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Learning environments and student engagement with learning in tertiary settings: A summary

Introduction

This Teaching and Learning Research Initiative (TLRI) project, "Learning Environments and Student Engagement with Learning in Tertiary Settings", researched student engagement in nine tertiary education institutions: two universities, four institutes of technology, one wānanga, one private training provider and one community organisation. It investigated the nature and importance of environmental influences on student engagement with their learning. The project was conducted on two levels: first, it sought information about student engagement at the local level of each partner institution; and secondly, it attempted to gain an understanding of engagement across the nine institutions. The project was conducted in four phases: the first completed a review of literature to inform the project; the second used key findings about student engagement from the literature review to construct a questionnaire for first-time enrolled students; the third interviewed selected students in order to follow up key findings identified in the student survey; the fourth surveyed tertiary teachers in these nine settings to identify their approaches to achieving student engagement. Findings provided insights into ways of creating learning environments that engage learners.
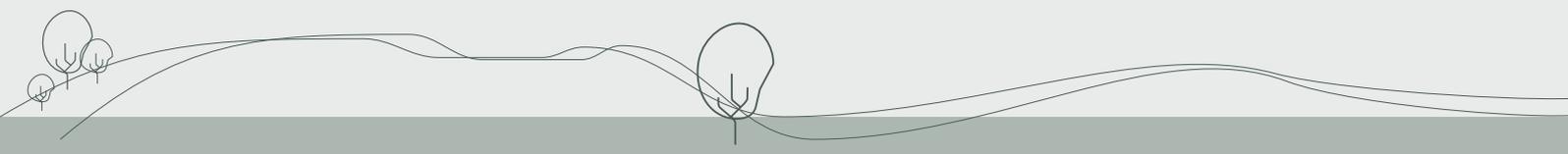
Aims and objectives of the project

The aims of the project were to:

- identify and describe, in an agreed template format, literature relevant to the project

- research the nature and extent of student engagement with learning across the tertiary sector—in two universities, four polytechnics, a wānanga, one private training establishment, and one community provider—using data from a large quantitative survey of first-time returning students, selected interviews with such students, and a survey of teachers

- investigate the influence of learning environments on student engagement with learning via the data gathering tools noted above in the nine institutional settings

- establish an energetic, committed, collaborative partnership of established and new researchers across and within the nine settings.

The project has:

- provided a relevant and accessible data base of research literature on student engagement

- developed a series of nine case studies of student engagement within their learning environments using a student survey and interviews

- considered data from the nine case studies in one national case study

- triangulated student data with data from a survey of tertiary teachers

- made the findings from the research available to the tertiary sector through publications and presentations.

Research question

The research questions was "How do institutional and non-institutional learning environments influence student engagement with learning in diverse tertiary settings?"

Participants

The student survey was distributed to a sample of first-time enrolled students representative of gender, age and ethnicity in each of nine case study institutions. The samples from eight institutions were from the total first-year population, and the sample for one was from selected programmes. Sample sizes varied, and were determined by institution size.

About eight students were interviewed in each institution. Each institution also surveyed its teachers. The distribution of students by gender, age, mode of study, method of study and ethnicity is recorded in Table 1.

TABLE 1 **Characteristics of student respondents**

		All Institutions	A	B	C	D	E	F	G	H	I
Gender	Female	66.4	59.6	84.6	78.0	69.4	74.1	52.4	76.6	68.1	53.5
	Male	31.1	39.0	15.4	22.0	27.0	20.4	11.5	23.4	27.5	45.2
Age	Under 20	35.0	80.3	7.7	44.5	34.7	16.7	6.1	18.8	3.3	48.4
	Over 21	64.0	19.3	88.4	55.5	65.3	83.3	86.6	81.2	92.7	50.3
Mode of study	Face to face	74.7	77.4	100.0	55.0	89.8	53.2	13.3	97.6	84.8	76.5
	Distance	25.3	22.6	0.0	46.0	10.2	46.8	86.7	22.4	15.2	23.5
Method of study	Part-time	32.7	5.8	80.8	32.4	5.1	33.3	73.2	0.0	65.6	32.3
	Full-time	62.3	88.3	11.5	61.8	88.8	64.8	20.7	100.0	29.7	63.2
Ethnicity	N.Z. Pakeha	52.9	70.2	46.7	64.4	26.4	67.3	82.9	16.4	45.4	58.5
	Māori	15.9	7.1	20.0	5.9	12.3	12.7	9.8	27.4	32.1	14.2
	Pasifika	8.5	2.8	13.2	2.7	18.3	-	6.1	23.2	10.0	7.5
	Asian	13.9	12.6	13.4	9.6	30.1	3.6	-	15.1	8.9	10.2
	Other	8.7	7.5	6.7	9.0	12.7	16.4	1.2	17.8	4.6	9.7
Total Returns		1246	223	26	173	196	54	82	64	273	155

Note: Categories may not always add to 100% due to missing data

As can be seen from the Table 1, the demographic data shows both similarities and differences across institutions. The gender distribution was consistently weighted in favour of females; in three institutions more than three-quarters of respondents were female. Age distributions were more varied, with 80 percent of respondents in one institution being older than 20 while a similar proportion was younger than 20 in another. Respondents largely studied in face-to-face situations. Only in one institution did more than half study at a distance. In six institutions, most respondents studied full-time; in three, the majority were part-timers. In seven institutions, most respondents identified as Pākehā New Zealanders; Māori were the largest group in one institution and the second largest in five others. Respondents of Asian origin were the largest group in one institution and the second largest in two institutions. The institutions varied greatly in size. Three are large by New Zealand standards; two small; the others are of medium size.

Methodology

The project was designed as four stages. Each stage involved gathering data in nine case studies. These case study data were also used to develop overviews of all case studies.

- The first stage was a literature survey which used a common search strategy but focused on literature useful to each of the collaborating settings, and which recorded key information in a commonly agreed template. Each research partner contributed to the store of literature templates.

- The second stage was a quantitative survey of students returning to study after completing one enrolment period in their institution.

- The survey drew on the literature reviewed and on the Australasian Survey of Student Engagement (AUSSE), which is adapted from *The College Student Report: National Survey of Student Engagement* (Kuh, 2001). To suit the diverse learners researched in this project, additional questions about non-institutional influences were used.

- The sample included ethnic, age, gender and level of subject representation as appropriate to each partner institution. The institutional data were analysed and reported as a case study by each of the partner researchers.

- Case study data were collated to develop a national case study. Given the spread of the nine partner institutions, the national case study was expected to approximate the tertiary education population. However, no claim for generalisability was made.

The third stage comprised interviews with about eight students in each case study setting. The aim was to explore in greater depth issues or themes that emerged from the analysis of the student survey data.

- In the fourth stage, a quantitative survey was used to gauge the views of teachers in each case study setting about the learning environments they try to create to achieve student engagement. The questions in this survey mirrored those in the student questionnaire. A sample of teachers in each institution was invited to participate, and the case study data were also used to provide a national perspective.

- Ethics approval for this project was gained from the Massey University Human Ethics Committee and from ethics committees of participating institutions where required.

Limitations

The limitations of this research project included:

- Response rates in most case study institutions for the student survey were disappointing, ranging from 5.5 percent to 82.7 percent and averaging 14.5 percent. While 1246 responses from the nine case studies were useful, the case study design meant that generalisations for all tertiary institutions in Aotearoa New Zealand were untenable.

- Consequently the overview papers written using data from all case studies must be regarded cautiously. Overview studies can only offer tentative findings that should be checked against results in individual institutions.

- Student engagement is a complex concept. Dividing it into discrete categories has its dangers. For example, while the study treated a teacher's influence and motivation as separate, their influences on engagement are likely to overlap.

Summary of findings

Student engagement is a complex construct made up of a number of lenses. Each strand is informed by many indicators,[1] only some of which are included in Table 2. Indicators may vary from institution to institution as well as from course to course.

There are a number of actions that institutions can take to enhance engagement. These include:

- enhancing students' self-belief

- enabling students to work autonomously, enjoy learning relationships with others, and feel they are competent to achieve their own objectives

- recognising that teaching and teachers are central to engagement

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1 The conceptual organiser used for this project was developed from reviews of literature over time. Consequently, it has evolved in terms of the number of lenses/strands used and terminology used. The evolving nature of the project explains the difference in the way the organiser is presented from the overview papers

TABLE 2 **Strands in engagement and a selection of indicators**

STRANDS IN ENGAGEMENT	FINDINGS FROM THE CHOSEN INDICATORS
Motivation and agency (Engaged students are intrinsically motivated and want to exercise their agency)	A student feels able to work autonomously A student feels they have relationships with others A student feels competent to achieve success
Transactional engagement (Students engage with teachers)	Students experience academic challenge Learning is active and collaborative inside and outside the classroom Students and teachers interact constructively Students have enriching educational experiences
Transactional engagement (Students engage with each other)	Learning is active and collaborative inside and outside the classroom Students have positive, constructive peer relationships Students use social skills to engage with others
Institutional support (Institutions provide an environment conducive to learning)	There is a strong focus on student success There are high expectations of students There is investment in a variety of support services Diversity is valued Institutions continuously improve
Active citizenship (Students and institutions work together to enable challenges to social beliefs and practices)	Students are able to make legitimate knowledge claims Students can engage effectively with others including the "other" Students are able to live successfully in the world Students have a firm sense of themselves Learning is participatory, dialogic, active and critical
Non-institutional support (Students are supported by family and friends to engage in learning)	Students' family and friends understand the demands of study Students' family and friends assist with e.g. childcare, time management Students family and friends create space for study commitments

- creating learning that is active and collaborative and that fosters learning relationships
- creating educational experiences for students that are challenging and enriching, and that extend their academic abilities
- making institutional cultures welcoming to students from diverse backgrounds
- investing in a variety of support services
- adapting to changing student expectations
- enabling students to become active citizens
- enabling students to develop their social and cultural capital.

Teachers and teaching have the most important effect on student engagement. Students identified the following teacher behaviours as most important:

- giving priority to building relationships with students, being available, counselling them when asked, and providing prompt, constructive feedback on their learning
- showing enthusiasm for their subject, and making learning of the subject interesting thus enabling students to engage with it
- challenging their students intellectually in ways that recognise students' objectives, abilities and interests
- enabling students to actively apply the knowledge they construct to practical problems and situations

- providing information about studying successfully when such information is needed.

Intrinsic motivation, particularly perceptions of competence, agency and relatedness, are important in engagement:

- Perceptions of competence were seen as more motivating for engagement than either agency or relationships.
- There was a significant gap between perception and action. While students seemed to understand what motivated them, they did not always use this knowledge when studying.

Non-institutional influences have a moderate effect on student engagement:

- Only family support for study and personal study endeavours could be said to have exercised a substantial effect.
- Nevertheless, non-institutional influences do need to be taken into account when considering factors affecting student engagement. When students are affected by health, family, work or financial issues, and cultural or religious commitments, they engage less with their study and their achievement is adversely affected.
- There were significant differences in the ways subpopulations were affected, in particular the way

Pasifika students were often more affected by external factors than others.

Student engagement may best be researched within individual institutions and even individual cohorts within institutions:

- There were significant differences between the nine institutions in what students perceived to be important to their engagement. Even students in similar institutions did not agree on what was important.

- Some institutions performed well on what students considered to be important; most did not.

- There were significant differences between ethnic groups about what was important and how well it was done. These differences were particularly noticeable between Pasifika students and others.

Building capability and capacity

The research team included 15 members distributed across the nine case study institutions. Of these, three had no research experience, and four had limited experience of working on funded research projects. Members in each institution completed case studies designed to interest their particular communities. These are available on the TLRI website.

A number of members have published or have in press academic papers in New Zealand and international journals. All papers report on results from the student questionnaire. They focus on issues of motivation, teaching, and institutional and non-institutional environmental factors leading to engagement. All address facets of the research question: "How do institutional and non-institutional learning environments influence student engagement with learning in diverse tertiary settings?"

Four kinds of community outputs have been compiled.

- The project was designed to ensure that the communities associated with the case studies were informed about results in their case study institution. Research partners presented seminars and workshops within their institution that reported results from different aspects of the case study.

- Each research partner completed a formal case study report and an extended abstract for their community to be disseminated within the institution and lodged on the TLRI website to act as an ongoing baseline for further research.

- Concurrently, researchers working at the central level were available to discuss results with institutional communities not part of the project.

- This project has had a considerable effect on teaching and has directly informed the work of postgraduate students who are teachers in tertiary institutions.

Recommendations

Each case study showed similar but also significantly different patterns of engagement. The differences were important. We recommend that institutions conduct their own case studies.

The importance of teachers and teaching cannot be overstated. We recommend that institutions develop policies to promote student engagement, including planning, implementing, and evaluating teacher professional development programmes.

There is enough evidence to suggest that when planning teacher development programmes, the following action statements be incorporated:

- enhance students' self-belief

- enable students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives

- recognise that teaching and teachers are central to engagement

- create learning that is active, collaborative and fosters learning relationships

- create educational experiences for students that are challenging, enriching and extend their academic abilities

- ensure that institutional cultures are welcoming to students from diverse backgrounds

- invest in a variety of support services

- adapt to changing student expectations

- enable students to become active citizens

- enable students to develop their social and cultural capital.

References

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