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*Te Tāhuhu o te Mātauranga*

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**Supporting students in tertiary study:**

**A summary of a synthesis of research on the impact of  
student support services on student outcomes in  
undergraduate tertiary study**

Summary Report to the Ministry of Education

**Edited by Janet Rivers**

**RESEARCH DIVISION**



**Wāhanga Mahi Rangahau**

## **Supporting students in tertiary study:**

**A summary of a synthesis of research on the impact of student support services on student outcomes in undergraduate tertiary study**

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## Overview

The systems which tertiary institutions put in place to support their undergraduate students can have a significant influence on how well those students achieve. Support systems, broadly defined, range from those which provide specific support, such as help in choosing courses, orientation programmes at the start of study or peer tutoring and other academic support, through to institutional-level behaviours and organisational features that may support, or hinder, student outcomes.

To provide tertiary institutions with a guide to the most effective types of support for students, the Ministry of Education commissioned a systematic review of international research on the impact of support services on student outcomes.

The full report from this project is called: *Impact of Student Support Services and Academic Development Programmes on Student Outcomes in Undergraduate Tertiary Study: A Synthesis of the Research* and is available on line at:

<http://www.minedu.govt.nz/goto/UgradStudOutcomesRpt> or in hard copy by request from the Ministry of Education Research Division, [research@minedu.govt.nz](mailto:research@minedu.govt.nz) or PO Box 1666, Wellington.

The review was undertaken by a research team from the Massey University College of Education, comprising Tom Prebble, Helen Hargraves, Linda Leach, Kogi Naidoo, Gordon Suddaby and Nick Zepke.

The team synthesised a total of 146 studies, of which 78 were primary sources. From these, they derived a set of 13 propositions for student support practices likely to have a positive effect on student outcomes. Ten of the propositions offer ways of integrating students into existing institutional cultures and three challenge institutions to change their policies and practices and adapt to the cultural capital brought by their students. Together they provide institutions with empirical evidence to use in developing student support practices that help improve student outcomes. This is considered particularly important given the increasing diversity of students undertaking tertiary study.

The review of research on student support services is part of the wider systematic review by the Massey University team which also included a review of the research on the impact of academic staff development programmes on student outcomes in undergraduate tertiary study (summarised separately).

This booklet is a summary of the team's findings related to student support. The summary does not include details of individual research studies, which can be obtained from the full report and annotated bibliography.

## The propositions

Based on its analysis of the international literature, the review team derived a series of 13 propositions which encapsulate the key features of effective student support services. The first 10 help diverse students integrate into the existing culture of an institution. The final three challenge institutions to adapt to the cultural capital brought by their diverse students, rather than focus on integration.

## ***Integration***

Student outcomes are likely to be enhanced when:

- institutional behaviours, environments and processes are welcoming and efficient
- the institution provides opportunities for students to establish social networks
- academic counselling and pre-enrolment advice are readily available to ensure students enrol in appropriate programmes and papers
- teachers are approachable and available for academic discussions
- students experience good quality teaching and have manageable workloads
- orientation and induction programmes are provided to facilitate both social and academic integration
- students working in academic learning communities have good outcomes
- a comprehensive range of institutional services and facilities is available
- Supplemental Instruction (SI) is provided
- peer tutoring and mentoring services are provided.

## ***Adaptation***

Student outcomes are likely to be enhanced when:

- the institution ensures there is an absence of discrimination on campus, so students feel valued, fairly treated and safe
- institutional processes cater for diversity of learning preferences
- the institutional culture, social and academic, welcomes diverse cultural capital and adapts to diverse students' needs.

## **The synthesis**

The synthesis is based on a robust and comprehensive search of national and international studies on student support systems, and how they affect student success. A total of 146 studies met the criteria for inclusion.

The studies, which include both quantitative and qualitative studies, fall into five broad categories: large-scale, multi-institutional quantitative studies; single institution quantitative studies; small to medium-sized (covering between two and five institutions) qualitative studies; single institution qualitative studies; and existing syntheses of major quantitative studies.

New Zealand studies are included where possible, but the team found very little New Zealand research had been published which links student support services to student outcomes.

The synthesis includes an annotated bibliography which describes each of the studies included in the synthesis, including the type of study; its methodology; the size of the study; and an assessment of how rigorous the study was.

Positive student outcomes are described by the terms retention, persistence, completion and graduation, while negative outcomes are described by terms such as withdrawal, non-completion, drop-out, attrition and departure.

The synthesis grouped the findings from across the studies into 13 broad categories, each of which forms a proposition for effective student support practices based on the evidence in the various studies.

The first 10 propositions focus on improving student outcomes by supporting the social and academic *integration* of students. These are broadly grouped into institutional practices that support social and emotional needs and those that support academic needs, although in many cases a particular practice may cover both categories.

However, in the more recent studies there is a theme emerging of *institutional adaptation*, whereby the institutions endeavour to take account of student cultural needs and diversity, rather than expecting the students to adapt to the institution. The final three propositions focus on adaptation.

## **The findings**

Each proposition is discussed in turn, as in the full report of the synthesis. Any one study may provide evidence for more than one proposition.

The first 10 propositions relate to systems that support students' integration into an institution and the final three propositions relate to institutions adapting to meet the needs of diverse students.

### ***Institutional behaviours, environment and processes are welcoming and efficient***

The evidence from the research shows that a range of factors relating to an institution's organisational behaviour, environment and processes can have a positive or negative effect on student outcomes such as retention and persistence.

For example, enrolment processes and the provision of advice on finances, course timetables and general administration procedures can have an impact on student satisfaction and persistence. Where these processes go smoothly, they can have a positive effect on retention, but if there are difficulties, the experiences can lead to students feeling alienated and dropping out.

Institutions should provide clear information about their goals, values, and policies – students need to know what to expect of an institution, as those whose expectations are not met are more likely to withdraw. Students also need clear information on what a course involves. This

may help them avoid choosing the wrong course, which can be a major factor in students failing to complete a course.

The research also shows that students are less likely to withdraw from a welcoming environment which provides students with a sense of community and belonging, where they feel safe, where there is an absence of prejudice or harassment, and which offers a range of campus activities.

### ***The institution provides opportunities for students to establish social networks***

The research evidence supports the notion that student outcomes are likely to be enhanced if institutions reach out to students beyond formal academic contact, and if they have a commitment to the total well-being of students.

Several studies indicate it is important for students to be assimilated into an institution's general social milieu. If students have a sense of belonging, it can help them make a successful transition into higher education, and contribute to their ongoing commitment and their academic achievement.

Students need to establish good friendships and personal social networks. Activities which help students form social networks include attending performances on campus, doing volunteer work, and taking part in study groups. Institutions can support effective social integration by providing suitable facilities and events that will enable students to make friends, and by providing special courses such as study groups that will help students meet people and ease their transition into the institution.

However, while the research evidence indicates being part of a social network can have a positive effect on outcomes, too much socialising may be detrimental to academic success. Also, there is no evidence that socially isolated students are necessarily less likely to succeed than well-connected ones, and in some cases students, such as senior students who have found their social niche, may be more focused on academic achievement than campus life.

### ***Academic counselling and pre-enrolment advice are readily available to ensure that students enrol into appropriate programmes and papers***

The research evidence highlights the effects of a lack of academic counselling and pre-enrolment advice, namely, that students make the wrong choices. Wrong choices can be made at different levels – choice of institution, field of study, programme, or course. Studies of student withdrawal suggest a surprisingly large number of students enrol in the wrong course, and even the wrong university. One reason students make a 'wrong choice' is because they missed out on their first choice and enrol in an alternative in the hope they can transfer to their 'first choice' later. Others only find out once they have started a course that it is not what they want to do. Choosing the wrong course can result in significant levels of transfer to other courses and to other institutions.

Strategies to help students make the right choices include providing accurate, easy to follow and informative advice about institutions, programmes and courses; establishing links with

schools; providing pre-course briefings; providing course samplings; providing interview guidance; providing specialist guidance, involving current students; improving selection policy and practice; providing induction programmes; having early diagnostic assessments; and giving feedback on progress.

### ***Teachers are approachable and available for academic discussions***

A strongly recurring theme in the research is that outcomes can be improved where students have regular and meaningful contact with teachers, both inside and outside the classroom.

The research shows a link between informal contact between students and teachers outside of class and students' satisfaction with the experience of study, educational aspirations, intellectual and personal development, academic achievement and persistence.

Several studies also support the notion that where teachers take a nurturing role, it can improve student retention and persistence, particularly for minority students.

However, the evidence on the effects of having teachers involved in research is mixed. Some studies showed that teachers or institutions with a research orientation may be less centred on a nurturing role, whereas others showed small, collaborative student–teacher research projects can help students to identify with their institution.

When teachers work with students in a learning community – a group of people working together to enhance the learning of everyone in the group – or act as mentors, it can have a positive effect on student outcomes.

### ***Students experience good quality teaching and manageable workloads***

None of the studies directly researched the impact of teaching quality on student outcomes, but many identified quality teaching as one factor. The attributes of good teachers include having respect for students; being fair and unbiased; being culturally sensitive; and being approachable. Good teachers are also helpful and caring and ensure they are available for students to have regular and meaningful contact with them. They motivate their students, are interested in and enthusiastic about their subject, and can explain the subject well. They are also well organised; set clear goals and standards; use appropriate assessment; and emphasise students' independence.

Teaching methods can also have an effect on student outcomes, with many of the studies identifying students' difficulties adjusting to the independent learning required at tertiary level. Students can be disconcerted by the impersonal style of lectures, at being left to manage their own learning, and at the lack of help available to make the transition.

Some studies advocate collaborative teaching methods that engage students actively in learning and with each other, while others call for flexibility in methods to cater for the needs of increasingly diverse students and to improve completion rates. Flexibility can be in programme delivery and assessment procedures as well as teaching style.

Workload is another issue, and students' perception of workload is closely associated with their levels of satisfaction and their academic achievement. It is also an issue in assessment, particularly when students feel they are over-assessed or there is a lack of communication between teachers about the timing and volume of assessment.

The issues of quality teaching and workload are important because they are both within the control of institutions.

### ***Orientation and induction programmes are provided to facilitate both social and academic integration***

Several of the propositions already discussed have touched on the importance of orientation and inducting students into general academic life. However, this section addresses the impact of special orientation and induction programmes, courses and seminars in more detail.

The results from both large scale surveys and studies of individual institutions show formal academic orientation programmes can help to overcome potential student unhappiness with course selection and induction, which in turn reduces student attrition. Several studies also found that a lack of institutional help with choosing suitable academic courses and pathways was a key reason for students leaving early.

Other research on general orientation courses and workshops found that providing information on university and student life, and on how to choose a career, will enhance student retention.

Orientation programmes need to heed the increasing diversity of the student population by offering a diverse set of experiences in orientation programmes.

Suggested strategies for successful orientation programmes include:

- offering opportunities for students to establish supportive personal networks
- offering integrated, coordinated and holistic orientation programmes that involve a range of personnel from the institution
- drawing on the experiences of students who have moved beyond the first year
- connecting the programmes to subject learning.

### ***Students working in academic learning communities have good outcomes***

Academic learning communities provide opportunities for students to learn collaboratively. They can take a variety of forms, from combining courses to creating cohort groups within larger classes (known as tutorial groups in New Zealand) to institutions deliberately creating a homogeneous ethos in relation to ethnicity, gender, domicile or religion.

A number of studies found that grouping students from several courses into separate learning communities improved persistence, retention and academic performance, and there was also strong evidence that the use of tutorial groups had a positive effect on student outcomes.

However, the evidence did not support the idea that special ethos institutions, based on a shared ethnic, gender or religious ethos, would have a beneficial effect on student outcomes.

### ***A comprehensive range of institutional services and facilities is available***

Institutional services and facilities play a role in the social and academic integration of students, which in turn leads to their retention and success. These services are often separated into those that focus on personal, social and emotional needs and those that focus on academic needs. However, combining the two groups may encourage greater cooperation between academic staff and student services staff, and enable more students to make use of the services.

Recommended support services include Supplemental Instruction (SI), peer tutoring and mentoring, which are discussed in more detail in other sections. The research also recommends institutions set up schemes for the early detection of students at risk of failing, and ensure they systematically monitor how first year students are adjusting to tertiary education.

There is also conflicting evidence about the use of student services. Several studies identified services and facilities as factors in the retention and performance of students and that they were well used. Other data suggests that services and facilities are not well used, even though students seem to know about them. Some evidence suggests students are more likely to consult family and friends than counsellors if they are thinking of withdrawing.

### ***Supplemental Instruction is provided***

Supplemental Instruction (SI) is a valuable strategy for increasing student outcomes across diverse groups of students and a range of subject areas, and has much to offer tertiary education in New Zealand.

SI is a particular method of support for students aimed at improving their academic outcomes. It differs from tutoring and remedial assistance in that it:

- identifies high risk subjects, rather than high risk students
- integrates the development of study skills within an academic subject
- is voluntary and open to all students
- has SI leaders who are trained in teaching and learning theory and attend all the lectures
- has SI leaders who facilitate group study and problem solving rather than act as an authority figure and re-lecture the subject matter
- is conducted from the first week of the semester before students encounter academic difficulties

- is supervised by a trained academic staff member
- provides training for SI leaders in collaborative learning methods.

The evidence shows that early academic success leads to improved student outcomes such as retention, achievement and graduation. It also shows that Supplemental Instruction is one way of ensuring early academic success, and that the programmes have positive effects on student outcomes.

Supplemental Instruction has been used successfully across a range of subjects including business and accounting, mathematics, sciences and social sciences, and it has also been successful in retaining traditionally under-represented groups and international students, and improving their grades.

Studies of other programmes that share characteristics of Supplemental Instruction, such as mentoring programmes, also show a positive impact on graduation and persistence with study.

### ***Peer tutoring and mentoring services are provided***

There is strong evidence that peer mentoring and tutoring improves student outcomes in terms of retention, completion and academic performance. It may also contribute to a greater sense of unity within the faculty where the tutoring occurred.

Peer tutoring and support usually focuses on specific subjects and is often provided by returning students. It has also been used in a more general way to help new students integrate into university life.

Strategies suggested for ensuring peer mentoring success include:

- providing adequate training of peer mentors (this can range from short seminars to more extensive credit bearing courses)
- ensuring support and advice is readily available from teaching staff
- providing a reward to tutors for services rendered (e.g. certificates; documenting service in transcripts and references; small cash payments).

### ***The institution ensures there is an absence of discrimination on campus, so students feel valued, fairly treated and safe***

The literature included in the synthesis shows that academic integration is a key factor in persistence and success, and this is reflected in the first set of propositions. However, there are also some recent studies on student outcomes that suggest educators need to look beyond integration if they wish to understand fully why students withdraw. This proposition – that there is an absence of discrimination on campus, so students feel valued, fairly treated and safe – is the first of the three propositions that suggest institutions will need to consider

adapting to the cultural capital brought by their diverse students, rather than focus on student assimilation, if they wish to solve the puzzle of why students depart before completion.

Discrimination was not directly researched in any of the student support studies analysed in the synthesis. However, it emerged as a factor in a number of studies on retention, withdrawal and persistence, and it may be that forms of discrimination are disguised in some studies as, for example, ‘social isolation’, ‘alienation’, ‘difficulty making friends’, or ‘not belonging’.

A ‘lack of presence’ of features relating to the culture of minority students (such as a lack of materials from the minority culture in the curriculum, or a lack of minority role models or mentors) can be a barrier to academic success, while a campus environment that is fair towards students can have a positive influence on student retention.

It is clear from the studies that the climate created within an educational institution can have an impact on student outcomes such as retention and withdrawal. Minority students are more likely to feel safe, and therefore to achieve, in an affirming and accepting environment. At a time when students are increasingly diverse, it is important that institutions create climates that welcome, accept, respect, affirm and value this diversity. Where this does not happen, discrimination in various forms may occur.

In summary, student outcomes, particularly those of minority students, are likely to be improved when an institution:

- creates a climate that welcomes and values diverse students
- acts to prevent all forms of discrimination and harassment
- ensures minority groups have a presence in the curricula, on advisory boards, in the faculty as role models and as mentors
- establishes a physically and psychologically safe environment.

### ***Institutional processes cater for diversity of learning preferences***

There are not many studies on learning preferences, and the results so far are mixed: general studies suggest the emphasis should be on independent learners who prefer self-directed problem-solving, whereas the literature on minority students suggests more collaborative and holistic approaches. The synthesis concludes that both practices can be adopted so that collaborative *and* problem-based learning can occur, with less emphasis given to transmission modes of teaching (such as lectures).

Over the past several years there has been a change in the way students engage with their tertiary education, and students increasingly expect the institution to fit with their lives rather than the other way round. Reasons include the greater proportion of full-time students who also work; whose social life is not connected with the university; and whose lives and study are influenced by new technologies. Institutions can meet these students’ needs by reshaping university practices, particularly in relation to timetables and flexible work schedules. One

way to help retention is to ensure services such as financial services, procedures for course changes, and academic advice are easily available and offered in non-bureaucratic ways.

Institutions can also help improve outcomes for students, particularly minority students, if they meet student learning preferences – that is, institutions need to adapt to their students rather than expecting the students to adapt to the institutions.

### ***The institutional culture, social and academic, welcomes diverse cultural capital and adapts to diverse students' needs***

The studies synthesised here reinforce the view that tertiary students are becoming an increasingly diverse group but that the achievement of minority students is often lower than that of traditional students. As discussed earlier, although much of the literature in this synthesis supports the notion of student assimilation and integration, there is an emerging view in recent theoretical and empirical studies that supports the idea that, rather than requiring the student to adapt to the institution's culture, the institution should also adapt to the cultures of its minority and non-traditional students.

Students arrive at an institution with a particular cultural capital (defined, for example, as habits, manners, lifestyle preferences, interpersonal skills, culturally specific learning tools, and so on). Where a student's cultural capital fits with the institutional culture, the student is more likely to integrate, but where the cultural capital is not valued or accepted, or not congruent with the institutional culture, the student will find it harder to integrate.

Minority students in Eurocentric institutions often experience culture loss or culture shock, and see the institutional cultures as alien and isolating. Students can feel neglected and lacking in support. The barriers they face include a lack of a presence of minority issues, materials and role models on campus and in the curriculum; teachers having low expectations; staff displaying discouraging and demeaning behaviour; and students experiencing racism and prejudice. The students may resist pressure to be assimilated into the culture of the institution because they feel it compromises their own cultural value or identity.

Institutions which accept differences, which adapt or change their institutional culture to get a better 'match' with students' cultural and social backgrounds, and which make minority achievement and diversity part of their core values are more likely to have positive student outcomes. Some studies suggest it is possible to foster the two different institutional cultures simultaneously, with minority students operating across both – that is, for institutions to value the students' 'culture of origin' while helping them to integrate into the new academic 'culture of immersion'.

The emerging view, then, is that instead of requiring students to separate from their old world and their culture of origin, 'dual socialisation' allows minority students' two worlds to converge, enabling them to function effectively and less stressfully in both.

This transformation of an institution needs to affect the social, academic and institutional levels of culture. It involves transforming the norms, values, practices, beliefs and assumptions that guide the behaviour of individuals and groups within the institution, and includes changes to faculty appointments, pedagogy, curricula, and assessment, as well as changing the relationships between people in all sectors and at all levels of the organisation.

## **Conclusion**

This synthesis of the literature looked at 146 international studies. Although there were only a few New Zealand studies included, the authors are confident their findings are relevant to the New Zealand context.

The evidence from the studies indicates that institutions can influence the integration, retention and course completion rates of their students by providing comprehensive and well-designed support services. However, the effectiveness of these efforts will be affected by the context in which the education takes place and the qualities which students bring to their study. With the increasing diversity of cultural and socio-economic backgrounds of tertiary students in New Zealand, greater attention should be paid to practices that adapt to this diversity rather than requiring all students to adapt to a standard set of expectations.