

Māori University success: what helps and hinders qualification completion

Reremoana Theodore¹, Megan Gollop², Karen Tustin¹, Nicola Taylor², Cynthia Kiro³, Mele Taumoepeau⁴, Jesse Kokaua⁵, Jackie Hunter⁴ and Richie Poulton⁶

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Abstract

Māori (Indigenous New Zealand) university graduates are role models for educational success and are critical for the social and economic wellbeing of Māori whānau (extended family) and communities. In this study, Māori graduates ($N = 626$) from all eight New Zealand universities participated in the Graduate Longitudinal Study New Zealand between July and December 2011. They were asked to describe factors that they found helpful or challenging to the completion of their qualifications. Graduates described a range of external (e.g. family), institutional (e.g. academic support), and student or personal (e.g. persistence) factors. Describing the experiences of Māori graduates can provide a blueprint for future indigenous success by building an evidence base of the factors that may promote indigenous higher educational achievement in New Zealand and internationally.

Keywords

Māori students, indigenous, university, tertiary education, graduates, higher education

New Zealand Māori (Indigenous New Zealanders hereafter referred to as Māori) university graduates are critical for Māori futures, are role models for educational success, and play a crucial role in supporting the social and economic wellbeing of Māori whānau (extended family) and communities. The percentage of Māori with a bachelor's degree or higher nearly doubled from 2005 to 2015 (5.6%–9.9%), but currently remains lower than for Europeans (20.7%) and other ethnic groups (35.2%), not including Pasifika (8.9%) (Ministry of Education, 2015).

Higher education success has long-term consequences because it confers private benefits for individuals, including increased earnings, and social benefits for their communities, including reduced poverty (Baum, Ma, & Payea, 2013). Worldwide, the under-representation of indigenous people in higher education inhibits indigenous potential and results in a lack of diversity in the academy (Wilson et al., 2011). For indigenous groups, higher education strategies and policies should align with indigenous social, cultural and economic aspirations, and developments within indigenous communities (Andersen, Bunda, & Walter, 2008; Indigenous Higher Education Advisory Council, 2006).

Māori higher education success is of national importance in New Zealand, and it is a priority that Māori succeed at higher levels in tertiary education (Ministry of Education, 2013). The New Zealand Tertiary Education Strategy recognises the role of Māori as tāngata whenua (people of the land) and crown partners under the Treaty of Waitangi that was signed in 1840 by representatives of the

British Crown and various Māori chiefs. The strategy also acknowledges that Māori students should be able to succeed as Māori, while protecting their language and culture (Tertiary Education Commission, 2014).

Like tertiary participation rates, completion rates are also increasing for Māori, with 62% completing qualifications at bachelor degree level or above within 5 years of starting full-time study. This statistic, however, remains below the total population completion rate of 74% (Tertiary Education Commission, 2014). In his seminal theory of student retention, Tinto (1975, 1987) proposed that a student's likelihood of dropping out was primarily related to their ability to integrate into the academic and social structures

¹The National Centre for Lifecourse Research (NCLR), Department of Psychology, University of Otago, Dunedin, New Zealand

²Children's Issues Centre, University of Otago, Dunedin, New Zealand

³Faculty of Education and Social Work, University of Auckland, Auckland, New Zealand

⁴Department of Psychology, University of Otago, Dunedin, New Zealand

⁵Division of Health Sciences and the Pacific Development Office, University of Otago, Dunedin, New Zealand

⁶Dunedin Multidisciplinary Health and Development Research Unit, The National Centre for Lifecourse Research (NCLR), Department of Psychology, University of Otago, Dunedin, New Zealand

Corresponding author:

Reremoana Theodore, The National Centre for Lifecourse Research (NCLR), Department of Psychology, University of Otago, PO Box 913, Dunedin 9054, New Zealand.

Email: moana.theodore@otago.ac.nz

of universities (Henley, 2009). His critics have argued, however, that this theory largely ignores the role of the institution, and structural and systemic barriers (e.g. funding inequities); overemphasises individual responsibility, and fails to adequately capture the experiences of indigenous students trying to fit into Western educational environments that do not necessarily reflect their lived realities (Day & Nolde, 2009; Gorinski & Abernathy, 2007; Nikora, Levy, Henry, & Whangapirita, 2002; Wilson et al., 2011).

Over the last 20 years, researchers have identified three key barriers to the participation and retention of Māori tertiary students (Jefferies, 1997; Tertiary Education Commission, 2012). First, external barriers including family responsibilities, community commitments, and financial issues (Hunt, Morgan, & Teddy, 2001; Levy, Williams, Thompson, & Vaughn, 2002; McMurchy-Pilkington, 2011; Reid, 2006). Second, institutional barriers including monocultural university environments and curricula; a lack of Māori staff and visible Māori role models; non-inclusive, competitive, or unwelcoming tertiary environments; and a lack of, or inappropriate, support systems (Hunt et al., 2001; Levy et al., 2002; Mayeda, Keil, Dutton, & 'Ofamo'oni, 2014; Reid, 2006). Last, student or personal barriers including negative schooling experiences prior to entering university, inadequate academic preparation, transitional difficulties from school to university, a lack of familiarity with academic expectations and environments, being first-generation students, a lack of confidence in accessing resources, and being too *whakamā* (shy, embarrassed) to seek help (Hunt et al., 2001; Levy et al., 2002; van der Meer, Scott, & Neha, 2010).

Researchers have also identified a number of factors that are associated with Māori student success. First, *whānau* and financial support are crucial for many Māori students (Greenwood & Te Aika, 2008; Hunt et al., 2001). Second, strong, respectful, and nurturing relationships with lecturers, tutors, and staff who provide appropriate academic and pastoral support are key facilitators of student success (Airini et al., 2009; Curtis et al., 2012; Greenwood & Te Aika, 2008; Hunt et al., 2001; Madjar, McKinley, Deynzer, & van der Merwe, 2010). Third, peer and *tuākana* (older or more expert "brothers/sisters") support, culturally safe spaces or havens, and *kaupapa* Māori (Māori principles) tutorials that create a *whānau*-like environment, and support group work and cooperative learning are important contributors (Airini et al., 2009; Curtis et al., 2012; Henley, 2009; Hunt et al., 2001; Mayeda et al., 2014). Fourth, studies have shown the importance of strong Māori leadership and role models, Māori academic staff, and culturally appropriate and relevant curricula, teaching practices, and activities (Airini et al., 2009; Curtis et al., 2012; Greenwood & Te Aika, 2008; Henley, 2009; Hunt et al., 2001; Mayeda et al., 2014). Last, success is also fostered when students have a good understanding of academic requirements and skills, feel motivated, and set goals (Airini et al., 2009; Hunt et al., 2001).

These New Zealand findings align with overseas research detailing the formidable barriers both within and outside of the university environment that indigenous students face (Andersen et al., 2008). There are also similar

facilitators of higher education success internationally, including appropriate cultural and family support; a connection to culture, community, and homeland; and the importance of giving back to tribal community, being role models, and helping others (Craven et al., 2005; Day & Nolde, 2009; DiGregorio, Farrington, & Page, 2000; Jensen, 2011; O'Rourke, 2008).

Students are exceptional advisers for identifying areas of improvement within higher education (Airini et al., 2009). Of note, student perspectives do not always align with those of staff. For example, Guillory and Wolverton (2008) found that faculty identified financial support and academic programmes tailored to meet the needs of indigenous students as key support factors. Financial difficulty and lack of academic performance were described as key barriers. The same factors were also identified by Native American students; however, the most important aids were family, giving back to their communities, and on-campus social support from staff and peers. Family structure (such as single parenthood), lack of academic preparation, and inadequate financial support were also regarded as barriers by these students. In this way, determining what helps or hinders qualification completion from the perspectives of indigenous students can help to build an evidence base that may enable government and tertiary institutions to better serve indigenous students and their communities. This information may also help educators to identify students who are having difficulties early on before they become overwhelmed (Hunt et al., 2001).

To sum, research has provided important insights into the factors that hinder and facilitate indigenous higher education success. Most of these studies are limited, however, by employing small sample sizes and focusing on specific disciplines or specific programmes that support indigenous students within one or few institutions. There are few large-scale, representative, longitudinal studies of graduate experiences and outcomes, particularly ones that follow indigenous graduates (Craven et al., 2005). In this study, we have attempted to address these limitations by asking Māori graduates enrolled in the Graduate Longitudinal Study New Zealand (GLSNZ) to identify the key barriers and facilitators of their success at university. The GLSNZ is an ongoing, longitudinal project that, over a 10-year period, investigates the outcomes of graduates from all eight New Zealand universities. The GLSNZ also has a Māori research policy that highlights the need to maximise the study's contribution to sustaining and improving Māori educational outcomes, has a commitment to the Treaty of Waitangi, and states that all ethnicity-related analyses are done in partnership with Māori researchers who lead studies focused on Māori graduates (Tustin et al., 2015).

Methods

Participants and procedure

Participants were members of the GLSNZ, which has been described in detail previously (Tustin et al., 2012). In brief, baseline sampling was conducted across all eight New

Zealand universities between July and December 2011. A randomly selected (stratified by university), representative sub-sample ($N = 13,343$) of all potential 2011 graduates (approximately 36% of the expected total graduate population) was identified and invited to participate in an online baseline survey and three follow-up surveys over the next decade. All international PhD students, and all students from the smallest university (Lincoln), were invited to participate. Participants were those enrolled in a programme of study that would have allowed them to graduate with a bachelor's degree or higher after the successful completion of their studies in 2011.

Māori individuals and groups were consulted at each individual university and the questionnaire was piloted with Māori students. Consultation was undertaken with Te Kāhui Amokura (Universities New Zealand Māori Consultation Committee) and the Ngāi Tahu (principal Māori tribe of New Zealand's southern region) Māori Consultation Committee. Informed consent was obtained from all participants. The New Zealand Multi-region Ethics Committee approved the baseline survey in 2011.

Eligible students were contacted by letter and email. Non-responders and non-completers were sent multiple reminder emails, and contacted up to four times by trained call centre staff. Māori participants who were slow to complete the survey were contacted by Māori call centre staff. Of the randomly selected sub-sample ($N = 13,343$), there was a 72% response rate (including those who started, but did not complete, the survey). A conservative criterion of full survey completion (400+ questions) was required for ultimate inclusion in the GLSNZ, resulting in a founding cohort of $N = 8,719$ to be followed over a 10-year period. Of those, $n = 626$ (7%) reported Māori ethnicity. Ethnicity was self-reported, using a standard New Zealand Census question, which allows multiple ethnic identities to be selected. This study focuses specifically on those reporting Māori ethnicity. The background and characteristics of the Māori participants have been described in detail previously (Theodore et al., 2016). In brief, their average age was 29 years, 29% were male, 68% were undergraduates, and 63% were studying full-time in 2011. In addition, 50.8% were studying Humanities or Education, 17.7% Commerce, 15.4% Science or Engineering, 10.9% Health Sciences, 2.8% Law, and 2.4% PhD study.

Measures and analysis

Baseline survey information was collected across a broad range of domains, including general and background characteristics; university experiences; aspirations, goals, and values; earnings and assets; health and wellbeing; personality; and community involvement (Tustin et al., 2012). In this study, we examined survey information on barriers and facilitators of university success. Specifically, participants were asked whether there were any key factors that helped or hindered the completion of their qualification. Of those who responded "yes", open-ended spaces were provided for participants to detail those factors.

A content analysis was undertaken on participants' text responses. A detailed coding scheme to classify

Table 1. Factors that helped Māori university graduates ($N = 382$ participants) to complete their qualifications.

Broad categories	Percent
Family	39.3
University-Academic	28.3
Student or personal factors	20.2
Friends	18.3
University-Other	16.5
Peer support	10.5
Financial	9.7
Other support	8.9
Partner	7.3
Employment	6.5
Childcare	2.1
Religion	1.8
Therapy	1.3
Residence	0.8
Miscellaneous	2.1
Unclear	1.6

Participants could provide multiple responses and these responses could be categorised into more than one factor, hence percentages do not sum to 100%.

participants' responses into categories was derived inductively from their responses using a thorough process of ongoing revision and refinement (Thomas, 2003). If participants indicated more than one factor that helped or hindered their qualification completion, then each factor was coded. For example, if a participant stated, "I got depressed after my father died," then this was coded as two barriers: "mental health" and "death/bereavement". Multiple incidences of the same factor, for example, "the support of my mother and my sister was helpful" was coded only once as "family support". The coding process resulted in 51 codes for key factors that helped, and 80 codes for key factors that hindered qualification completion. These codes were then collapsed into broad categories (as outlined in Tables 1 and 2). All of the participants' responses were coded by one coder (who developed the coding scheme) and a second coder independently coded 16% of the participants' responses for the total sample to assess inter-rater reliability. Agreement between the coders was 84.9% (Cohen's $\kappa = .84$) and 82.9% (Cohen's $\kappa = .82$) for the helping and hindering factors, respectively.

Results

Factors that helped qualification completion

In all, 61% ($n = 382$) of Māori graduates described key factors that helped qualification completion, which fell into 14 broad categories (Table 1).

For the Māori university graduates who identified factors that helped them to complete their qualification ($n = 382$), family was the most frequent response (39.3%). This category included general references to whānau, family, or family members; family support; and family as sources of love, motivation, encouragement, and inspiration: "... support from my whānau whānui [wider family], hapū

Table 2. Factors that hindered Māori university graduates ($N = 282$) completing their qualifications.

Broad categories	Percent
Family responsibilities	21.3
Student or personal factors	20.9
Health	19.1
Financial	16.3
Employment	15.2
University-Academic	11.3
University-Other	9.6
Bereavement	9.6
Natural disasters or weather	6.7
Time pressure	6.0
Lack of support	5.3
Pregnancy or birth	4.3
Residence	2.5
Interpersonal relationships	2.5
Miscellaneous	7.8
Unclear	1.1

Participants could provide multiple responses and these responses could be categorised into more than one factor, hence percentages do not sum to 100%.

[subtribe], relatives, elders ... my wonderful partner/children" (Female postgraduate, participant 236).

Family provided practical (e.g. childcare) and financial support. Examples included one female undergraduate (participant 53) who received "Support from family such as buying food, petrol, and textbooks. Providing childcare", while a male postgraduate (participant 154) described living at his parents' home and not having to pay rent.

Children were a source of motivation for participants who were parents. Graduates highlighted their desire to build a better life for their tamariki (children) and be role models for educational success for whānau. Being one of the first in their family to graduate was clearly a motivating factor:

... beautiful tamariki (who keep me motivated—I am doing this so they see me succeed at tertiary level so they feel inspired to do the same). I didn't grow up with academic parents nor did they expect this of me. (Female undergraduate, participant 453)

University-Academic factors (relating to academic matters) were the next most frequently mentioned (28.3%) for helping qualification completion. This category included comments about supervision and teaching; academic staff; the content, delivery, and assessment of academic programmes or papers; mode of study (intramural or extramural); and practicums or work experience. The support of supervisors, lecturers, tutors, and mentors who were described as friendly, caring, understanding, and engaging was helpful:

Amazing and supportive staff ... helped me find an academic pathway which was well suited to me. Working with lecturers and course advisors I managed to complete my bachelors degree, honours (first class) and am now doing a Masters. (Female postgraduate, participant 467)

Teaching staff who were experienced, enthusiastic, passionate, respectful, and knowledgeable and who fostered a warm, welcoming environment helped to motivate graduates. Māori staff, including specific examples of academic staff and services, were identified.

The availability of extramural programmes, flexibility in the way that courses were structured, and being able to study part-time or suspend studies for a period of time were also described as helping students to complete their qualifications.

Student or personal factors were identified by 20% of participants and included personal attributes and behaviours like commitment, determination, perseverance, time management, discipline, hard work, goal-oriented thinking and behaviour, a desire for a better future, personal belief in oneself and one's academic abilities, and passion. For example, a female postgraduate (participant 208) described her passion for her research about people and the environment.

Graduates described being motivated by future benefits including better job opportunities and income. An interest in one's course, having prior knowledge and related work experience, and previously, or currently, working within academic environments also helped.

University-Other factors included generic references to the university or university staff; comments about non-academic staff (administrators, student liaison officers, and career, course, or scholarship advisors); university facilities, resources, or services; and student support services. Māori student support services (including those within academic divisions) and Māori support staff were identified as key influences that helped graduates to complete their qualifications. Also included were tuākana programmes or networks, kaupapa Māori tutorials, cultural support, and cultural responsiveness:

Being able to walk into a study room full of other Māori students (in the Tuākana programme) of all shades of white and brown and not have to even once think of my ethnicity (negative stereotypes), but just get on with studying, and sharing, and laughing. (Female postgraduate, participant 218)

Māori graduates mentioned specific Māori student associations, services, and admission schemes across the different universities that supported them. Other university-based support included doctors at campus health services, the student health centres in general (e.g. free student health services), counsellors and psychologists, student financial services, and library services and resources.

Other, less frequently mentioned factors that helped qualification completion included support from friends (18.3%) both within and outside of the university setting, peers (10.5%) in the university environment, and partners (7.3%) (e.g. boyfriends or girlfriends). Financial support (9.7%) included support from the government, employers, family and partners, scholarships, awards, funding, loans, and other sources of income. Included were specific iwi grants and Māori scholarships or bursaries. Employment factors (6.5%) included study leave assistance, supportive colleagues, and employers who were understanding, flexible, or who paid tuition fees.

Factors that hindered qualification completion

In all, 45% of Māori graduates ($n = 282$) described key factors that hindered qualification completion, which were classified into 14 broad categories (Table 2).

Of the Māori university graduates who identified factors that hindered qualification completion ($n = 282$), family (21.3%) was the most commonly stated factor. This included caregiving responsibilities, and family commitments, obligations, and crises: *“The interruptions of whānau/hapū/iwi [extended family/subtribes/tribes] who need support in life generally. There is a pull when family calls for help and the studies go on the back burner while decisions and help are put into place”* (Female postgraduate, participant 370).

Family barriers to completion included parenthood, caring for family members, family members’ illnesses, limited or lack of family support, and balancing family life with study and work. One female undergraduate illustrated this by describing herself as a parent with two preschool children who had no support networks in the area where she was studying. Graduates described studying part-time and extending their studies in order to complete their qualifications because of family responsibilities. Being a solo parent was described as challenging, as was *“the lack of consideration for the extra difficulties that must be juggled with studying”* described by one female undergraduate (participant 468).

In all, 21% of graduates who reported hindering factors described student or personal factors. These included a lack or loss of confidence, focus, motivation or interest, and shyness. For some, this was related to being unsure of what to study or which career path to take: *“Lost motivation to study ... due to losing sight of career prospects, and decreasing subject interest”* (male undergraduate, participant 154).

Being unprepared for university study and lacking study or learning skills, and a difficult transition from school to university, also made qualification completion difficult, for example, *“My general lack of awareness of university expectations”* (male undergraduate, participant 374). Changing, failing, or repeating papers; missing assignments; and changing courses, majors, mode of study, or universities were also described as hindering qualification completion.

A broad range of health issues (physical and mental) were detailed by 19.1% of participants who described factors hindering qualification completion. These included illnesses, disabilities, hospitalisations, injuries, and surgeries. Problems with alcohol and stress were also identified and some graduates cited multiple health issues. For example, one female undergraduate (participant 577) described, *“physical illness, mental stress and life events.”*

Financial issues were identified by 16.3% of those who outlined factors that hindered their qualification completion. Issues included university costs (e.g. fees and textbooks), financial hardship, a lack of scholarships, not having access to student allowances, running out of funding, concerns over student debt, having to work while

studying for financial reasons, and issues with Studylink (New Zealand’s student loans and allowances government service). *“Financial strain! Having to give up full-time work to study meant I could not afford food for myself and my daughter most weeks”* (female undergraduate, participant 53).

Employment was identified as hindering qualification completion by 15.2% of participants. Work commitments (full-time or part-time), multiple work contracts, and issues with work or study balance were described. One male postgraduate (participant 299) reported, *“... not having enough time between work and study to do a better job in my studies.”* Another male undergraduate (participant 85) said, *“Working full time meant only being able to complete one paper per semester, so perseverance was key.”*

Moreover, Māori graduates described multiple, inter-related factors as impacting on their studies. *“Multiple demands. Employment, partner, children, house maintenance, injury, church, community, sports coaching”* (male postgraduate, participant 172). Graduates mentioned having to work to support their families while studying. The cost of childcare while studying also created financial strain. One male undergraduate (participant 123) described having to raise six children on one income while studying.

The University-Academic category (identified by 11.3% of participants who described hindering factors) included issues related to supervision, teaching, and academic staff (supervisors, lecturers, or tutors); the content, delivery, and assessment of academic programmes or papers; work experience or practicums; and lack of academic support or peer support or engagement. For example, a female postgraduate (participant 236) said that her university *“... lacked culture friendly support/lecturers.”* Another female postgraduate (participant 180) mentioned, *“Some of the lecturers at the university and their ideologies.”*

In addition to academic factors, Māori graduates identified other university factors (9.6%) that hindered their qualification completion, including administrative issues or errors; poor support or course advice; issues with university resources, services, and facilities; lack of availability of courses or papers; course restructuring; and issues with non-academic staff. Institutional factors related to Eurocentric university environments were also included. One female postgraduate (participant 393) described the integration of Māori concepts or ideas as non-existent and stated, *“Come on, we live in a bicultural society!”* Another female undergraduate (participant 225) stated that the university environment did not cater to the needs of Māori students whose contributions were not valued in an environment that is *“alien to the culture of Māori upbringing”*, and a female postgraduate (participant 218) said, *“Racial prejudice (probably largely unintentional) toward Māori, and totally misconstruing our beliefs, values, and intentions, probably due to Eurocentric-dominated societal norms and perspectives in NZ. Good learning though for a desire to stop it.”*

Bereavement and tangihanga (Māori funeral rite) impacted upon qualification completion for 9.6% of participants who identified hindering factors, including a lack of understanding from members of the university

community regarding the impact of bereavement. A female postgraduate (participant 402) shared the following experience:

I had five family members pass away in my final year of study—the university would not grant me an extension as they felt my life was too “hectic.” This was not their decision to make. I received no support from them and this meant that I was going to fail my postgraduate studies.

There were a number of other barriers that impacted on qualification completion for Māori graduates. One example was the impact of natural disasters and weather (6.7% of participants); there were graduates studying in Christchurch at the time of the 2010 Canterbury earthquake (7.1 magnitude resulting in widespread damage but no loss of life) and the 2011 Christchurch earthquake (6.3 magnitude resulting in 185 deaths and widespread damage). Other examples of key barriers included a lack of time to study (6.0%); a general lack of support (5.3%); pregnancy, birth, or having a new-born (4.3%); residential issues (e.g. relocation due to earthquakes) (2.5%); and interpersonal relationship difficulties (e.g. separation) (2.5%).

Discussion

In this national study of graduate outcomes, hundreds of successful Māori university graduates described the key factors that helped and hindered the completion of their qualifications. Consistent with previous research, family support was described as the most important factor helping qualification completion. Families provided emotional and practical support, such as accommodation and childcare for students who were parents. The need to work with whānau to support student participation and achievement is crucial (Tertiary Education Commission, 2014). Whānau should feel welcome on campus, be provided with information on education and career options translated into te reo Māori (Māori language), and encouraged to support their family members who are studying (Airini et al., 2009; Craven et al., 2005; Earle, 2008; Tertiary Education Commission, 2012). There is a dearth of research, however, examining effective ways to support whānau participation within universities. Current initiatives include formal welcomes for new students and their whānau, including those held on campus marae (the courtyard of a Māori meeting house). Nationally, staff in Māori university support centres and services often work with whānau (e.g. provide course advice) and a number of staff (Māori and non-Māori) participate in outreach programmes for Māori school students and whānau to encourage young Māori into university study.

Importantly, approximately half (48.4%) of the Māori graduates in the GLSNZ are the first in their immediate family to attend university (Theodore et al., 2016). These students face challenges such as a lack of access to role models who have attended and completed higher education, support in gathering information, and help when making educational (e.g. subject) choices (Nikora et al., 2002; O'Rourke, 2008). First-year experience programmes can

provide support for these students and their families, including orientations, parent receptions or welcomes, and providing one-on-one contact with academic advisers (Smith, 2012).

Although family is a huge source of support for indigenous students, family responsibilities were the most frequently described barrier to qualification completion. For some, these responsibilities resulted in them undertaking part-time study and taking longer to complete their qualifications. The pressures of whānau commitments may also be compounded if institutional staff are unwilling to accommodate indigenous students' needs to undertake certain cultural responsibilities (such as attending tangihanga). Balancing multiple obligations including parenting, study, and work placed Māori students and their families under considerable pressure. Previous GLSNZ research has shown that a greater proportion of Māori graduates are parents compared to other graduates (Theodore et al., 2016). Strategies such as the flexible delivery of courses, including evening or weekend classes, may support Māori student participation without compromising family or work commitments (Tertiary Education Commission, 2012).

Research has shown that a key driver of success for many indigenous students is the desire to provide a better life for their families, to help others, and to contribute to community and tribal development (Asmar, Page, & Radloff, 2011; Greenwood & Te Aika, 2008). Universities should support these aspirations by helping Māori students to retain strong tribal identities and whānau or community relationships rather than forcing assimilation into mainstream university culture. Moreover, subjects taught within universities should enable Māori students to build their capabilities to “give back” through their future work (Day & Nolde, 2009). Tertiary providers should also continue to build stronger relationships with whānau, hapū, and iwi to successfully engage Māori communities and support Māori student success (Ministry of Education, 2013).

Although finances were not identified by Māori graduates in their final year of study as the top helping or hindering factor to qualification completion, previous research shows that the provision of sufficient financial support for indigenous students throughout their studies is important (Guillory & Wolverton, 2008). In this study, Māori graduates mentioned iwi grants and scholarships as being key facilitators. Particularly for students who are parents, sufficient financial assistance can help with the mounting costs of living, childcare, and studying (Guillory & Wolverton, 2008).

Our findings are consistent with research showing that relationships are fundamental for indigenous success in a tertiary environment. These include relationships between students and staff, students and the institution, and between students (Gorinski & Abernathy, 2007). Staff who are passionate about their work, have vast subject knowledge and expertise, and are approachable and respectful are important for the retention and educational outcomes of Māori students (Tertiary Education Commission, 2014). University departments should take a proactive approach to building these connections early on (Mayeda et al., 2014).

Māori students describe the under-representation of Māori staff and role models, and the lack of culturally competent support and supervision as hindering their success (Mayeda et al., 2014). Māori graduates in the GLSNZ noted Eurocentric norms, the lack of integration of Māori concepts and knowledge, and a lack of culture-friendly staff as being hindrance factors. Eurocentric environments send an underlying message to indigenous and non-indigenous individuals that indigenous people, values, and knowledge are separate and different (Andersen et al., 2008). Culturally responsive provision is essential to support the wider development of mātauranga Māori (Māori knowledge) and te reo Māori (Tertiary Education Commission, 2014). For many academic departments, this requires curriculum transformation that recognises and values the experience, contribution, and knowledge of Māori students and their communities (Gorinski & Abernathy, 2007). Moreover, embracing Māori worldviews via pedagogies and research methodologies works to validate cultural identity, reduce alienation, and inspire students (Durie, 2009; Tertiary Education Commission, 2014).

Māori graduates in the GLSNZ identified support services and staff as key influencers of qualification completion. Māori support services, programmes, and networks; Māori student associations; admission schemes; tuākana programmes or networks; and kaupapa Māori tutorials were all described as key helping factors. These represent some of the areas where Māori graduates believe that universities are getting it right in terms of supporting their academic success. Other research provides empirical support that Māori-specific programmes promote an on-campus whānau environment; enhance belonging; promote interdependent versus isolated learning; promote community connectedness; reduce cultural alienation; facilitate interactions between students and academic staff; provide peer support; increase use of university resources, tutorial attendance, and course satisfaction; and reduce students' perceptions that grades are a barrier to postgraduate study (Airini et al., 2009; Curtis et al., 2012; Guillory & Wolverton, 2008; Wilson et al., 2011). In addition, enclaves or cultural spaces create safe havens and supportive environments where Māori culture, language, and identity are the norm (Airini et al., 2009).

Our results suggest that student or personal factors, including determination, perseverance, and being goal-oriented, are important for success. These results support findings from Airini and colleagues (2009) showing that individual drive and goal setting helps Māori to succeed in degree-level studies. Conversely, Māori graduates in the GLSNZ identified shyness and a lack or loss of motivation, interest, and focus as key barriers to qualification completion. In this way, the prior knowledge and experiences that students bring with them to university are important. A number of scholars have described the disadvantages that Māori students experience during formal schooling that result in them being underprepared for tertiary study (Madjar et al., 2010; Mayeda et al., 2014).

Health issues were identified by 19% of the Māori graduates who reported factors that hindered qualification

completion. Our previous research has shown that 20% of Māori graduates have a long-term medical condition (Theodore et al., 2016). Encouragingly, graduates also described student health centres, including free health services, counsellors, and psychologists, as key factors helping them to complete their qualifications.

Overall, the present study adds to the body of research showing that a combination of external, institutional, and student or personal factors influence Māori student success. To further improve Māori students' participation and completion rates, effective programmes that are adequately resourced should focus broadly on teaching, students, and organisational change (Curtis et al., 2012). For example, recent evidence suggests that barriers can be reduced by culturally appropriate and responsive policies and strategies, integrated support services, support staff and programmes, and improved institutional practice (Airini et al., 2009; Curtis et al., 2012). To improve equity, institutions often focus on recruitment, financial support, admission programmes, and outreach and support services, before making changes to educational practices like curricula and teaching practices (Richardson & Skinner, 1991). As described previously, however, culturally appropriate and relevant curricula, and effective teaching and learning practices, are important for Māori student success (Airini et al., 2009; Curtis et al., 2012). Worldwide, increasing the prominence and status of indigenous culture, knowledge, and studies; increasing the number of indigenous staff; and increasing indigenous participation in governance and management are key priorities (Indigenous Higher Education Advisory Council, 2006). Furthermore, increasing the expertise of all staff working with Māori (e.g. team training on the Treaty of Waitangi) and increasing their awareness of what Māori students perceive as helping or hindering their success are also important (Airini et al., 2009).

The strengths of this study include the large sample size and the inclusion of participants from all eight New Zealand universities across the range of disciplines at both undergraduate and postgraduate levels. With regard to limitations, the survey was online, whereas face-to-face interviews or focus group discussions may have garnered more in-depth responses. The research focused on qualification completion and may not have captured the factors that graduates perceive as helping or hindering them throughout the duration of their studies. The study also focused on university graduates; we did not survey graduates who received degree-level qualifications from one of the three *whare wānanga* (places of higher learning) that are publicly owned tertiary institutions, or other tertiary providers.

The limitations of this study notwithstanding, describing the experiences of hundreds of Māori university graduates helps to build an evidence base that can lead to positive changes for indigenous students in educational policy, institutions, and quality improvements nationally and internationally (McMurchy-Pilkington, 2011; Tertiary Education Commission, 2014). To improve equity in graduate outcomes and support Māori success, ongoing work is

required to reduce and remove existing barriers to their university completion. To this end, we have described a number of factors that can boost Māori educational success at higher levels. This is important given the role that Māori university graduates have in supporting Māori social, cultural, and economic aspirations and developments.

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Glossary

hapū	subtribes
iwi	tribes
Kaupapa Māori	Māori principles
Māori	indigenous New Zealander
marae	the courtyard of a Māori meeting house
mātauranga Māori	Māori knowledge
Ngāi Tahu	principal Māori tribe of New Zealand's southern region
tamariki	children
tāngata whenua	people of the land
tangihanga	Māori funeral rite
Te Kāhui Amokura	Universities New Zealand Māori Consultation Committee
te reo Māori	Māori language
tuākana	older or more expert "brothers/sisters"
whakamā	shy, embarrassed
whānau	extended family
whānau whānui	wider family
whare wānanga	places of higher learning (publicly owned tertiary institutions)

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