

Kia mau: Recruitment and Retention. Moderator - Linda Waimarie Nikora

## Cultural identity and academic achievement among Māori undergraduate university students.

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Cultural identity and academic achievement were investigated among a non-random sample of 72 undergraduate Māori university students studying at Massey University. Student problems were examined to identify the types of difficulties most prevalent among this population. The degree to which cultural identity moderates the relationship between student problems and academic achievement was then examined. Major findings were that (a) there is a consistent negative relationship between student problems and academic achievement; and (b) cultural identity moderates the effect of student problems on academic achievement, in that: a high degree of problems were associated with decreases in grade point average among respondents with low cultural identity; while among respondents with high cultural identity, high levels of student problems had little negative effect on grade point average. Despite the study having limitations, the findings have important implications for Māori students, deliverers of tertiary education, tertiary education providers, and those involved in the development and implementation of tertiary education policy.

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*E tipu e rea, mo nga ra o te ao,*  
Grow up O tender child in the days of your world,  
*Ko to ringa ki nga rākau a te Pākehā,*  
In your hands the tools of the Pākehā,  
*Hei oranga mo to tinana.*  
As means to support and sustain you.  
*Ko to ngakau ki nga taonga a o tipuna,*  
In your heart the treasures of your ancestors,  
*Hei tikitiki mo to mahunga.*  
As a plume for your head.  
*Ko to wairua ki te Atua,*  
Your spirit given to God,  
*Nana nei nga mea katoa.*  
The source of all things.  
*(Sir Apirana Ngata)*

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From the signing of the Treaty of Waitangi in 1840 through to the present day, where Māori make up approximately 10% of all university students, the role that Māori have played within New Zealand's education system has undergone tremendous change. Pākehā colonisation of New Zealand brought with it a whole new set of perspectives and ways of living, quite

foreign to those that Māori had traditionally lived under. With this came the need to adapt to a new environment. Significantly, amongst these many changes was the introduction of an education system, which made it necessary for Māori to seek formal qualifications in order to survive both socially, and economically.

The whakatauki<sup>1</sup> from Sir Apirana Ngata that opens this paper is a well-known expression of what he believed Māori needed to do in order to preserve and advance their culture. The proverb encourages Māori to give their hands to the tools of the Pākehā as a means of maintaining their physical well being, whilst giving their hearts to the treasures of their ancestors. This illustrated Ngata's belief that for Māori development to continue western philosophies and ideas needed to be embraced and adopted by Māori society, whilst at the same time Māori needed to acknowledge their ancestry and retain their identity. The proverb also sets down a challenge for both Māori and Pākehā by attempting to capture the essence of what it means to be bicultural in New Zealand (Mead, 1996).

Education has long been identified by academics as one of the pathways to empowerment for Māori. Even today the need to up-skill and refine the practices of the Māori workforce is considered vital for continued social recovery. In a recent statement, former Māori Affairs Minister Dover Samuels identified education as the "key" to bridging the vast social and economic gaps between Māori and non-Māori. Samuels spoke in reference to the recent "Closing the Gaps" report from Te Puni Kōkiri that highlighted the comparative failure of Māori within the education system in terms of both achievement and representation at higher levels of tertiary education (Te Puni Kōkiri, 2000). This statement referred to the flow-on effects that improved education would have towards greater employment, better health standards, and improved income ability.

The possibility that an individual, who is secure in his or her identity as a Māori, is more likely to succeed in an academic setting is a central focus of the present study. Although little research has investigated this interaction, qualitative research has looked to delineate factors that contribute to the success of Māori women in tertiary education (Selby, 1996). This research identified a number of aspects of Māori culture that were considered vital to

the academic success of six Māori women, these included; whānau support, strong whakapapa, and knowledge of their tūrangawaewae<sup>2</sup> (Selby, 1996). Recent Massey University research has also established that Māori who are more secure in their identity have higher educational aspirations than those less secure in their identity (Durie, 1998).

Cultural identity, as it is conceptualised in the present study (see below), is hypothesised to moderate the relationship between student problems and academic outcome among Māori university students: whereby students with a high cultural identity will be less likely to experience the negative academic consequences of experiencing a high degree of problems. Figure 1 illustrates the proposed relationship between variables.

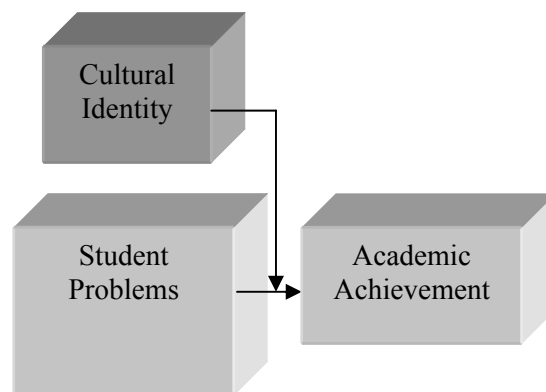


Figure 1. Model 1: Diagram depicting the proposed relationship between variables

The conceptualisation of cultural identity used in this study will be collective self-esteem. Collective self-esteem is a concept that is derived from Tajfel and Turner's social identity theory (1986). Social identity theory posits that self-concept is made up of two distinct components. One is the personal identity made up of certain individual characteristics such as personal talents or abilities; the other aspect is the social identity. The social identity stems from an individual's awareness of his or her membership in a societal group, and the emotional significance that they place on their involvement in that group (Tajfel,

<sup>1</sup> A whakatauki is a proverb or a poem.

<sup>2</sup> Tūrangawaewae – place of origin

1981). Although most often considered in a general sense, collective self-esteem, as it will be considered in the present research, refers to how the individual feels about his or her ethnic group membership. More specifically, how Māori university students feel about the fact that they are Māori. Although the scale is a general measure of collective self-esteem, the authors advise that minor adjustments can be made to the wording of individual items for more specific research purposes.

Research linking the constructs of student problems and academic outcome is relatively common. Of particular relevance was the research by Tofi, Flett, and Timutimu-Thorpe (1996). These researchers developed an ad-hoc scale reflective of problems commonly experienced by Pacific Island students. The authors found problems to be a significant negative predictor of a subjective measure of academic performance. The most commonly reported problem items were worrying about courses, high workloads, and feelings of stress. Using the same self-report measure of academic performance, Seymour (1999) also demonstrated a significant negative association between academic achievement and student problems in a sample of 107 Massey University students.

Past research has proposed that cultural identity may buffer the negative consequences of stress on well-being, and also the negative consequences of stereotype threat on academic outcome (e.g., Romero, 1998; Chatman, 1999). The hypothesis of the present study is that cultural identity acts as a protective factor to the negative academic consequences of experiencing a high degree of problems.

### **Method**

This study was conducted at Massey University. All respondents identified as being of Māori descent and were enrolled Massey University students at the time this study was conducted.

#### *Respondents*

Two non-probability convenience samples were drawn during the course of this study. The first sample recruited volunteers to participate in a discussion

group, the primary function of which was to identify items for a scale assessing the types of difficulties experienced by Māori students studying at Massey University. The second, more general sample, involved the recruitment of participants to complete the questionnaire on which the current study is based, and obtaining consent to access academic records through the Massey University database.

#### *Measures*

##### Cultural Identity

Cultural Identity was measured using a revised version of the Collective Self-esteem scale (CSES: Luhtanen & Crocker, 1992). This scale measures collective self-esteem in a manner consistent with social identity theory (Tajfel & Turner, 1986). The measure was initially developed as a 'global' collective self-esteem scale, that is endeavouring to capture respondents' broad social identity rather than any specific group identity such as gender, ethnicity, or other acquired group memberships. The present research was interested in assessing collective self-esteem for the ethnic group of respondents (specifically Māori). Alterations were made to the scale instructions and some minor rewording was made of individual items so that the scale would assess collective self-esteem related to Māori identity. The CSES asks respondents to indicate their level of agreement with a series of 16 statements on a 7-point Likert scale ranging from 'disagree strongly' to 'agree strongly'. The CSES provides the researcher with an overall collective self-esteem score, as well as subscale scores measuring four proposed dimensions of collective self-esteem. For the purposes of this study a mean collective self-esteem score was utilised [ $\alpha = 0.81$ ].

##### Academic Outcome

Academic outcome was assessed objectively by accessing the Massey University database and retrieving the academic records of respondents. Student grades were then converted to a grade point average (GPA).

##### Student Problems

Difficulties experienced by the students were assessed using a 24-item scale

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developed specifically for this study (see Procedure for details of this process). The scale is made up of a series of statements or certain experiences (for example 'homesickness') that may or may not have been perceived as difficult. Respondents are asked to what extent they agree that each item has been a problem for them. Responses are made on a 5-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The individual responses are summed yielding a total score out of 120 whereby higher scores indicate more experienced difficulties. A Cronbach's alpha of 0.83 was attained for this scale.

### *Procedure*

The data reported here were collected as part of a larger study which has been described in detail elsewhere (Bennett, 2001). Respondents were invited to participate in a questionnaire survey concerned with '...cultural identity and academic achievement...'. Respondents were informed that their responses would be anonymous and confidential, they could skip or omit any questionnaire items, and they could discontinue participation at any time. A procedure was outlined whereby respondents could receive feedback concerning the results of the survey.

### Construction of a Student Problem Scale:

An initial pool of items was generated by reviewing a group of studies that had used such scales in the assessment of student difficulties. Studies were selected based on their pertinence to the current research. Two studies in particular, conducted using sample groups drawn from Massey University, formed the basis of these selected items. Seymour (1999) and Tofi et al (1996) both used problem item scales in the assessment of student difficulties. Their scales consisted of 43 and 42 items respectively, producing a group of 85 items. Construction of these two scales has been discussed elsewhere (Seymour, 1999; Tofi et al, 1996).

Discussion group participants were given the list of items generated by the researcher. Each item was then opened to group discussion. This discussion session was very effective with the group distinguishing a group of problems that

they deemed to be particularly germane in the context of their collective academic experiences, and eliminating items they considered irrelevant. Participants also identified several other difficulties that did not appear in the generated list that they deemed to be particularly invasive.

This process yielded a list of 30 items to be included in the final questionnaire. It was initially intended that a factor analysis would be conducted in order to identify components of student problems. However, the final sample size was not sufficient for this to take place. Following data collection, six items from the Student Problem scale that exhibited non-significant positive correlations with grade point average were removed from the analysis because of poor concurrent validity. Therefore the final Student Problem scale consisted of a 24-item measure assessed as a uni-dimensional construct.

## **Results**

### *Descriptive Statistics*

The sample consisted of 19 males and 53 females. The most common age range was from 18 to 23 (33 % of respondents). The majority (71%) were full-time students, and 83% were studying towards a Bachelor of Arts, a Bachelor of Social Work, or a Bachelor of Business Studies, degree.

Table 1 shows the means, standard deviations and inter-correlations for the study variables. As can be seen, there was a moderate negative correlation between grade point average and student problems [ $r = -0.33, p < 0.05$ ].

### *Main Analysis*

The major hypothesis was that student problems and collective self-esteem interact to predict grade point average. That is, it was expected that low grade point average would be associated with increases in student problems among respondents with low collective self-esteem. Among respondents with high collective self-esteem, student problems were predicted to have little negative impact on grade point average.

To test this hypothesis a hierarchical multiple regression was conducted with grade point average as the dependent variable. Demographic variables of gender,

age, and study mode were entered into the equation at step one. Collective self-esteem and student problems were entered at step two. A vector formed by calculating the cross product term of collective self-esteem and student problems was then added at step three. In this way the variance accounted for by the interaction term was assessed after controlling for the main effects of gender, age, study mode, collective self-esteem and student problems.

Table 1.  
*Means, Standard Deviations and Zero-order Correlations for Cultural Identity, Grade Point Average and Student Problems.*

Measure	Cultural Identity	Grade Point Average	Student Problems
Collective Self-esteem	-	0.185	0.029
<i>M</i> = 22.43 <i>SD</i> = 2.87			
Grade Point Average	-	-	-0.330*
<i>M</i> = 2.55 <i>SD</i> = 1.55			
Student Problems	-	-	-
<i>M</i> = 94.00 <i>SD</i> = 15.50			

Note: an asterisk (\*) indicates the result was significant at an alpha level of 0.05

After step one the equation was not significant. At step 2, the addition of the main effects of collective self-esteem and student problems did produce a significant *F* change. Finally at step three the interaction term involving collective self-esteem and problems was entered producing a significant *F* change, [*F* (1,50) = 4.725, *p* < 0.05]. A schematic representation of the nature of this interaction is presented in Figure 2. The data in Figure 2 were derived by conducting a median split on the student problems and

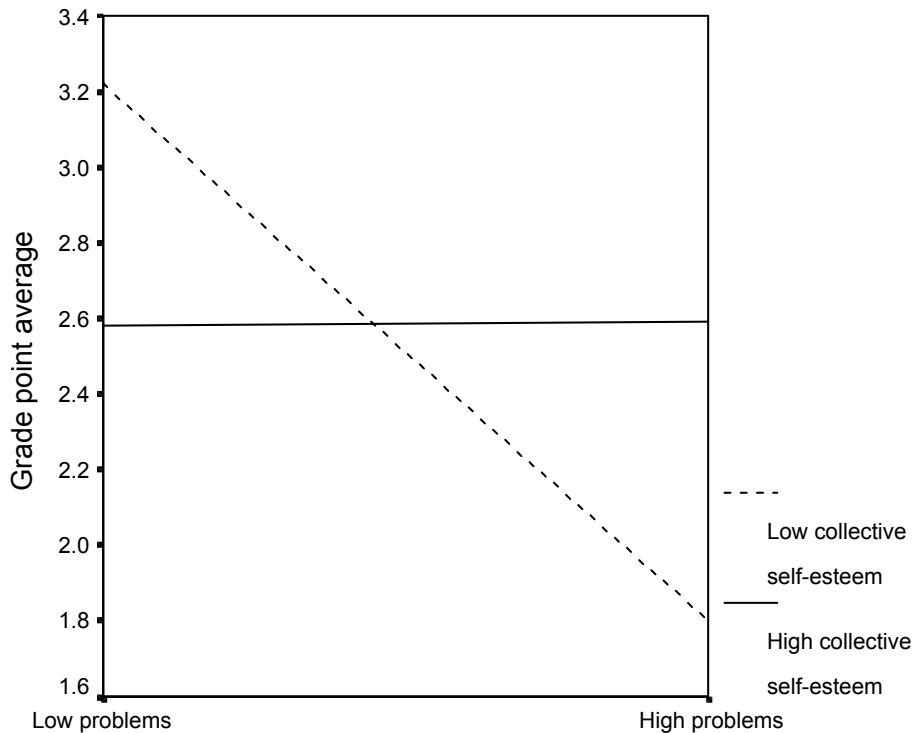
collective self-esteem measures. This classification was done only for the purposes of illustration and the variables were treated as continuous in all statistical analyses.

Figure 2 illustrates that collective self-esteem moderates the effects of problems on academic achievement. The grade point average of Māori students with high collective self-esteem remains relatively stable under conditions of low problems and under conditions of high problems. This is in contrast to the relationship between problems and grade point average among students with low collective self-esteem. Figure 2 shows that among students with low-collective self-esteem, those that experience a high level of problems have a significantly lower grade point average than those who experience a low level of problems.

### Discussion

There are a number of limitations to the present study that must be acknowledged. The small sample size raises issues of statistical power, and means that caution is required in the interpretation of the simple interaction effect. The extent to which generalisation is possible to other groups of Māori students is limited by the fact that the sample was not random. Additionally, the cross-sectional nature of the study limits the extent to which causal inferences are possible and does not clarify whether cultural identity is best viewed as an antecedent or consequence of psychological distress.

Despite these limitations a number of tentative generalisations are possible. There is a consistent relationship between student problems and academic achievement among Māori university students. This is consistent with the findings of other researchers who have investigated these constructs among New Zealand university students (e.g., Tofi et al, 1996; Seymour, 1999). Furthermore, the findings suggest that the relationship between student problems and grade point average is moderated by cultural identity.



**Figure 2.** Schematic representation of how the interaction between collective self-esteem and student problems affects the prediction of academic achievement.

Specifically, the grade point average of Māori students who had high cultural identity scores remained relatively stable under conditions of high levels of problems and under conditions of low levels of problems. On the other hand, the grade point average of students who had low cultural identity scores was significantly lower under conditions of high, than low, levels of problems. Although this is an interesting finding, why this moderating effect occurs is unclear from the research to date. This highlights a need for the development of a theoretical framework that explains the mechanism by which cultural identity exerts its moderating effect. One explanation for this phenomenon may come by drawing parallels to the ‘plasticity’ hypothesis of Ganster and Schaubroeck (1991). These researchers proposed that workers with lower self-esteem are generally more sensitive to environmental stressors and therefore more likely to develop symptoms in response to job stress. Flett, Biggs, and Alpass (1995) supported this theory in a study that assessed levels of stress in relation to job-tension when they found that

under conditions of high job tension, workers with low self-esteem suffered significantly greater levels of stress than workers with high self-esteem. Generalising the ‘plasticity’ model to the results of the current study, one might speculate that among Māori students a strong cultural identity increases one’s resilience to the difficulties that academic life presents, and as a result those students with a high level of cultural identity are less likely to experience the negative academic consequences of a high level of problems.

As a result, a number of recommendations are supported. The strengthening of cultural identity among Māori students could act as a form of *primary prevention* in terms of decreasing the impact that certain environmental stressors have on their academic performance. It provides justification for the continued investment of university resources in to Māori study rooms, Māori tutorial groups, and other initiatives that are likely to enhance and foster the development of cultural identity within an academic setting. Among other things, these initiatives create a space in the

university environment that Māori students can call their own, instilling in them a sense of belonging within the university, and acknowledging the uniqueness of their identity.

In the final analysis, those that would lay claim to expertise regarding what is best

for society would agree that a situation whereby Māori university students are able to advance through a westernised education system, while maintaining links to their Māori heritage, represents a state of affairs to be highly coveted.

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