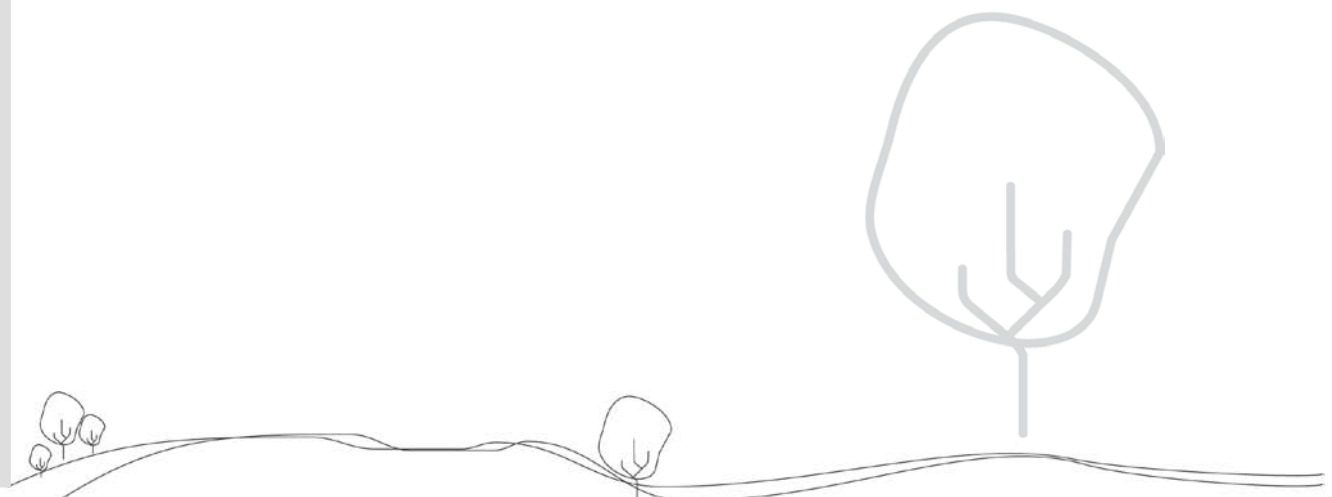




Student Engagement: What Is It and What Influences It?

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1. Introduction

This paper seeks to answer two questions: “What is student engagement?” and “How do teachers, external factors and student motivation influence it?” It is an overview paper reporting findings from a project funded by the Teaching and Learning Research Initiative (TLRI) entitled “Learning Environments and Student Engagement with Learning in Tertiary Settings”. This two-year project involved nine tertiary institutions: two universities, four institutes of technology or polytechnics, one wānanga, one community organisation and one private training establishment. The project attempted to answer the research question: “How do institutional and non-institutional learning environments influence student engagement with learning in diverse tertiary settings?” There were two approaches to the research. Engagement in diverse settings was explored in case studies compiled by each of the nine partner institutions. A number of overview papers using information from these studies were also written. This paper is one of the overview papers. It is structured into three sections. In the first, we review international literature to answer the question “What is student engagement?” In answer to the second question of how teachers, external factors and student motivation influence student engagement, we present findings from a student questionnaire, one of the data gathering instruments used in the project. We locate the study in a conceptual organiser derived from the engagement literature, describe the methodology used and present findings that address question two. Finally, we discuss the implications of the answers to both questions for institutions in Aotearoa. New Zealand.

What is student engagement?

A survey of the literature reveals that student engagement has been well researched since the 1990s. While not yet researched extensively in post-school education in New Zealand, elsewhere it is plentiful. Various definitions have been suggested. Chapman (2003) offers one—students’ cognitive investment in, active participation in, and emotional commitment to their learning. The Australian Council of Educational Research (ACER) proposes another: “students’ involvement with activities and conditions likely to generate high quality learning” (ACER, 2008, p. vi). While such definitions provide a bird’s-eye view of the engagement process, they do not indicate what enables engagement to occur. Some researchers have emphasised student motivation and effort as a key factor in engagement (Schuetz, 2008). Others highlight the way educators practise and relate to their students (Umbach & Wawrzynski, 2005), and the roles of institutional structures and cultures (Porter, 2006). Yet others spotlight the sociopolitical context in which education and engagement take place (McInnis, 2003; Yorke, 2006), and the effect on students of environmental

factors such as family background and economic status (Law, 2005; Miliszewska & Horwood, 2004).

The engagement literature, then, uses a number of lenses to investigate influences on engagement. These focus variously on student motivation, teacher–student interactions, learners interacting with each other, the role of institutional policies, sociopolitical factors and the role of non-institutional influences such as family, friends, health and employment. While there is no unanimity about what motivates learners to engage, a strongly represented view is that education is about students constructing their own knowledge (Krause & Coates, 2008). This assumes that students are learning agents, able to achieve their goals. Self-belief is reported as a key attribute in motivation. An extensive literature explores how teachers and higher education institutions influence student engagement. Kuh, Kinzie, Buckley, Bridges, and Hayek (2006), for example, assign to teachers and institutions a dominant influence in engaging students. Institutions are expected to be welcoming, to respect students coming from diverse backgrounds (Johnson et al., 2007; Gavala & Flett, 2005), offer a wide range of learning support services (Porter, 2006; Pike, Smart, Kuh, & Hayek, 2006), and be prepared to adapt to changing student expectations (McInnis, 2003; Yorke, 2006). Not so plentiful is research investigating influences on engagement originating in students’ external, non-institutional environment. This paper acknowledges that family, employment, and social, cultural and personal factors have an effect on student success (Zepke, Leach, & Butler, 2011, in press). A different lens again is used by McMahon and Portelli (2004), who critique engagement research as conservative and too student-centred. They want engagement to include social dimensions, expecting engagement research to add a democratic-critical conception that goes beyond strategies, techniques or behaviours; a conception in which engagement is participatory, dialogic and leads not only to academic achievement but success as an active citizen (Barnett & Coate, 2005).

To make sense of this complexity in the research and address the first question, we developed a conceptual organiser of engagement with two features. One identifies the key lenses employed in the engagement literature; the other suggests indicators of outcomes that might be achieved using each lens (see Table 1). An earlier version had four lenses. After testing that version with data gathered in another project, we separated transactional engagement into two—engaging with teachers and engaging with other students—and added non-institutional support.

Table 1 **A conceptual organiser of student engagement**

Lenses on engagement	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

The organiser offers a synthesis of the literature. The indicators also originate in the literature, although they do not pretend to represent all possible indicators of engagement. A virtue of the organiser is that it recognises the various engagement research approaches as discrete entities while the frame around the whole table suggests that the perspectives are also connected. But this conceptual organiser also has shortcomings. It pictures student engagement as a bounded entity that is made up of separate parts existing in an uncertain relationship with each other. Boundaries between perspectives are not obviously permeable and the engagement concept cannot escape its own frame. It remains a synthesis and does not, indeed cannot, claim to be theoretical. Indeed, the engagement literature seems light on theory. While constructivism could serve as a unifying theory for the first four perspectives, it is less suited to the final two. Zepke (2010) has addressed the atheoretical nature of engagement research by suggesting that complexity theory may be a useful theoretical foundation for thinking about student engagement.

In a systematic literature review, Zepke and Leach (2010, in press) used the organiser to identify actions that teachers and institutions can take to increase student engagement:

- 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.

Together, the literature review, the conceptual organiser and these 10- propositions answer the first question: "What is student engagement?"

However, the organiser does not provide any information on which of the six lenses are most important. Each is assumed to exercise an equal influence—an assumption that is difficult to sustain. The research literature focuses most strongly on teaching and motivation, but the research question also asked us to investigate non-institutional factors. Consequently we have chosen these three lenses—motivation, teachers, and external influences—because they focus most strongly on institutional and non-institutional environmental factors, the heart of the research question. What is not spelt out in the literature is which of these three is the most important. In the next section of this paper we narrow our focus to look at student engagement through these three lenses, and ask which of these influences is most important in enabling students to engage with learning. To answer this question requires an empirical approach. The next two sections describe the method used to gather the data and analyse the information that enabled us to answer the question of which of these three lenses are most important in engaging students.

Project overview and research method

Two objectives underpinned the research design for the project as a whole. The first was to obtain the views of both students and teachers using all six lenses. The project's focus on student perception data is justified by Hu and Kuh (2003) who convincingly show that student perception research is valid and valuable, providing questions gauge items within their experience. The second objective was to drill down into how teachers and students perceived engagement in different kinds of institutions. To achieve this objective we decided to use case studies to better understand engagement in different contexts. The advantages of case study design were raised in various literatures. In the retention literature, Tinto (1993) emphasised the importance of

institutional differences. Braxton and Lien (2000) showed that empirical support for academic integration as a major factor in retention varied in strength for multi-institutional and single-institutional studies. McInnis, Hartley, Polesel, and Teese (2000) also recommended that researchers undertake single institution case studies to bring out factors that multi-institutional studies might not identify. Writing about adult teaching and learning, Fenwick (2005) identified the view that education is situated practice, performed “in the habitual practices of a particular site or community” (p. 9). This suggests that specific insights into student engagement may be more readily obtained in data from single institutions than from multi-institutional studies.

A further consideration favouring case studies is embedded in TLRI expectations. TLRI expects that its funded projects help to improve learning and teaching, and build research capacity. Generalised results may have less effect on institutions as they encourage “this does not apply here” thinking. Data that speaks directly to teaching and learning in specific institutions, on the other hand, has a greater effect on practice. However, the decision to construct institutional case studies is not cost-free. It means we cannot generalise our findings across all New Zealand tertiary institutions. Adopting an approach that recognises institutional differences led to a number of consequential decisions. We wanted institutions that had already conducted some institutional research and research partners who had some research experience. All nine institutions had conducted internal research into learning and teaching. While the majority of the research partners had research experience, a small minority did not. We also sought a good geographic spread, different types and sizes of institutions, at least one offering distance delivery, at least one with a rural hinterland, and at least one with a significant Māori and Pasifika presence. In the end, we selected nine that together matched our inclusion criteria.

The survey instrument was distributed by a partner researcher in each of the case study institutions to a sample of first-time enrolled students representative of gender, age and ethnicity in each institution. Sample sizes varied, determined by institution size. A total of 1246 responses were received. The overall response rate, adjusted for unusable responses, was a disappointing 14.5 percent, very similar to the 14.2 percent response rate achieved by the 2007 Australasian Survey of Student Engagement (ACER, 2008).

The questionnaire contained three scales gauging: motivation; transactions within the institutional setting, including teachers’ work and institutional culture; and non-institutional influences. It also sought demographic information. The motivation scale contained 24 Likert-type items divided into three equal clusters, focusing on the importance of student competence, autonomy and relatedness needs to engagement. Transactions within institutional settings, including teaching and institutional support, were surveyed in 26 Likert-type items. The non-institutional, external influences section included 12 Likert-type items seeking level of agreement to statements about family, employment, social, cultural and personal influences on engagement.

Students were asked how important each item was in engaging them. They had five options: very important, important, little importance, no importance and not applicable. We used means to analyse these responses. Means reveal the central tendencies of responses to the four points on the

Likert scale that express an opinion, ranging from 1 (strongly affirmative) to 4 (strongly negative), with the smallest means (between 1 and 2) indicating strongest affirmation. This way of analysing the data ensured that even negative responses counted in the analysis. This paper reports on how the engagement of different groupings of students—females and males; students 20 and under and 21 and older; New Zealanders of European origin (Pakeha), Māori and Pasifika; and part-timers and full-timers—was affected by teaching, motivation and non-institutional influences. The questionnaire did not ask students to compare the importance of items in one scale with those in other scales.

There are limitations to this study. The sample, while large enough and reasonably descriptive of tertiary students in New Zealand, was limited by the fact that our responses came from nine case studies, not a national representative sample. Further, most of the Māori and Pasifika students were enrolled in institutions whose mission was to cater for such students. Consequently we cannot generalise from these data, and findings need to be treated with caution.

How do teachers, external factors and student motivation influence engagement?

This paper is a project overview report that draws on data gathered in the TLRI study described above. To answer the second question in this paper, our analysis focused on relevant questions in the student survey—the 24 items investigating student motivation, the 12 items focusing on the importance of teacher contributions to engagement, and the 12 items seeking responses on non-institutional support. In this section, we combine data for all case study institutions to answer our second question by investigating the effect of teachers, motivation and non-institutional influences on student engagement according to gender, age, ethnicity and method of study. Combining data from the case studies can be justified by an acceptable fit between the demographic subpopulations in the sample and those active in post-compulsory education in 2007 (Ministry of Education, 2009). However, such an overview offers some tentative findings, which should be tested in individual institutions. Some data from individual case studies can be found in Zepke, Leach, and Butler (2009) and in individual case studies associated with the project and available on the TLRI website (Teaching and Learning Research Initiative, n.d.).

To get a preliminary feel for the relative importance of teaching, motivation and external influences on these students' engagement, we identified the 10 items with the smallest means (most important) from across the scales and ranked them. Table 2 shows the items, the scale from which they came, their means and standard deviations.

Table 2 **Top 10 ranking items from teaching, motivation and external influence scales**

Rank	Item	Scale of origin	Mean score	Std deviation
1	Teachers providing feedback that improves my learning	Teaching	1.28	.491
2	Teachers teaching in ways that enable me to learn	Teaching	1.31	.502
3	Taking responsibility for my learning	Motivation	1.38	.534
4	Teachers being enthusiastic about their subject	Teaching	1.39	.572
5	My family supports me studying	External influences	1.41	.593
6=	Teachers making the subject really interesting	Teaching	1.43	.602
6=	Knowing how to apply what I learn	Motivation	1.43	.589
8	Knowing how to achieve my goals	Motivation	1.44	.576
9	Teachers caring about my learning	Teaching	1.53	.629
10	Knowing where to get help	Motivation	1.55	.624

Half of the top 10 items, including the top two, are from the teaching scale. Two of the items relate to approaches to teaching that improve learning, two to subject matter, and one to teacher–student relationships. Four items from the motivation scale appear in the top 10, but only one occupies a top half position. It belongs to the autonomy aspect of self-determination theory, while the other three items describe motivation for competence. None of the motivation items link to the relationship aspect of self-determination theory. Influences from the external environment only have one place in this list. It highlights that families had a strong positive influence on these students’ engagement.

We also wanted to know about differences in the way subpopulations in our survey rated the influence of teachers, motivation and external influences. We sorted the means for each scale into high importance (mean 1.0–1.9), some importance (mean 2.0–2.9) and little importance (mean 3.0–3.9) and calculated the percentage of responses assigned to importance categories by our subpopulations. Table 3 tells this story.

Table 3 Percentage of means for subpopulations falling into each band

Subpop	n	Teacher influence			Motivation influence			External influence		
		High Impt %	Some Impt %	Little Impt %	High Impt %	Some Impt %	Little Impt %	High Agree %	Some Agree %	Little Agree %
Female	827	91.7	8.3		66.7	33.3		33.3	41.7	25.0
Male	382	83.3	16.7		50.0	50.0		33.3	58.3	8.3
Māori	218	100.0			70.8	29.2		25.0	50.0	25.0
Pasifika	100	100.0			83.3	16.7		33.3	58.3	8.3
Pakeha	612	83.3	16.7		54.2	45.8		33.3	41.7	25.0
≤20	436	83.3	16.7		58.3	41.7		33.3	50.0	16.7
≥21	779	100.0			62.5	37.5		25.0	50.0	25.0
Part time	407	91.7	8.3		62.5	37.5		25.0	50.0	25.0
Full time	776	91.7	8.3		62.5	37.5		33.3	50.0	16.7
Total Population	1246	91.7	8.3		62.5	37.5		33.3	41.7	25.0

More than 90 percent of all respondents thought teacher influence had high importance for their engagement. All subpopulations agreed. No subpopulation rated teacher influence of little importance. Less than 10 percent of females, part-time and full-time students thought teacher influence to be of only some importance, while less than 20 percent of males, Pakeha and students aged 20 or younger placed teacher influence into the “some importance” band. All Māori, Pasifika and older students put teacher influence into the high importance category.

Almost two-thirds of students thought that motivation was of high importance to their engagement. Indeed, a majority of students in all subpopulations thought the influence of motivation to be of high importance and none thought it of little importance. But motivational influences, certainly within the self-determination theory construct, were not as important as the influences of teachers. More Pasifika students (83 percent) reported motivation to be of high importance than other groups, with only 50 percent of males doing so.

External influences seemed to have the least influence on engagement. Only one-third of students reported high agreement with the statements whereas a quarter reported little agreement with them. However, the majority of students agreed external influences had at least some influence. At least 75 percent of all the subpopulations rated them as either of some or high influence with 92 percent of males and Pasifika students doing so.

Another major purpose of this paper is to compare the influence of teachers, motivation and external factors on Māori, Pasifika and Pakeha, three particularly important subpopulations in the survey. We were interested in how these students rated teaching, motivation and external

influences in two different types of institutions. Of our nine case study institutions, six follow what we considered to be a mainstream agenda. They offer general programmes to meet the learning goals of a wide variety of students using curricula and teaching methods not mediated in any way by cultural or other diversity considerations. Three of our case studies seek to meet the needs of non-traditional students such as Māori and Pasifika. Their curricula, teaching methods and operations are designed to respect and meet cultural beliefs and practices within mostly mainstream academic programmes. Table 4 compares the ranking of the top 10 items from the teacher, motivation and external influence scale by all students and for each of the subpopulations of Māori, Pasifika and Pakeha students within mainstream and non-traditional institutions. The bolded number in each cell indicates the ranking achieved in Table 2 for all students.

Table 4 **Top 10 rankings of teaching, motivation and external influence scales by Māori, Pasifika, and Pakeha students in mainstream and non-traditional institutions**

Rank	All students n = 1246		Māori students n = 198		Pasifika students n = 106		Pakeha students n = 659	
	Mainstream focus n=883	Non- traditional n=363	Mainstream focus n=91	Non- traditional n=107	Mainstream focus n=60	Non- traditional n=46	Mainstream focus n=512	Non- traditional n=147
1	Teaching 1	Teaching 2	Teaching 1	Teaching 1	Teaching 1	Motivation 3	Teaching 1	Teaching 2
2	Teaching 2	Teaching 1	Teaching 2	Motivation 3	External 5	Teaching 2	Teaching 2	Teaching 1
3	External 5	Motivation 3	External 5	Teaching 2	Motivation 3	Motivation 10	Teaching 4	Teaching 4
4	Teaching 4	Motivation 8	Motivation 6=	Teaching 4	Teaching 9	Motivation New	External 5	Motivation 6=
5	Motivation 3	Teaching 4	Motivation 3	Motivation 8	Motivation 8	Teaching New	Teaching 6=	Motivation 3
6	Teaching 6=	Motivation 6=	Teaching 4	External 5	Motivation New	Teaching 1	Motivation 3	Motivation 8
7	Motivation 6=	Teaching 6=	Teaching 9	Motivation 6=	Teaching 4	Motivation 8	Motivation 6=	Teaching 6=
8	Motivation 8	Teaching 9	Teaching 6=	Teaching 6=	Teaching 2	Teaching New	Motivation 8	Teaching 9
9	Motivation New	External 5	Motivation 8	Teaching 9	Motivation New	Teaching 9	Motivation New	Teaching New
10	Motivation 10	Motivation New	Teaching New	Motivation New	Teaching 6=	Teaching 6=	Motivation 10	External 5

(Note: Respondents not identifying as Māori, Pakeha or Pasifika are not included)

Ranking items from the three scales according to their importance and the level of agreement (smallest means) for our three subpopulations in institutions with either a mainstream or non-traditional focus revealed a number of similarities. In general, items listed in Table 2 also featured in Table 4. Most obvious here was the pre-eminence of *teachers providing feedback that improves*

my learning (no. 1) and *teachers teaching in ways that enable me to learn* (no. 2) which ranked highest or second highest for most groups in both types of institutions. Overall, teaching remained the most frequently and highest ranked influence followed by motivation and external factors. Two other items from the teaching scale featured in the top 10 for most subpopulations in both types of institutions: *teachers being enthusiastic about their subject* (no. 4) and *teachers making the subject really interesting* (no. 6=). Two motivation items, *taking responsibility for my learning* (no. 3) and *knowing how to achieve my goals* (no. 8) featured in the top 10 of all subpopulations in both types of institutions. One other motivation item, *knowing how to apply what I learn* (no. 6=), appeared for most subpopulations and in both institution types. The same external influence item, *my family supports me studying* (no. 5), featured in the top 10 for five of the six ethnic subpopulations. The one item which disappeared from the rankings of four of the six groups was a motivation one: *knowing where to get help*.

There were interesting differences too. There was a variation in number of items from each scale in the top 10 for the subpopulations. On the teaching scale, between four and six items featured in the top 10 of all subpopulations in both types of institutions. One item, *being challenged by what I am learning*, not in the top 10 in Figure 2, featured in the top 10 for Māori learners in mainstream institutions, and Pasifika and Pakeha learners in institutions with a non-traditional focus. Another item, *teachers challenging me*, was ranked in the Pasifika top 10 in institutions with a non-traditional focus. Motivation items ranged from five placements to three. But the identity of motivation items varied greatly between subpopulations and from Figure 2. Four new items were introduced. Two, *setting high standards for myself* and *knowing how the systems here work*, were included by Pasifika or Pakeha students in mainstream institutions. Two others, *having clear goals* and *feeling I belong here*, were included by Māori and Pasifika students respectively in institutions with a non-traditional focus.

There were also some interesting differences between the two institutional types, particularly on the motivation and external influence scales. We assigned reverse numerical values to where teaching, motivation and external influences were ranked, 10 for the top ranking to one for the lowest ranking, in order to judge the combined influence of frequency and level of ranking. The differences between rankings in mainstream and non-traditional institutions were noticeable. Teaching influences were stronger for Pakeha and slightly stronger for Pasifika in non-traditional institutions than in the mainstream, whereas for Māori they were slightly lower. All three groups in non-traditional institutions were influenced more by motivational items than were those in mainstream institutions, the difference being greatest for Pasifika and least for Pakeha. Conversely, all subpopulations learning in mainstream institutions were influenced more by external factors than those learning in non-traditional institutions, with some of the differences large. Most notably, the one external factor ranked third by Pasifika students in mainstream institutions was not ranked at all by those in non-traditional institutions; one ranked fourth by mainstream Pakeha dropped to tenth in non-traditional institutions.

We wanted to know whether the differences between the influences of teachers, motivation and external influences on student engagement were significant using an independent *t*-test. Table 5

shows that the difference between teachers and motivation, teachers and external influences, and between motivation and external influences were significant at the $p < .05$ level in all but one instance—motivation and external influences for Pakeha mainstream students.

Table 5 **Comparing motivation, teacher influences and external influences**

Population in types of institutions	<i>n</i>	Teacher influences mean	Motivation mean	External influences mean	T vs M Sig.	M vs E Sig.	T vs E Sig.
All in all institutions	1246	1.59	1.91	2.36	✓	✓	✓
All non-traditional	286	1.56	1.84	2.41	✓	✓	✓
All mainstream	960	1.62	1.95	2.35	✓	✓	✓
Pakeha, non-traditional	121	1.62	1.99	2.57	✓	✓	✓
Pakeha, mainstream	491	1.65	2.03	2.43	✓		✓
Māori, non-traditional	123	1.50	1.74	2.38	✓	✓	✓
Māori, mainstream	95	1.62	1.93	2.45	✓	✓	✓
Pasifika, non-traditional	42	1.44	1.67	2.18	✓	✓	✓
Pasifika, mainstream	58	1.52	1.76	2.20	✓	✓	✓

(Note: Respondents not identifying as Māori, Pakeha or Pasifika are not included.)

Discussion

A key requirement for research funded by the TLRI is that it makes a difference to the quality of student learning; in this project, student engagement. In this section, we focus on improving the quality of learning by discussing the findings addressing our two focusing questions: “What is student engagement?” and “How do teachers, external factors and student motivation influence engagement?” The conceptual organiser (Table 1) suggests that student engagement is a complex construct, understood in different ways with many factors affecting it. The multiple lenses identified in the research literature suggest that institutions and teachers can act in a variety of ways to enhance student engagement. Table 6 outlines a possible agenda for action that is synthesised from the engagement literature. Introduced initially in this paper as 10 propositions for teacher and institutional action, here the actions are explicitly linked to the six lenses on student engagement. The items in the agenda are seen from teachers’ and institutional perspectives as teachers and institutions have the largest influence on engagement. The items offer starting points for policy development that suits institutional values, missions and the political climate within which teachers and institutions work. While some educators may be able to develop all ideas in the agenda for action at the same time, most will want to start development on one or two fronts. The answer from our survey data to the second question suggests that a useful start would be with teachers and teaching.

Table 6 **An agenda for facilitating student engagement**

Lenses on engagement	An agenda for action
<p>Motivation and agency (Engaged students are intrinsically motivated and want to exercise their agency)</p>	<p>Enhance students' self-belief Enabling students to work autonomously, enjoy learning relationships with others and feel they are competent to achieve their own objectives</p>
<p>Transactional engagement (Students engage with teachers)</p>	<p>Recognise that teaching and teachers are central to student engagement Create educational experiences for students that are challenging, enriching and extend their academic success</p>
<p>Transactional engagement (Students engage with each other)</p>	<p>Create learning that is active, collaborative and fosters learning relationships</p>
<p>Institutional support (Institutions provide an environment conducive to learning)</p>	<p>Ensure that institutional cultures are welcoming to students from diverse backgrounds Invest in a variety of support services Adapt to changing student expectations</p>
<p>Active citizenship (Students and institutions work together to enable challenges to social beliefs and practices)</p>	<p>Enable students to become active citizens Enable students to develop their social capital</p>
<p>Non-institutional support (Students are supported by family and friends to engage in learning)</p>	<p>Facilitate accessible and open relationships with important people in students' lives</p>

If the first question has complex answers, the answer to the second question seems more straightforward. Teachers seem to have a stronger influence on student engagement than either motivation or external influences. Individual items asking about teaching featured most strongly in the 10 highest ranking survey items (Table 2). Teacher attributes and behaviours occupied half the places on this list, including three places in the top five. When computing the means of responses to all questions in each of the three scales, teachers were significantly more influential than motivation and external factors. Similarly, all subpopulations in the survey endorsed teaching as the primary influence on how they engaged. This primacy of teacher influence is well reflected in the literature. In their literature survey, Kuh et al. (2006) placed teaching and teachers at the heart of engagement. Bryson and Hand (2007) argued that students are more likely to engage where they are supported by teachers who establish inviting learning environments, demand high standards, challenge, and make themselves freely available to discuss academic progress. Umbach and Wawrzynski (2005) concurred. They found that the educational environment created by teachers' behaviours, beliefs and attitudes has a dramatic effect on student learning and engagement. The evidence from this paper is clear: teaching and teachers are most influential in engaging students.

However, this apparently straightforward answer may be more complex than first appears. One reason for this view is the way Māori and Pasifika students responded in the survey. All students

in these non-traditional groups thought that teachers' influences on their engagement were of high importance, while only a quarter of Māori and a third of Pasifika students thought external influences were. This seems almost counter intuitive as both Māori and Pasifika people are thought to be heavily influenced by members of their immediate communities. But such students also rely on a favourable cultural climate within their learning environments to engage with learning. Gavala and Flett (2005), for example, showed that where Māori students reported high cultural stress, they were significantly more likely to experience a lowered sense of well-being and reduced feelings of academic enjoyment and motivation, and Bennett and Flett (2001) found that when Māori students exhibited a high cultural identity as Māori, this mediated the effect of academic problems and helped them improve their educational outcomes. It can be argued that teachers play an important part in establishing culturally safe environments for students and that their attitudes and behaviours therefore will be considered a very important influence on student engagement.

Another potentially counter intuitive finding is that motivation plays second fiddle to teachers in importance. Yet motivation is generally regarded as of prime importance in engagement for learning (Yorke & Knight, 2004). The questionnaire did not ask students to compare the influences of teachers, motivation and the external environment. They were asked to rate the importance of items in separate and independent scales. The means reported in this paper resulted from independent expressions of student perceptions, in which motivation did not score as highly as teachers as an influence on engagement. There may be two explanations for this. The first is that there are many motivational models that have been used to investigate engagement; for example using the effect of personality, perfectionism, extroversion, intrinsic interest, approaches to knowledge acquisition and futures orientation (Schuetz, 2008). But this study consciously chose to investigate motivation through self-determination theory because it was found to be the best fit for engagement research (Schuetz, 2008). The three motivational needs of autonomy, competence and relationships that are central to self-determination theory may not explain all the motivators helping students to engage. What the data show is not so much the importance of motivation, but the influence of intrinsic motivation as represented by autonomy, competence and relationships. The second explanation for the results centres on the role of teachers who are motivational agents in their own right. Four of the five items finding their way into the top-10 list have strong motivational flavours. Teachers may provide the extrinsic motivation not well recognised by self-determination theory.

Survey results regarding the influence of environmental factors are unambiguous. The effect of non-institutional influences on students' engagement was moderate, lagging behind the influence of both teachers and motivation. Even though one item from the external environment scale, family support, exerted a strong influence, resulting in a fifth place in the top 10 items, there were significant differences between teacher and external influences, and motivation and external influences. The effect size of the difference between teachers and external influences was large. The moderate influence of external factors becomes even clearer when considering data that assesses the proportions of students considering external factors to be of high, some or little

importance. Whereas more than 90 percent of students thought teachers and nearly two-thirds thought motivation were of high importance, less than half thought that external factors were of high importance for engagement. For every subpopulation, the greatest percentage of respondents felt that items on this scale were only of some importance. Whereas none of the subpopulations felt that teachers and motivation were of little importance, at least some in every subpopulation thought this about external influences, fully a quarter of females, Māori, Pakeha (New Zealanders of European origin), students aged 21 and over, and part-time students.

Concluding thoughts

This paper has analysed engagement literature and data from a survey of students enrolled for the first time in higher education programmes in nine institutions in Aotearoa New Zealand to answer two questions about student engagement. The answer to the first question, drawn from the literature, resulted in a conceptual organiser that revealed a number of perspectives on student engagement. It also resulted in a provisional agenda for action. The answer to the second question established that teachers were the major influence on student engagement followed by motivation and external factors.

It seems appropriate to offer three further ideas for action from the results. These ideas are addressed to policy makers. They recommend that institutions draw up a plan of action for engaging students, that a prime focus in that plan be on developing teachers and teaching, and that in the development process the importance of both intrinsic and extrinsic student motivation be addressed.

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