an impact on their perspectives. Their experience, approach and context contributed to having a positive mindset.

*"Both my mum's parents are actually doctors...my parents have always been encouraging of academic stuff...mum's actually back at uni at the moment...given me heaps of tips from doing it..."* (Moeroa, interview one)

*"...my dad is a massive role model...when I hear stories about him...it inspires me to be better...my mum's side...she's also told me to be better than what they are...like we have achieved this much, but we want to see you achieve further..."* (Lilly, interview one)

Barriers: where families struggled because of their own situation or lack of understanding of the tertiary environment, the participants felt the impact of these which affected their transition to university.

*"It was hard because there was very little money...we lost the truck...that was like our source of income...so he had to walk to work..."* (Sione, interview one). *"Yeah...like last year, he was asking me for money, and I barely got any money... \$40 bucks is heaps but, yeah...Oh man, I hate this..."* (shuffling sound...emotional). (Sione, interview two)

*"...They finish school em...year 12...they don't know what its like basically..."* (Karaponi, interview one). *"quite hard for me and for them (parents), just because they don't understand...how hard Health Sciences is..."* (Karaponi, interview two)

#### 2) Individual attributes (Skills/Abilities)

Enablers: those who recognised what they needed to succeed such as maintaining connectedness with previous established relationships, as well as creating

new strategic networks were able to settle in quickly to the new learning environment.

*“...keeping in touch with my old friends and family...I think that’s really important, and always feels really nice to talk to people like you’ve known forever” (Moeroa, interview two)*

*“I think networking is probably one of the best ways to get where you want to be, and I don’t mean that by sucking up to people...I mean the kind of networking where you build relationships and friendships that are going to last a lifetime.” (Lili interview one)*

Barriers: those who did not have the relevant skills to navigate the new learning environment or did not make the most of the opportunities provided did not perform well.

*“...I think my confidence, my self-confidence...has dropped... significantly...over this semester...and I was like I don’t see what I’m doing, because I am putting way more effort but I am getting the average grade...I don’t understand that...so my self-confidence has dropped... (Fereni, interview two)*

*“I should have taken every opportunity because I didn’t go to all the tutorials I should have gone to, I would probably look back at all the wrong things I did, like not take every opportunity like going to every tut” (Sione, interview four)*

### 3) Pre-college schooling

Enablers: the role of having supportive and enabling teachers as well as a balanced school learning environment, which included developing academic skills and extra-curricular activities were helpful.

*“I look back at some of my teachers and I’m just like...those people were super heroes...without them, I would not have believed in myself as much as I did to get where I want to be...it was how they taught you... (Lili, interview three)*

*“Yeah, I really enjoyed my time at high school, had lots of fun, got involved in lots of sports and extra curricular events, and stayed on top of academic stuff as well (Wale, interview one)*

Barriers: similarly a learning environment that did not have supportive or proactive teachers, or those that did not support students’ aspirations were unhelpful.

*“The teachers weren’t very good, they wouldn’t come to class...so we’d be...ah we can self-study. Some teachers don’t learn. When they are there, they just sit there and the kids do whatever they want”... (Salamasina, interview one)*

*“I went to...quite a prestigious school...our career advisor...couldn’t relate to the island girls...asked her for advice...she wouldn’t really look at our*

*results but she'd just...would you like to do barista or...do hairdressing courses and so we just felt like the dreams that we had didn't relate to what she was offering..." (Sinalei, interview one)*

#### 4) Goal commitment

Enablers: having aspirations, clear goals (intentions) as well as a sense of purpose that was connected to serving communities were helpful.

*"I've always wanted to...I had this idea that if I was a doctor...I would be connected...I really want to work with people...and be someone that can be trusted...that people could go to..." (Moeroa, interview one)*

*"...well initially I looked at all the different science degrees...I wanted to stick with a BSc because ultimately, my goal is still to get into a professional course..." (Karaponi, interview three)*

Barriers: it was helpful to have aspirations and goals (intentions) aligned with personal skills, abilities and academic strengths. There were challenges when these were not aligned.

*"I've always wanted to be a lawyer...since I was seven years old...and it was just last year, that I decided...I need to do medicine...we are the highest underutilised people of health services, and I wanted to change that...I don't think I can do that through law..." (Fereni, interview one)*

*"I was thinking maybe...I should go back and do law...English and literature...is... a strength in a way..." (Fereni, interview three)*

#### 5) Institutional commitment

Enablers: reputation for tertiary institutions was important for Pacific students, and personal contact including a Pacific friendly environment were important in making them feel welcomed.

*"I thought Otago overall was going to be better...it has a better reputation...this is the best in New Zealand for Health Sciences" (Salesa, interview one)*

*"It seemed more friendly and welcoming and all that, like everything was like...you guys say 'Warm Pacific Greetings'!...it actually feels like it was warm from the inside" (Priya, interview one)*

Barriers: the role of school career advisors were important, and they could influence the choice students made when choosing where to go for university.

*"My career advisor at school...advised...not to go to Auckland because it was...pretty cut-throat there...she said...its very very competitive..." (Karaponi, interview one)*

#### 6) Academic system and integration

Enablers: those who developed an interest in the content and were intellectually challenged by the academic work, including those who were passionate about understanding what was being taught transitioned well into the learning

environment.

*“...study is incredibly important...so if a test didn’t go well as I hoped...I need to go back...think about why it didn’t go well...what I can do to make sure the next time I don’t make the same mistake again...” (Salesa, interview four)*

*“...I think if you find things that you love...I found that I’ve really love the content of what we’re learning. It really fascinates me how thing work...especially the human body” (Sinalei, interview two)*

Barriers: participants who had not developed good study skills and those who had yet to understand how to navigate the learning environment to their benefit struggled to transition well into the new learning environment.

*“All-nighters...because I don’t study at day time, just sitting around watching TV or movies...so I crammed two nights” (Salamasina, interview two)*

*“I didn’t realise I was really behind...I know they say that you shouldn’t, but it was like my first test I didn’t know what to do...how it worked...so I just put my head down and focussed on HUBS and I got behind in everything else...” (Karaponi, interview two)*

#### 7) Social system and integration

Enablers: connecting with others and making new friends, including having an environment where they felt at home was helpful.

*“Oh it’s so good, they were so welcoming on the first night. Like I was already on first name basis with everyone...” (Fereni, interview one)*

*The Early Orientation Programme was really awesome because it gave me an opportunity to experience the culture away from my family...it was really nice... (Salesa, interview one)*

Barriers: those who found it difficult to make friends or who had difficulty developing trust and connections with others found the transition period challenging.

*“Friendship at university are really hard to maintain, because everybody’s got their own timetable...there’s times they study best, and there’s like...days they don’t want to get out of the house...” (Priya, interview two)*

*“Being friends... they would just trick you and let you down, they are a bad influence...they’re brighter than you are, so they have their own way...and you are struggling along the way”. (Salamasina, interview one)*

#### 8) Faculty staff interactions

Enablers: the role of helpful staff who created a welcoming environment where students felt at home was critical to students transitioning well into university.

*“I’ve been like overwhelmed today...I didn’t realise how much support and help this whole programme gives...how many people are like wanting to*

*help. Everything...seems like is already happening... That's all I would really ever hope for". (Moeroa, interview one)*

*"I think its valid fitting into the university experience, and also finding like a family away from home within the university...whether it's the POPO programme or the Pacific Islands Centre..." (Saisului, interview one)*

Barriers: too much support offered by staff can be unhelpful. Students needed to navigate all the support services provided and determine what was most helpful for their learning.

*"...so like 20 hours a week on tutorials alone...I appreciate the fact that they gave it to us...I don't know if I can fit everything in and still get like eight hours sleep..." (Lili, interview one)*

#### 9) Academic integration and goal commitment

Enablers: Having clear goals about what they wanted to achieve or the direction they wanted for their career pathway was helpful. This is likely to assist their journey in the long run, as some health professional career pathways can be five or six year programmes.

*"I think I'm really lucky that I know this is what I should be doing... because lots of my friends...they have no idea what they want to do." (Moeroa, interview three)*

*"...because I know gradually my marks are getting better...I think for me it's just having the patience...I just really want to finish the year well." (Sinalei, interview four)*

Barriers: the lack of planning or clear career goals and targets were a distraction for some students, and some drifted as a result or were drawn to please others instead of following their aspirations.

*"I don't know how to explain this...maybe like stop trying to...please everyone. Stops trying to go out of your way to make sure you are doing this for everyone else...then...you've just left yourself with no time to do things for yourself..." (Fereni, interview four)*

*"For me last semester, I couldn't figure out what was important and what was not...it was like...everything was important...and I just panicked...and did everything rather than what I should have been doing." (Sinalei, interview three)*

#### 10) Social integration and goal commitment

Enablers: social connectedness, engaging in and having activities to look forward to, assisted students to perform well in the academic learning environment. These also assisted in maintaining a positive outlook on life.

*"...having a social life will actually be important to me to em...do well. If I never see my friends and I'm cooped up in my room all day, I will not want to study...if I've got something to look forward to, then I will study."*

*(Moeroa, interview one)*

*“I have a good group of friends right from the start, and I really love going to POPO...I’ve met so many people, and I think that really helped” (Kara-poni, interview two)*

Barriers: feeling isolated and disconnected from others had a negative impact on participants. These created stress and feelings of helplessness which had unhelpful consequences on academic performance.

*“When I reflect back...I reckon it’s more negative...like I’ve gone more quieter...I don’t reach out to people as much this year as well...either you are stressed or other people are stressed...you don’t have time to just stop by and talk to people” (Priya, interview three)*

*“In the end people were just like...not talking to anyone, and just staying in their own rooms...it was stressful...I felt there was nothing really I could do about it...” (Fereni, interview three)*

11) Dropout decision (Departure decision)

Enablers: feeling connected, receiving excellent support and working well with others reduced the likelihood of dropping out of tertiary studies.

*“Excellent support...yep, excellent support I must say...its down to the bottom line, whether we do our work or not.” (Sililo, interview three)*

*“Its been really good, I’ve really enjoyed it...people that are studying the same thing as me as well so we can work together on assignments and all that...yeah...very supportive” (Wale, interview three)*

Barriers: not enjoying the programme of study or struggling to keep up with the work-load resulted in a lack of focus making the work stressful increasing the risk of dropping out.

*“I’m not attending, the only problem with me is just the time...finding the time to attend...the offer is provided and like for myself I miss out because I’m not up to the level” (Sililo, interview two)*

*“Oh well throughout the second semester I wasn’t enjoying the course so much, I wasn’t so motivated and so I didn’t put in as much effort as I probably could have (Wale, interview four)*

### 3.3. Additional Findings Not Captured by Tinto’s Model

There were six additional components relevant to Pacific students’ integration and retention that were not included or captured fully in Tinto’s model. These are outlined below:

1) Culture and identity

Enablers: feeling connected to their culture and other Pacific students in an environment where they felt a sense of belonging was helpful. There was also strong affiliation expressed with the ethnic group they identified with.

*“I’ve always been a proud Solomon Islander...its a pretty cool thing...like not many people here...can say they’re a Solomon Islander...” (Wale, interview one)*

*“I loved going to the (Pacific) tutorials, because it’s the one chance I get to speak my language and joke around, and have that humour with my people” (Fereni, interview two)*

Barriers: confronting issues of racism and stigmatisation in the tertiary environment was unhelpful. Some students struggled with their identity and others lacked connectedness because they were not brought up within a Pacific environment.

*“...when they talk about Pacific Islanders...they are the low...causing trouble...we are the ones that you know, low income and all that...so it made me you know, so down about it, yeah”, (Sililo, interview three)*

*“...my identity, because being a Fijian-Indian...I don’t know who I am. My passport says I’m a New Zealander...I look Indian, but I’m from Fiji...” (Prerna, interview one)*

*“I was actually a little bit nervous going into POPO, em, just because...I wasn’t very strongly associated with Pacific peoples” (Karaponi, interview two)*

## 2) Psychological (mental) well-being

Enablers: students recognised the importance of their mental well-being in the learning environment and took time to do things that were helpful such as engaging with friends, getting enough exercise and sleep as well as keeping up with their academic work.

*“Get on top of everything early...be on top of it...getting enough sleep and taking care of myself” (Moeroa, interview one)*

*“Balance, you just don’t study fulltime...like you still want time to go for a walk...chat with friends...being able to do the things you like” (Prerna, interview two)*

Barriers: some struggled to cope with maintaining mental well-being and recognised the cause of these. Some were related to the fear of failure and others to stresses related to internal and/or external expectations.

*“...I guess a lot of pressure to get in...I don’t feel pressure from my family...but it’s just like myself, it’s something that I’ve always wanted to do...so it’s like self-pressure” (Karaponi, interview one)*

*“I grew up with my dad always like after a test...oh what happened to the other 2%, and you know the typical island parent...why didn’t you get 100%, why did you get 98%...My fear of failure...because I will over think it at some point because I have and it will always stress me out” (Shiva, interview one)*

## 3) Spiritual well-being

Enablers: participants with Christian beliefs felt this was important for them, and had a strong sense of calling and the obligation to do well aligned with this calling.

*“I grew up as a Christian, so yeah, church is important, just to give back to Him, you know” (Ate, interview one)*

*“...it wasn’t just me who planted that seed, I really do feel that God just put a seed for a reason so I’m just going to keep chasing that goal” (Sinalei, interview one)*

Barriers: feeling disconnected to their faith and by extension their family, family values and upbringing was concerning for some as it provided stability, while others were resentful to be forced to take onboard their parent’s religion in their upbringing.

*“...so coming here, I just need to find an environment where I can just go and have some quiet time...a connection with God...but I don’t know any churches around here” (Fereni, interview one)*

*“...I wouldn’t want to learn it, but over time I learnt how to read the Koran...they pushed me to learn even when I didn’t want to, they forced me to learn” (Shiva, interview one)*

#### 4) Physical well-being

Enablers: participants who recognised the importance of looking after their physical well-being did well. These included having regular meals, maintaining hydration, getting enough sleep and exercise.

*“I’ve learnt more about what I need to do...so I get a decent amount of sleep...keeping hydrated, going to meals...you need the break to see people...” (Prerna, interview two)*

*“I’m so proud of myself...getting lots of exercise...has helped me stay positive...I am releasing all of that you know stress.” (Fereni, interview three)*

Barriers: alternatively those who did not have a proper routine which included exercise and eating well struggled with poor energy, ongoing tiredness with a general sense of loss of control.

*“I’ve been eating lots of fast food just because you get home, you’re too cold you’re like...ah I can’t be bothered...I live just across the road from McDonalds, yeah (laughter)...” (Fereni, interview four)*

*“I’ve let it slip over...the last four weeks...because I’m always tired. I don’t have the energy to wake up in the morning to go to the gym, it’s the only time I can fit it in” (Karaponi, interview two)*

#### 5) Social well-being

Enablers: the strength and support from their social connections, networks and friends ensured everyone were well supported in the journey, and also contributed to their academic success.

*“I couldn’t have done last semester without friends, it would be so lonely...like we always study together...it was so much easier with like other people going through exactly the same thing.” (Moeroa, interview three)*

*“Cause the chick staying next to me and the dude on the other side...they’re both doing Health Sciences...we always make sure everyone like gets the deadline for things...we’ll all work through it together.” (Ioane, interview three)*

Barriers: those who did not have support and lacked connectedness to a good social network in the tertiary environment felt isolated, disconnected and unable to reach out for help even to those who they considered friends.

*“...for me, in my life, friends have been a big problem, because I don’t generally get along with people very well...because a lot people don’t share my view of the world...” (Shiva, interview one)*

*“my friends sometimes they just say it but they don’t know how hurtful it is but they call me...your useless (chuckle)...it just kills me inside...they say it in a joking way...that hurts...” (Ate, interview three)*

#### 4. Discussion

The work undertaken by Tinto (Tinto, 1975, 1987; Tinto, 1999) and other researchers (Braxton & Lien, 2000; Kuh & Love, 2020; Reason, 2009) over the years has led the development of efforts and understanding about how to support the retention and success of students in higher education internationally. This research examined whether Tinto’s longitudinal model of institutional departure has relevance for Pacific students in the tertiary environment in New Zealand. These results show that all components identified by Tinto’s model resonated well with Pacific students. However, there were additional components identified from the data that were important for Pacific students’ success in the tertiary environment that were either not included or not captured in their entirety in Tinto’s model. These additional components were culture, identity, health and well-being. Health and well-being included students’ psychological, spiritual, physical and social well-being.

In relation to culture, researchers have investigated factors that impact on the academic performance of students from minority communities and identified socio-cultural issues as important (Bamber & Tett, 2001). The idea of racelessness was suggested where minority students were more likely to succeed if they did not bring their culture and cultural values into the learning environment (Fordham, 1988; Fordham & Ogbu, 1986), suggesting that this assisted students to fit better into mainstream enabling them to succeed. Others had alternative perspectives (Arroyo & Zigler, 1995; Whitbeck et al., 2001), proposing that students’ traditional culture and values were a positive contributor to success. Chu argued that the cultural capital Pacific students bring into the learning environment was important for success in the tertiary environment (Chu et al., 2011).

Participants in this study valued their culture and engaged readily with cultural support offered. Many felt the Pacific environment within the institution provided them with a home away from home. It provided some with the opportunity to learn more about their own cultural background, and others took the opportunity to learn or enhance their ethnic language skills.

Identity refers to an individual's need for social recognition and sense of self (Langer-Osuna & Nasir, 2016). There have been various theories proposed over the years about identity and identity development, including reviews of studies on ethnic identity (Phinney, 1990). The social identity theory suggests that being connected to a member of a group contributes to a sense of belonging and contributes to a positive sense of self (Tajfel & Turner, 1979). Some suggested that identity is fixed (Kobayashi et al., 2009) while others proposed that it changes over time (Woodward, 1997). In this study, there was identity expressed related to being first-year students at university, and belonging to a specific ethnic group. A participant in this study struggled with her identity in her first interview. A few weeks later, this was no longer a concern because she felt connected to her Pacific peers and felt she belonged in this context. Another student had a clear sense of his identity linked to the ethnic group he identified with "*I've always been a proud Solomon Islander*". These results suggest cultural identity was important for Pacific students, and that perspectives on identity were varied, shaped by their experiences and journey through life.

Mental health or the psychological well-being of Pacific students in higher education in New Zealand is an area that has attracted very little research. International research has highlighted concerns about the mental wellbeing of students in higher education (Field & Kift, 2010; Flatt, 2013; Givens & Tija, 2002; Hunt & Eisenberg, 2010; Hussain et al., 2013; Kitzrow, 2003). This includes the rising demands for student health services (Brown, 2016; Kitzrow, 2003) and the types of services sought have shifted from minor to more severe psychological problems (Kitzrow, 2003). Research within New Zealand found stress, depression and sleeping difficulties amongst tertiary students and alcohol related harm associated with psychological distress (Doran, 2015; Jameson & Smith, 2011; Samaranayake et al., 2014; Tyssen et al., 1998). Participants in this study identified stress related to expectations (internal and external), the fear of failure, stressful relationships and coping with stress and stressful situations for some were overwhelming. Learning to recognise the symptoms early, managing the cause in a timely manner including the utilisation of available resources assisted students in maintaining balance and wellness.

Research has investigated the impact of religion on child development (Bartkowski et al., 2008; Pearce et al., 2003) and the relationship between spirituality and students in higher education (Kuh & Gonyea, 2004). These outlined the impact of religion or spirituality on young people, and there were positive effects reported and situations where there were either no or a negative impact. Research engaging Pacific students in higher education has also identified the positive aspects of being part of religious communities giving them purpose and

direction, and fostered supportive relationships that motivated them as learners (Ng Shiu, 2011). However, there were also challenges identified, where commitments and obligations related to church activities impacted learning. Approximately 70% of Pacific peoples identify as Christians (Statistics New Zealand, 2018b). The findings from the current study showed a mixture of students with religious affiliations and others having no affiliation with any religion. For those who did, feeling supported in their beliefs within this context was helpful, enabling them to uphold their family and religious values and contributed to their overall health and well-being. It was equally important for students who do not have a strong affiliation to any specific religion to feel welcomed and valued in this environment.

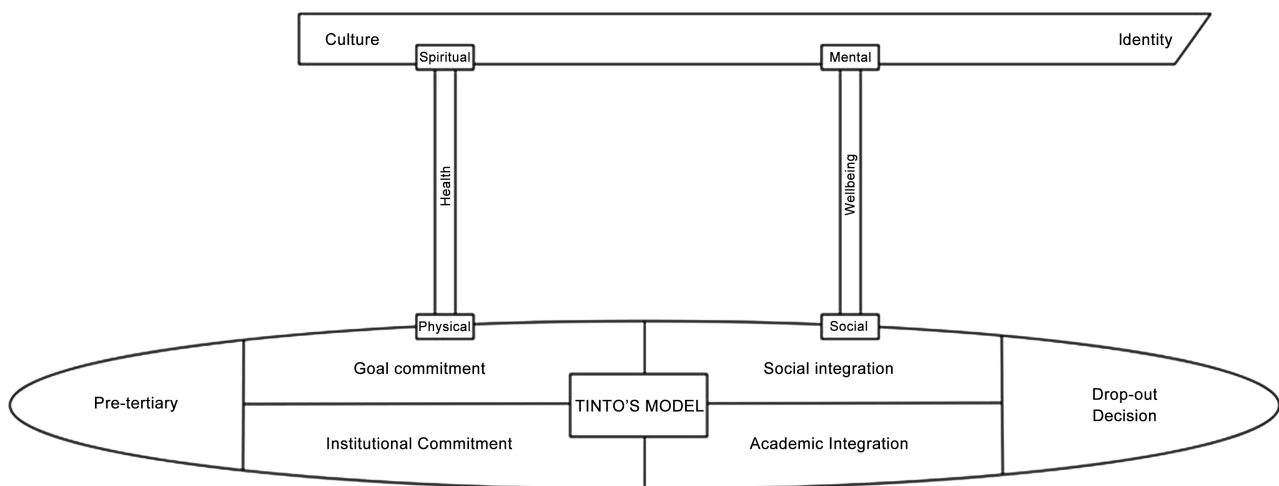
Physical well-being is an important component of overall health and well-being (Bullo et al., 2015; Mandolesi et al., 2018). Physical exercise improves students' self-efficacy and subjective well-being (Lin et al., 2022; Wang et al., 2022). Poor sleeping patterns can have a negative effect on cognitive performance (Kronholm et al., 2009; Xu et al., 2011), and there are associations between good nutrition and subjective wellbeing (Apaolaza et al., 2018; Ares et al., 2016; Hakkarainen et al., 2004). In this study, participants struggled with their sleeping patterns especially leading up to assessments. One student's insomnia was so severe it required medical intervention. Most students opted to stay in Residential Colleges where nutritious meals and adequate heating were provided, including easy access to gyms and parks for recreational activities. These assisted in maintaining physical health and supported their overall health and wellbeing. Maintaining physical well-being had flow on benefits for their mental wellbeing and supported their overall health and well-being.

Social integration was identified by Tinto as an important component of students' participation in higher education and our current study has elaborated on that (Tinto, 1975, 1993). While social integration was identified as important for student success in Tinto's models, a specific link between social integration and social well-being was not made. Social well-being is "appraisal of one's circumstances and functioning in society" (Keyes, 1998). Social wellbeing is viewed through different dimensions including social integration, social acceptance, social contribution, social actualisation and social cohesion. Participants in this study expressed the importance of their peers and friends and their integration and acceptance within this context. Many expressed a strong sense of obligation to their families and the contribution they can make to the well-being of others in society through their training. Racism and stigmatisation however impacted on the wellbeing of some. Despite these challenges, they focused on working well with others in the learning environment to achieve their goals for their families and communities.

### **Folauga—Adapted Tinto Model**

Folauga is proposed as an adaptation of Tinto Model and outlines additional components important for the retention and success of Pacific students in the

tertiary environment in New Zealand. Folauga means voyage or journey in the Samoan language and similar meanings are found in other Pacific languages. The Folauga model is presented in the shape of an outrigger canoe, see **Figure 2**. Viewed from the top, the main body of the canoe encapsulates all the elements for student retention and success outlined in the Tinto longitudinal model of institutional departure. The additional components consist of the float (ama) which provides balance and stability for the outrigger (va'a/waka) preventing it from tipping over. The ama represents the culture and identity. The ama is connected to the outrigger through the two booms (lako) representing health and well-being, and tied in four areas of the outrigger with traditional sinews (afa). The four components of health and well-being are psychological (mental well-being), spiritual, physical and social well-being. These additional added components complement Tinto's model and provide balance and stability for Pacific students in their journey in higher education.



**Figure 2.** Folauga model, an adaptation of Tinto's model.

## 5. Implications

This research suggests the importance of valuing culture, identity, health and wellbeing in the provision of effective support for Pacific students in higher education in Aotearoa, New Zealand. These components add value to what is already known about what is helpful in the retention and success of students in higher education through Tinto's model. It is helpful to consider these additional components in student engagements and the provision or the development of support programmes for Pacific students in New Zealand. How the institution expresses how it values the culture Pacific students bring into the learning environment is important. These need to be articulated clearly in the institution's vision, mission and high-level strategic plans and championed by its senior leaders. Supporting the student's journey of discovering and/or affirming their identity in the learning environment is also important. Their experiences can change over time during this transition period. Health and well-being are critical to

students' success. For Pacific students these include their mental, social, physical and spiritual well-being. Incorporating these facets of health and well-being ensures the provision of effective and meaningful support for the retention and success of Pacific students in higher education in Aotearoa. While not all components may be relevant for all students, they are important helpful areas to be considered, in the provision of holistic support for Pacific students' transition, retention and success in the tertiary environment.

## **6. Strengths and Limitations**

The strengths of the research are the retention of participants and the longitudinal data collection which allowed in-depth exploration of issues participants considered important. Of all planned interviews over the two years 76 of the 80 planned were able to be completed. The study also included participants with both positive and negative experiences, including some information on students who decided to leave the University. The participants were aware of the medical background of the interviewer and this gave many confidence to share openly issues and concerns, some of which were of a sensitive nature.

The limitations were related to actual or perceived power imbalance and the inability to capture fully the perspectives of those who withdrew from the university. Some participants may have participated out of obligation and therefore some answers provided may not be a true reflection of their perspectives. There were no students who identified with any other gender, other than either male or female. It is possible that they did not feel comfortable to do so in this setting.

## **7. Conclusion**

The Folauga model for Pacific student success in higher education, is an adaptation of Tinto's model. It highlights additional components of culture, identity, health and wellbeing that are important for the retention and success of Pacific students in tertiary studies in New Zealand. This research and proposed model contribute to the limited research available on factors that support the retention and success of Pacific students in higher education in Aotearoa, New Zealand.

## **Acknowledgements**

We would like to acknowledge with sincere gratitude the generosity of the Pacific students who gave their time and contributions for this research. Most are now working within the health and education sectors in Aotearoa, New Zealand. We are grateful to the staff at the Va'a o Tautai-Centre for Pacific Health for the support provided for this research.

We would also like to acknowledge the funder of this doctoral research, the Health Research Council of New Zealand.

## **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Anae, M. (2012). All Power to the People: Overstayers, Dawnraids and the Polynesian Panthers. In S. Mallon, K. Mahina-Tuai, & D. Salesa (Eds.), *Tangata o le moana: New Zealand and people of the Pacific* (pp. 220-239). Te Papa Press.
- Anae, M., Anderson, H., Benseman, J., & Coxon, E. (2002). *Pacific Peoples and Tertiary Education: Issues of Participation*. Ministry of Education.  
<https://hdl.handle.net/10652/2280>
- Anae, M., Coxon, E., Mara, D., Wendt-Samu, T., & Finau, C. (2001). *Pasifika Education Research Guidelines*. Auckland Uniservices Ltd.  
<https://www.educationcounts.govt.nz/publications/pasifika/5915>
- Apaolaza, V., Hartmann, P., D'Souza, C., & López, C. M. (2018). Eat Organic—Feel Good? The Relationship between Organic Food Consumption, Health Concern and Subjective Wellbeing. *Food Quality and Preference*, *63*, 51-62.  
<https://www.sciencedirect.com/science/article/pii/S0950329317301702>
- Ares, G., Giménez, A., Vidal, L., Zhou, Y., Krystallis, A., Tsalis, G. et al. (2016). Do We All Perceive Food-Related Wellbeing in the Same Way? Results from an Exploratory Cross-Cultural Study. *Food Quality and Preference*, *52*, 62-73.  
<https://doi.org/10.1016/j.foodqual.2016.03.014>
- Arroyo, C. G., & Zigler, E. (1995). Racial Identity, Academic Achievement, and the Psychological Well-Being of Economically Disadvantaged Adolescents. *Journal of Personality and Social Psychology*, *69*, 903-914. <https://doi.org/10.1037/0022-3514.69.5.903>
- Bamber, J., & Tett, L. (2001). Ensuring Integrative Learning Experiences for Non-Traditional Students in Higher Education. *Widening Participation and Lifelong Learning*, *3*, 8-16.
- Bartkowski, J. P., Xu, X., & Levin, M. L. (2008). Religion and Child Development: Evidence from the Early Childhood Longitudinal Study. *Social Science Research*, *37*, 18-36. <https://doi.org/10.1016/j.ssresearch.2007.02.001>
- Bedford, R., & Gibson, K. (1986). *Migration, Employment and Development in the South Pacific: New Zealand. Country Report No. 23b*. South Pacific Commission
- Bedford, R., Ho, E., & Lidgard, L. (2002). International Migration in New Zealand: Context, Components and Policy Issues. *Journal of Population Research (Special Edition)*, *39*-65. <https://search.informit.com.au/fullText;dn=395310839237002;res=IELHSS>
- Braxton, J., & Lien, L. (2000). *Reworking the Student Departure Puzzle*. Vanderbilt University Press.
- Brown, P. (2016). *The Invisible Problem? Improving Students' Mental Health*. Higher Education Policy Institute.  
<https://www.hepi.ac.uk/wp-content/uploads/2016/09/STRICTLY-EMBARGOED-UNTIL-22-SEPT-Hepi-Report-88-FINAL-1.pdf>
- Bullo, V., Bergamin, M., Gobbo, S., Sieverdes, J. C., Zaccaria, M., Neunhaeuserer, D. et al. (2015). The Effects of Pilates Exercise Training on Physical Fitness and Wellbeing in the Elderly: A Systematic Review for Future Exercise Prescription. *Preventive Medicine*, *75*, 1-11. <https://doi.org/10.1016/j.ypmed.2015.03.002>
- Chu, C., Abella, I., & Paurini, S. (2011). *Educational Practices that Benefit Pacific Learners in Tertiary Education*. Ako Aotearoa, National Centre for Tertiary Teaching Excellence.  
<https://ako.ac.nz/assets/Knowledge-centre/NPF-10-001A-Pasifika-Learners-and-Success-in-Tertiary-Education/RESEARCH-REPORT-Educational-Practices-that-Benefit-Pacific-Learners-in-Tertiary-Education.pdf>
- Doran, G. (2015). *Psychological Distress in New Zealand University Students and Its As-*

- sociation with Alcohol Consumption*. Master's Thesis, University of Otago.
- Field, R., & Kift, S. (2010). Addressing the High Levels of Psychological Distress in Law Students through Intentional Assessment and Feedback Design in the First Year Law Curriculum. *The International Journal of the First Year in Higher Education*, 1, 65-76. <https://doi.org/10.5204/intifyhe.v1i1.20>
- Flatt, A. K. (2013). A Suffering Generation: Six Factors Contributing to the Mental Health Crisis in North American Higher Education. *College Quarterly*, 16, 1-17. <https://www.semanticscholar.org/paper/A-Suffering-Generation%3A-Six-Factors-Contributing-to-Flatt/d93fb4b89c803fc69f2d8951e49c8c6e3d4a3508>
- Fordham, S. (1988). Racelessness as a Factor in Black Students' School Success: Pragmatic Strategy or Pyrrhic Victory? *Harvard Educational Review*, 58, 54-85. <https://doi.org/10.17763/haer.58.1.c5r77323145r7831>
- Fordham, S., & Ogbu, J. U. (1986). Black Students' School Success: Coping with the Burden of ACTING WHITE. *The Urban Review*, 18, 176-206. <https://doi.org/10.1007/bf01112192>
- Friesen, W. (2018). Beyond the RSE: Systems of Pacific Labour Migration to New Zealand. *New Zealand Population Review*, 44, 111-129. <https://www.proquest.com/docview/2230279812?pq-origsite=primo&parentSessionId=XBpmT0JZkLWYU1Ha5ITcsjKvhtDPn05XTvtwO6TAzHM%3D&sourcetype=Scholarly%20Journals>
- Gale, N. K., Heath, G., Cameron, E., Rashid, S., & Redwood, S. (2013). Using the Framework Method for the Analysis of Qualitative Data in Multi-Disciplinary Health Research. *BMC Medical Research Methodology*, 13, Article No. 117. <https://doi.org/10.1186/1471-2288-13-117>
- Gibson, K. D. (1983). Political Economy and International Labour Migration: The Case of Polynesians in New Zealand. *New Zealand Geographer*, 39, 29-42. <https://doi.org/10.1111/j.1745-7939.1983.tb01013.x>
- Givens, J. L., & Tjia, J. (2002). Depressed Medical Students' Use of Mental Health Services and Barriers to Use. *Academic Medicine*, 77, 918-921. <https://doi.org/10.1097/00001888-200209000-00024>
- Gorinski, R., & Fraser, C. (2006). *Literature Review on the Effective Engagement of Pasifika Parents & Communities in Education*. Report to the Ministry of Education. Bay of Plenty Polytechnic. [https://www.educationcounts.govt.nz/publications/pasifika\\_education/5907](https://www.educationcounts.govt.nz/publications/pasifika_education/5907)
- Hakkarainen, R., Partonen, T., Haukka, J., Virtamo, J., Albanes, D., & Lönnqvist, J. (2004). Food and Nutrient Intake in Relation to Mental Wellbeing. *Nutrition Journal*, 3, Article No. 14. <https://link.springer.com/article/10.1186/1475-2891-3-14>
- Hawk, K., Cowley, E. T., & Hill, J. (2002). The Importance of the Teacher/student Relationship for Māori and Pasifika Students. *Set: Research Information for Teachers*, No. 3, 44-49. [https://www.researchgate.net/profile/Sue\\_Sutherland2/publication/237266911\\_The\\_importance\\_of\\_the\\_teacherstudent\\_relationship\\_for\\_Maori\\_and\\_Pasifika\\_students/links/56f18b4b08aed354e56fbcf4.pdf](https://www.researchgate.net/profile/Sue_Sutherland2/publication/237266911_The_importance_of_the_teacherstudent_relationship_for_Maori_and_Pasifika_students/links/56f18b4b08aed354e56fbcf4.pdf)
- Howe, K. R. (1984). *Where the Waves Fall: A New South Sea Islands History from First Settlement to Colonial Rule*. Allen & Unwin.
- Hunt, J., & Eisenberg, D. (2010). Mental Health Problems and Help-Seeking Behavior among College Students. *Journal of Adolescent Health*, 46, 3-10. <https://doi.org/10.1016/j.jadohealth.2009.08.008>
- Hussain, R., Guppy, M., Robertson, S., & Temple, E. (2013). Physical and Mental Health

- Perspectives of First Year Undergraduate Rural University Students. *BMC Public Health*, 13, Article No. 848. <https://doi.org/10.1186/1471-2458-13-848>
- Jameson, M., & Smith, J. (2011). Voices of students in competition: Health Science First Year at the University of Otago, Dunedin. *New Zealand Medical Journal*, 124, 55-66. <https://nzmj.org.nz/journal/vol-124-no-1338/voices-of-students-in-competition-health-science-first-year-at-the-university-of-otago-dunedin>
- Keyes, C. L. M. (1998). Social Well-Being. *Social Psychology Quarterly*, 61, 121-140. <https://doi.org/10.2307/2787065>
- Kitzrow, M. A. (2003). The Mental Health Needs of Today's College Students: Challenges and Recommendations. *NASPA Journal*, 41, 167-181. <https://doi.org/10.2202/0027-6014.1310>
- Kobayashi, A., Rob, K., & Niegel, T. (2009). *International Cylopedia of Human Geogra-phy*. Elsevier.
- Kronholm, E., Sallinen, M., Suutama, T., Sulkava, R., Era, P., & Partonen, T. (2009). Self-Reported Sleep Duration and Cognitive Functioning in the General Population. *Journal of Sleep Research*, 18, 436-446. <https://doi.org/10.1111/j.1365-2869.2009.00765.x>
- Kuh, G. D., & Gonyea, R. (2004). *Exploring the Relationships between Spirituality, Liber-al Learning, and College Student Engagement*. Bloomington, Special Report to the Teagle Foundation: Centre for Postsecondary Research.
- Kuh, G. D., & Love, P. G. (2020). A Cultural Perspective on Student Departure. In J. M. Braxton (Ed.), *Reworking the Student Departure Puzzle* (pp. 196-212). Vanderbilt University Press. <https://doi.org/10.2307/j.ctv176kvf4.13>
- Langer-Osuna, J. M., & Nasir, N. S. (2016). Rehumanizing the "Other": Race, Culture, and Identity in Education Research. *Review of Research in Education*, 40, 723-743. <https://doi.org/10.3102/0091732x16676468>
- Leach, L. (2013). Engaging Ethnically Diverse First Year Students. A Practice Report. *The International Journal of the First Year in Higher Education*, 4, 117-124. <https://www.fyjejournal.com/article/download/177/219/177-1-1350-1-10-20131212.pdf>
- Lin, S., Li, L., Zheng, D., & Jiang, L. (2022). Physical Exercise and Undergraduate Stu-dents' Subjective Well-Being: Mediating Roles of Basic Psychological Need Satisfaction and Sleep Quality. *Behavioral Sciences*, 12, Article 316. <https://doi.org/10.3390/bs12090316>
- Mandolesi, L., Polverino, A., Montuori, S., Foti, F., Ferraioli, G., Sorrentino, P. et al. (2018). Effects of Physical Exercise on Cognitive Functioning and Wellbeing: Biological and Psychological Benefits. *Frontiers in Psychology*, 9, Article 509. <https://www.frontiersin.org/articles/10.3389/fpsyg.2018.00509/full>
- McKinley, E., & Madjar, I. (2014). From Schools in Low-Income Communities to Uni-versity: Challenges of Transition for Māori and Pacific Students. *Diversity in Higher Education*, 15, 241-252. <https://www.emerald.com/insight/content/doi/10.1108/S1479-364420140000015020/ful/l/pdf?title=from-schools-in-low-income-communities-to-university-challenges-of-transition-for-maori-and-pacific-students>
- Middleton, L., Tanuvasa, A. F., Pledger, M., Grace, N., Smiler, K., Loto-Su'a, T. T. et al. (2019). Corrigendum to: Widening Participation of Māori and Pasifika Students in Health Careers: Evaluation of Two Health Science Academies. *Australian Health Re-view*, 43, 360. [https://doi.org/10.1071/ah17170\\_co](https://doi.org/10.1071/ah17170_co)

- Ministry of Education (2019). Tertiary Students Qualification and Course Completion. [https://www.educationcounts.govt.nz/statistics/tertiary-education/retention\\_and\\_achievement](https://www.educationcounts.govt.nz/statistics/tertiary-education/retention_and_achievement)
- Ministry of Education (2020). Action Plan for Pacific Education. <https://conversation.education.govt.nz/conversations/action-plan-for-pacific-education/>
- Ministry of Education (2021). Indicator, Education of Learning Outcomes 2021.
- Nelson, K., Clarke, J., Kift, S., & Creagh, T. (2011). *Trends in Policies, Programs and Practices in the Australian First Year Experience Literature, 2000-2010*. Queensland University of Technology Press.
- Ng Shiu, R. (2011). *“It’s Like Going to the Moon”: The Experiences of Samoan Tertiary Health Students at the University of Auckland*. Master’s Thesis, University of Auckland. <https://researchspace.auckland.ac.nz/docs/uoa-docs/rights.htm>
- Pearce, M. J., Jones, S. M., Schwab-Stone, M. E., & Ruchkin, V. (2003). The Protective Effects of Religiousness and Parent Involvement on the Development of Conduct Problems among Youth Exposed to Violence. *Child Development, 74*, 1682-1696. <https://doi.org/10.1046/j.1467-8624.2003.00631.x>
- Phinney, J. S. (1990). Ethnic Identity in Adolescents and Adults: Review of Research. *Psychological Bulletin, 108*, 499-514. <https://doi.org/10.1037/0033-2909.108.3.499>
- Reason, R. D. (2009). An Examination of Persistence Research through the Lens of a Comprehensive Conceptual Framework. *Journal of College Student Development, 50*, 659-682. <https://doi.org/10.1353/csd.0.0098>
- Reynolds, M. (2018). “They Always Have My Back: A Strengths-Based Approach to Understanding the Value(s) of Pasifika Brotherhoods in Education in Aotearoa New Zealand. *International Journal of Multicultural Education, 20*, 1-23. <https://doi.org/10.18251/ijme.v20i2.1515>
- Salesa, D. (2012). A Pacific Destiny. New Zealand’s Overseas Empire, 1840-1945. In S. Mallon, K. Mahina-Tua & D. Salesa (Eds.), *Tangata o le Moana. New Zealand and the People of the Pacific* (pp. 97-121). Te Papa Press.
- Samaranayake, C. B., Arroll, B., & Fernando, A. T. (2014). Sleep Disorders, Depression, Anxiety and Satisfaction with Life among Young Adults: A Survey of University Students in Auckland, New Zealand. *The New Zealand Medical Journal, 127*, 13-22.
- Sin, I., & Ormsby, J. (2019). *The Settlement Experience of Pacific Migrants in New Zealand: Insights from LISNZ and the IDI*. Federal Reserve Bank of St Louis.
- Sopoaga, F., & van der Meer, J. (2012). Investigating Factors That Influence Success of Pacific Students in First-Year Health Sciences at University in New Zealand. *The New Zealand Medical Journal, 125*, 28-38. <https://www.ncbi.nlm.nih.gov/pubmed/22472710>
- Statistics New Zealand (2018a). *National Ethnic Population Projections, Projection Assumptions, 2018 (Base)—2043 Update*.
- Statistics New Zealand (2018b). *Pacific Peoples Ethnic Group*. <https://www.stats.govt.nz/tools/2018-census-ethnic-group-summaries/pacific-peoples>
- Statistics New Zealand (2022). *Household Labour Workforce Survey: June 2022 Quarter. People Employed and Not in Labour Force by Ethnic Group*.
- Tajfel, H., & Turner, J. (1979). An Integrative Theory of Intergroup Conflict. In M. A. Hogg, & D. Abrams (Eds.), *Intergroup Relations: Essential Readings* (pp. 94-109). Psychology Press.
- Thaman, K. (1992). Looking towards the Source: A Consideration of (Cultural) Context in Teacher Education. *Contemporary Issues in Education, 11*, 88-93. [https://pesaagora.com/access-archive-files/ACCESSAV11N2\\_088.pdf](https://pesaagora.com/access-archive-files/ACCESSAV11N2_088.pdf)

- Tinto, V. (1975). Dropout from Higher Education: A Theoretical Synthesis of Recent Research. *Review of Educational Research*, 45, 89-125. <https://doi.org/10.3102/00346543045001089>
- Tinto, V. (1987). *Leaving College: Rethinking the Causes and Cures of Student Attrition* (1st ed.). University of Chicago Press.
- Tinto, V. (1993). *Leaving College: Rethinking the Causes and Cures of Student Attrition* (2nd ed.). University of Chicago Press. <https://doi.org/10.7208/chicago/9780226922461.001.0001>
- Tinto, V. (1999). Taking Retention Seriously: Rethinking the First Year of College. *NACADA Journal*, 19, 5-9. <https://doi.org/10.12930/0271-9517-19.2.5>
- Tyssen, R., Vaglum, P., Aasland, O. G., Gronvold, N. T., & Ekeberg, O. (1998). Use of Alcohol to Cope with Tension, and Its Relation to Gender, Years in Medical School and Hazardous Drinking: A Study of Two Nation-Wide Norwegian Samples of Medical Students. *Addiction*, 93, 1341-1349. <https://doi.org/10.1046/j.1360-0443.1998.93913415.x>
- Vaiolenti, T. M. (2016). Talanoa Research Methodology: A Developing Position on Pacific Research. *Waikato Journal of Education*, 12, 21-34. <https://wje.org.nz/index.php/WJE/article/view/296>
- Viggers, H. A. K., & Hoden-Chapman, P. (2021). *Housing That Lacks Basic Amenities in Aotearoa New Zealand, 2018*. University of Otago Press.
- Waiari, D. A. K., Lim, W. T., Thomson-Baker, A. P., Freestone, M. K., Thompson, S., Manuela, S. et al. (2021). Stoking the Fires for Māori & Pacific Student Success in Psychology. *Higher Education Research & Development*, 40, 117-131. <https://doi.org/10.1080/07294360.2020.1852186>
- Wang, K., Li, Y., Zhang, T., & Luo, J. (2022). The Relationship among College Students' Physical Exercise, Self-Efficacy, Emotional Intelligence, and Subjective Well-Being. *International Journal of Environmental Research and Public Health*, 19, Article 11596. <https://doi.org/10.3390/ijerph191811596>
- Whitbeck, L. B., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2001). Traditional Culture and Academic Success among American Indian Children in the Upper Midwest. *Journal of American Indian Education*, 40, 48-60.
- Woodward, K. (1997). *Identity and Difference (Vol. 3)*. Sage.
- Xu, L., Jiang, C. Q., Lam, T. H., Liu, B., Jin, Y. L., Zhu, T. et al. (2011). Short or Long Sleep Duration Is Associated with Memory Impairment in Older Chinese: The Guangzhou Biobank Cohort Study. *Sleep*, 34, 575-580. <https://doi.org/10.1093/sleep/34.5.575>