Investigating the Transition Process Across the Undergraduate Degree: Implementing a Peer Mentoring Program to Address the Second Year Slump.

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December 2009
Acknowledgements

I would like to thank Sophia Xenos and Andrea Chester for their advice, support and supervision throughout this research. I would also like to acknowledge the RMIT Study and Learning Centre and RMIT Universities Leadership, Equity and Diversity unit (LEAD) for their knowledge and advice. Thankyou also to the RMIT staff and students who were continually supportive throughout this research.
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Abstract.

Providers of higher education are constantly faced with questions of how to improve undergraduate students’ experience and how to help students better realise their potential. This thesis examines these questions in a sample of university students across the three years of an undergraduate psychology course. Study 1 utilised 342 first year, 110 second year and 103 third students’ recruited from RMIT University. Student’s completed a demographic questionnaire and an assessment battery that examined social, psychological and academic performance, including The Depression, Anxiety and Stress scale (The DASS), The COPE, The Generalised Self Efficacy Scale, the Rosenberg Self Esteem Scale and the Interpersonal Support Evaluation List. Academic performance was assessed through student Grade Point Averages (GPA). It was hypothesised that the variables social support, self efficacy, self esteem and problem-focused coping would predict lower levels of depression, anxiety and stress, and higher GPA. It was further predicted that good written and verbal English proficiency and previous academic achievement would predict higher GPA scores and lower depression, anxiety and stress scores. Similarly it was expected that better study skills such as asking a tutor a question about content or assignments and working in a study group will predict both higher GPA and lower depression, anxiety and stress. It was predicted that emotion-focused coping would predict higher depression, anxiety and stress scores and lower GPA. It was also predicted that high levels of depression, anxiety and stress would have an association with lower GPA. These associations are widely supported in the literature and serve as the expected regular trends.

This study sought to assess the moderating effect of year level on each of these relationships. Thus, correlational and regression analyses were run to assess the presence of these relationships for each year level, and a moderation analysis was conducted to assess the impact of year level on each of these relationships. For most of the associations the regular trend was anticipated at each year level. However, there was some predicted variability for specific relationships at certain year levels. It was expected that the first and third year would replicate
the standard relationships addressed above, with the exception of previous academic achievement. It was predicted that the first year would show a stronger relationship between previous academic achievement and GPA than either third or second year. Similarly, it was expected that social support would be a more important variable in the first year, than the second and third year. Further, it was anticipated that the second year would show a different pattern of prediction than the first and third year. Specifically, it was anticipated that the stress buffering effects of problem focused coping, social support, self esteem and self efficacy would have less effectiveness in the second year than first and third year. For the second year it was predicted that the remaining variables would reflect regular trends.

The results of Study 1 do support the assertion that year level will have a moderating effect on the strength and direction of adjustment and achievement relationships, with the second year showing the greatest impact on stress reducing variables. Thus, results indicate that for the outcome variable GPA the predictors’ previous academic achievement, Depression, Anxiety and Acceptance coping were all moderated by year level. For each of these associations the relationship was stronger within the second year. This was replicated for Stress, with the variables Substance use, Planning and Suppression of competing activities showing stronger relationships in the second year, than the first and third year.

The third year was also implicated with the investigation of moderation effects finding that the influence of Written English on Depression and Anxiety varies as a function of year level. Specifically, that those students who reported possessing ‘poor’ Written English showed greater levels of depression at third year than first year. This result was replicated for Anxiety, with the third year again showing greater association between Written English and Anxiety than the first and second year. The expected difference between the first and third year in their relationship between previous academic achievement and GPA was not supported. Similarly, social support was no identified as more important in the first year than the second or third year.
The results of Study 1 study provide insight into those factors that are predictive of psychological adjustment and academic achievement, and provide information on how those factors change across the duration of a student’s degree. These findings have implications for university transition programs and counselling services. As the second year was highlighted as particularly influential on student adjustment Study 2 utilised the findings of Study 1 and created a mentoring program targeted at second year students. Student’s were recruited from their tutorial groups, with 23 student’s participating in the mentored group, and 63 serving as the non-mentored control. It was anticipated that by targeting students’ coping and study skills, student GPA could be increased and the variables Depression, Anxiety and Stress decreased. Students were assessed by completing a demographic questionnaire and an assessment battery that included The DASS, The COPE, The Generalised Self Efficacy Scale, the Rosenberg Self Esteem Scale and the Interpersonal Support Evaluation List. Academic performance was assessed through student Grade Point Averages (GPA). Students were also asked to complete a qualitative questionnaire that asked students their opinion of the program and if they perceived any benefits from the program. The data was subjected to an initial MANOVA and a 2 x 2 mixed factorial ANOVA to assess changes between the groups over time. Follow up correlations were also conducted to assess the presence of anticipated relationships identified in Study 1. The results revealed no statistically significant changes in student grades or psychological well being. However, students did note some benefits from the program in the qualitative questionnaire, including improvement in academic skills, support and self reflection. Further, statistical changes were evident for the mentored group in some of the predictor variables. The mentored group showed an increased level of active coping, religious coping, and denial coping across the semester. Additionally, both groups increased in their hours of study, with the mentored group equalling the non-mentored group at the end of semester after initially studying three times less than the non-mentored students. The correlations shed some light onto why these changes did not translate into concomitant changes in adjustment. No association was present
between active coping or religious coping and any of the outcome variables for the mentored students. Similarly, while hours of study was associated with higher anxiety and stress at pre-program for the mentored group, it showed no significant associations at post program. The implications of these outcomes and how mentoring programs could be improved to address the second year more specifically is discussed.
Chapter 1

The Transition to University: Factors Predicting Academic Achievement and Psychological Wellbeing in Undergraduate Students

Beginning the first year of university is often experienced as a challenging and demanding phase of the new student’s life. For school leavers, the first year of university requires transition to a novel environment, which entails a shift from the secure routine and restrictions of secondary school and demands greater levels of independence, initiative and self regulation (Chemers, Hu, & Garcia, 2001). Further, entering the first year of university often occurs with a dislocation from previously established friendship groups or even the family unit if the transition requires the student to enter new living arrangements. The new student’s transition to these demands has been the focus of a considerable body of literature. However, the stress inherent in the university experience does not dissipate with the passing of the first year. The proliferation of research into the first year of university tends to suggest that it is predominantly within this year that students struggle with psychological and academic adaptation. However, research that encompasses the entire undergraduate degree has found quite contrary results. This comprehensive literature indicates that university is a multifaceted stressor that requires continued adaptation throughout the entire undergraduate degree (Arthur & Hiebert, 1996). Thus, the student never ceases to ‘transition’, but continues to adapt to the ever changing stressors that each year of university presents.

Research into student’s transition has often conceptualised this as a unitary outcome. However, the notion of ‘transition’ is in itself a multifaceted concept. Transition has been investigated through both the student’s academic achievement and their psychological adjustment to the stressors that university entails. The literature that addresses both of these outcome measures has implicated a range of variables important to successful adjustment. These include psychological factors such as life event stressors the student experiences during their
course, the maintenance or presence of social support and an individual’s coping style, self-efficacy and self esteem (Aspinwall & Taylor, 1992; Chemers et al., 2001; DeAngelis, 2003; Gall, Evans, & Bellerose, 2000). In addition, academic factors such as previous academic achievement and study habits have been implicated as instrumental in the success of the student’s adaptation to university (Mckenzie & Gow, 2004; Pantages & Creedon, 1978).

Despite acknowledgement of the importance of these variables for student adaptation, much of the literature has restricted itself to analysis of the first year experience. This constraint has left deficits in our understanding of the continued stress adaptation process within the undergraduate degree. Specifically, the exclusion of second and third year analysis of stress adaptation has left the academic and university community ignorant of how the above mentioned adaptive variables changed across the undergraduate degree. The inclusion of this information could improve student success through appropriate and evidence based transition programs. Thus, there is a need for literature to address the transition process in a comprehensive fashion, which includes attention to not only significant adjustment variables, but also addresses them within each year of the undergraduate degree. This chapter will initially discuss those adaptive variables which are important for successful transition, it will then address student’s extended adaptation across the three years of the undergraduate degree.

**Life events and psychological variables.**

Before those factors which can be protective against the negative effects of the transition to university are discussed, it is important to evaluate why the transition to university can be problematic for students. While university can be a positive time for students enabling personal growth and engendering new challenges and experiences, it can also be considered in, and of itself, a stressful life event. However, the transition to university does not occur as a discrete stressor. Instead it requires adaptation to multiple life stressors across numerous domains. The new university student must adapt to novel pressures and responsibilities in their schooling.
These include the handling of assignments, new teachers, and greater freedom in attending classes and examinations (Jackson & Finney, 2002). In addition, the freedom from restriction which the university environment contains can potentially lead to a greater vulnerability to physical assault or deviance (Disch, Harlow, Campbell, & Dougan, 1999; Jackson & Finney, 2002). Finally, the transition to university necessarily involves interacting with a multitude of new people and a separation from peers and social groups which have been previously established. This introduction to an environment comprised of a diverse and numerous student body can result in an increase in racial vilification or marginalisation (Disch et al., 1999; Jackson & Finney, 2002). In addition, the dislocation from previous support networks can serve as a stressor in and of itself as can the requirement to establish new friendship groups (Jackson & Finney, 2002). As the student progresses through the undergraduate degree some of these stressors may become entrenched, such as low social support and deviance, and new stressors are added. These may include increased financial freedom from the family, competition among peers for academic places/marks, greater need to focus on a major and similarly, to make long term career choices (Lemons & Richmond, 1987). Thus, all of these factors are potential life event stressors if the student is unable to successfully manage them. The presentation of these sources of stress can therefore greatly influence the student’s functioning at university because the presence of life event stressors has been shown to translate into poor psychological adjustment (Garnefski, Kraaij, & Spinhoven, 2001; Paykel, et al., 1969; Tiet et al., 2001; Vinokur & Selzer, 1975; Zatura & Reich, 1983)

Life events are theorised to produce a state of disequilibrium which requires the person to go through a period of readjustment (Kessler, Price & Wortman, 1985). This period of readjustment is thought to expose the individual to a greater vulnerability for stress (Kessler et al., 1985). This vulnerability for greater stress is derived from an imbalance between the demand placed on the individual to adjust and their ability to do so (Vinokur & Selzer, 1975). Therefore, when this imbalance is high the results are an increase in psychopathology, such as depression.
and anxiety (Garnefski et al., 2001; Paykel et al., 1969; Tiet et al., 2001; Vinokur & Selzer, 1975; Zatura & Reich, 1983). Psychological literature has expanded on these findings and established that the necessity to adjust is not limited to those events which are viewed as negative. Positive life events entail the same state of disequilibrium and thus result in the same need to adjust and the same level of stress as a result. Therefore, even if university is viewed as a positive new experience and great achievement, it can still result in psychopathology. Further, research into the life events area indicates that the cumulative experience of life events translates into a growing need to adjust to them (Vinokur & Selzer, 1975). This cumulative increase in required adjustment has been associated with an increasing amount of psychological distress (Vinokur & Selzer, 1975). This is particularly pertinent to the adjustment to university as this transition often occurs with several life stressors, thus indicating that the transition to university can be a particularly demanding task. The detrimental influence of the life events associated with the transition to university can be ameliorated through the presence of individual assets. These include social support, self-efficacy, coping styles and self esteem.

**Social support.**

Social support has an important impact on the individual’s transition to university because social support is widely accepted as a protective variable which increases psychological adjustment (Cohen & Wills, 1985; Taylor, 1999). This is theorised to occur through its ability to influence the detrimental effect of the stressful life events associated with the transition to university. Thus, social support is theorised to reduce stress and increase well being when the individual is facing times of stress (Cohen & Wills, 1985). This theory maintains that support acts as a resource that reduces the impact of stress and negative experiences enabling the individual to cope better and experience greater psychological relief (Taylor, 1999). This occurs through its ability to attenuate the appraisal of an event as stressful by bolstering the individual’s self-efficacy and by the knowledge that others will provide assistance (Cohen & Wills, 1985). In
addition, social support has been posited as continually beneficial to the individual through the provision of regular positive experiences and stable social roles (Cohen & Wills, 1985). These in turn are theorised to increase positive affect, yield a sense of predictability and stability and provide recognition of self worth (Cohen & Wills, 1985). Thus, the individual who is able to maintain their social support, or establish a support network quickly will be in a better position to adjust to the stressors entailed in the transition to university. This proposition has been supported by Hachanova-Alampay, Beeher, Christiansen, and Van Horn (2002), Gall et al. (2000), Friedlander, Reid, Shupank and Cribbie (2007) and Aspinwall and Taylor (1992) who all identified that social support is associated with increased psychological adjustment to university. This psychological adjustment in turn is theorised to translate into better academic grades through a reduction in detrimental anxiety and depression. Thus, the individual who suffers less psychological distress is capable of engaging in their academic study with greater efficiency and effectiveness as they possess adequate concentration, motivation, and instrumental aid from peers. This theoretical proposition has gained empirical support from Petrie and Stoever (1997) who found that social support was a predictor of academic performance in first year students. Social supports two-fold influence on psychological adjustment and academic achievement indicates that a student’s appraisal of academic tasks greatly influences their subsequent transition. Implicit in these discussions is the notion of student self-efficacy which is partially a result of adequate support, and an important predictor of successful transition.

**Self-efficacy.**

Self-efficacy was introduced into the psychological literature by Bandura and is defined as the belief an individual holds in their capability to achieve a specific outcome (Chemers et al., 2001). Self-efficacy is pertinent to the discussion of adjustment to university because researchers have identified that individuals who possess this belief in themselves have a more positive approach to learning and achieve greater academic results then individuals who do not possess
this belief (Chemers et al., 2001; Hachanova-Alampay et al., 2002). The self efficacious person’s greater academic ability is theorised to be derived from greater persistence in overcoming obstacles (Bouffard-Bouchard, Parent, & Larivee, 1991) and the use of efficient problem solving strategies. Thus, the individual who is high in self-efficacy approaches problems calmly and thoughtfully, utilising effective strategies for achieving their goals (Chemers et al., 2001). In addition, the student who possesses higher self-efficacy is able to manage their time more productively, utilise sources of help in the environment and monitor their own effort more effectively then those students low in self-efficacy (Chemers et al., 2001). The ability to utilise these processes makes the student high in self-efficacy more capable of flourishing in the unrestricted environment of the university.

Self-efficacy is additionally influential to the new student’s successful transition to university because it has been associated with greater psychological wellbeing. This psychological serenity occurs because the student high in self-efficacy is more likely to view obstacles as challenges rather then threats (Chemers et al., 2001; Sander & Sanders, 2006). This feature of self-efficacy is theorised to reduce an individual’s experience of psychological distress because the individual views a stressful situation as an adversity which they are capable of overcoming. This is theorised to have the effect of reducing the individual’s experience of anxiety through the perception of problems as achievable obstacles which the individual has the resources to overcome, rather then intimidating and unachievable threats (Chemers et al., 2001). The theoretical proposition that the individual high in self-efficacy is less likely to be overwhelmed by the transition to university has gained support from Chemers et al. (2001) who found that first year university students from an American sample who were high in self-efficacy also possessed greater coping resources and viewed obstacles as challenges rather then threats. These authors found that these assets in turn lead to greater psychological adjustment to university life and satisfaction with university life. This relationship is also supported by Hechanova-Alampay et al. (2002) who identified, in a sample of first year American college
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students, that self-efficacy is negatively associated with depression and anxiety. The literature on
the influence of self-efficacy on an individual’s adjustment to university indicates that the way
an individual approaches a stressful situation can be instrumental in their ability to overcome the
obstacle. This notion is reflected in another psychological variable implicated in influencing an
individual’s transition to university. This variable is the individual’s coping styles.

Coping styles.

The psychological literature specifies two coping styles which are derived from the
writings of Folkman and Lazarus (1980). These coping styles are termed problem focused
coping and emotion focused coping. Problem focused coping involves initiating some action
which is directly aimed at solving the problem (Carver, Scheier, & Weintraub, 1989). Carver et
al. (1989) elaborate on this definition incorporating planning strategies to handle the stressor,
suppression of competing activities to focus all of one’s attention on the current problem,
restraining oneself from premature action toward a problem and seeking of environmental
assistance, into the definition of problem focused, or active coping. Similarly, authors have
elaborated on emotion focused coping which is traditionally defined as attempts to manage the
emotions which are elicited by the stressor (Garnefski et al., 2001). Emotion focused coping
involves self blame, blaming others, acceptance of the stressor and resignation to what has
happened, mentally disengaging from the stressor and focusing on positive things, rumination or
a focus on thoughts, reframing the stressor as an opportunity for growth, putting the event into
perspective and catastrophising (Carver et al., 1989; Garnefski et al 2001).

Problem focused techniques are generally considered to be more adaptive as they
alleviate the source of the stress, rather then temporarily alleviating one’s reaction to the stressor
(Garnefski et al., 2001). These problem focused techniques are considered to be particularly
pertinent to the transition to university as students need to address stressors as they arise
otherwise they will fail to keep pace with the requirements of their school program, a result
which will ultimately prolong the experience of stress and add additional stressors (Arthur, 1998). The theoretical proposition that problem focused techniques yield greater adjustment to university has been supported in university samples. For example, DeAngelis (2003) identified that students with greater problem-focused coping styles were more likely to yield greater GPAs and American College Testing scores. In addition Leong, Bonz, and Zachar (1997) found that problem focused coping was associated with personal and emotional adjustment to university, while Mosely et al. (1994) identified that problem focused coping was instrumental in improved psychological health among medical students facing the stressors concurrent with their course.

Use of the alternative coping style, emotion focused coping, has been found to yield the opposite results. Avoidance coping, disengagement, rumination and individuals focusing on their emotional experiences are consistently related to psychological maladjustment in reaction to stressful life events (Aldwin & Revenson, 1987; Lu, 1991; Nolan-Hoeksand, Morrow, & Fredrickson, 1993; Smari & Valtydottir, 1997). These results have been replicated in university samples with the use of avoidance coping being associated with less successful adjustment to university (Arthur, 1988; Aspinwall & Taylor, 1992). However, in spite of this research, analysis of stressor types has provided some support for the use of emotion focused coping strategies. Thus, despite the strong association between emotion focused coping techniques and poor adjustment, research does indicate that in situations in which the stressor cannot be altered, emotion focused coping is the only viable option for successfully reducing the deleterious impact of the stressor, while problem focused coping may be detrimental (Garnefski et al., 2001). Efforts to alter that which cannot be changed will ultimately lead to frustration and greater despondency. Thus, the individual can only address their own emotional reaction to the stressor in order to gain any sort of psychological relief. This proposition has been empirically supported by Forsyth and Compass (1987) who identified in college populations that the use of problem focused strategies when the stressor was perceived to be uncontrollable resulted in
greater psychological distress, while the use of emotion focused strategies to deal with the same stressor resulted in greater psychological adjustment.

The use of either emotion or problem focused coping also requires the student to possess a certain belief in their own efforts and their own capabilities. Thus, research has indicated that students necessarily must possess appropriate self esteem to initiate those actions which will address academic concerns, and also possess the psychological resiliency inherent in self esteem to navigate the psychological stressors of university.

**Self esteem**

Self esteem is defined as an evaluation of the self, specifically the worth one finds in oneself and the acceptance of oneself (Cheng & Furnham, 2003). This construct has been considered an important resource in times of stress (Aspinwall & Taylor, 1992; Pearlin & Schooler, 1978). It is theorised that individuals who possess greater self esteem are less vulnerable to the threatening self-relevant aspects of stressful events and thus experience less psychological disturbance when presented with stress inducing events (Aspinwall & Taylor, 1992). Alternate theoretical perspectives argue that self esteem is beneficial because it provides the individual with the confidence to approach a problem directly. This in turn is thought to facilitate motivation and the use of problem focused coping styles (Aspinwall & Taylor, 1992). The heightened motivation which occurs as a function of self-esteem is theorised to translate into higher academic grades, a theoretical proposition which is supported by Aspinwall and Taylor (1992) who identified that higher self esteem was predictive of greater motivation after three months of college which in turn was predictive of higher grades at the end of two academic years. The benefit of using problem focused coping styles in university has already been demonstrated with problem focused coping styles being associated with greater psychological functioning. Aspinwall and Taylor (1992) support the association between coping styles and self esteem indicating that the individual high in self esteem is less likely to use avoidant coping.
Despite the prolific literature supporting the importance of psychological factors in the adjustment to university, they are not the sole contributors to the individual’s transition to university. While these psychological factors do aid the individual in ameliorating the experience of stress which is associated with the life events concurrent with university, the student is also influenced by their academic ability which is manifest in their previous academic achievement and the student’s current study habits.

Academic Factors

The most widely recognised and perhaps most intuitively obvious predictor of transition to university is previous academic achievement. McKenzie and Gow (2004) and McKenzie and Schweitzer (2001) identified previous academic achievement as the most powerful predictor of academic success in the first year of university amongst Australian first year higher education students. Results which have been supported in multiple studies using American first year college samples (Chemers et al., 2001; Petrie & Stoever, 1997; Ting & Robinson, 1998). Previous academic achievement is thought to serve as an indicator of the individual’s cognitive abilities and their acquired knowledge (Tremblay, Gardner, & Heipel, 2000). Thus it is associated with continued high academic performance. However, academic achievement is also representative of an individual’s study abilities, work ethic, and study habits.

A first year student’s study habits have been associated with their adjustment to the university environment, particularly in relation to better academic grades (Pantages & Creedon, 1975). A student’s commitment to study, which is manifested in the hours a student spends studying, has been identified as one such study habit that is important in increasing academic achievement (Pantages & Creedon, 1975). Additionally, the way in which students engage with their study has been identified as important. Krause, Hartley, James, and McInnis (2005) highlight study habits, such as collaborating with peers in study and seeking help from lecturers and tutors outside of class, as instrumental in increasing the student’s academic achievement. However, the literature shows that help seeking is not always beneficial. Despite the intuitive
appeal of collaborative work as important in yielding better academic grades, Krause et al.’s (2005) meta-analysis revealed that collaborative study was utilised by both successful and unsuccessful first year students. These authors found that those students who were struggling at university were more likely than students who were managing well to borrow classmates’ notes, to work with students outside of class and to use email to contact friends in their course (Krause et al., 2005). This collaborative work may therefore be an indication of the student’s inability to manage the course, understand the course material, or keep up to date with the course in the unrestricted university environment. Conversely, collaborative learning was found by Krause et al. (2005) to be useful for those students managing well at university, providing them with a forum to increase and share their knowledge. Therefore, study habits are not in and of themselves beneficial, and it is important to evaluate the reasons why the student is engaging in them to understand their efficacy.

Despite this complexity, study habits have generally been identified as yielding good academic achievement (Pantages & Creedon, 1975). This academic achievement in turn is theorised to improve the new student’s psychological adaptation to university through two mechanisms. First, it allows the student to view the university experience as a positive one which is worthwhile and rewarding (Pantages & Creedon, 1978). Second, the combined outcome of good study habits and academic grades leads to development of a successful self concept, thus producing higher academic self-efficacy and improved self esteem, variables which have already been highlighted as important in psychological adjustment and continued academic success (Pantages & Creedon, 1978).

A student’s language competency has also been highlighted as important by researchers studying international student adjustment. Ying (2003) posits that international students’ competence in written English influences their ability to complete adequate assignments and thus yield higher academic results (Ying, 2003). Ying (2003) confirmed this theoretical proposition, identifying that those students who possessed greater written English skills yielded
greater GPA scores. Additionally, the international student’s spoken proficiency in English is likely to enhance their integration into the student body and facilitate their social interactions (Ying, 2003), variables which have already been highlighted as important for successful adjustment. Extension of these findings to local students could provide valuable information about students’ likely academic transition and success.

Much of the literature that addresses student transition through the outcome measures of academic achievement and psychological wellbeing does so with first year samples. The first year has remained an important area of research as student attrition is higher in the first year than any other year of the undergraduate degree (The Department of Education, Science and Training, 2004). This attrition is both costly to the university and results in personal loses to the student, such as loss of ability and a reduced chance of completion (Long, Ferrier & Heagney, 2006). This research emphasis is however limited and a one-dimensional conceptualisation of the student’s adjustment process. The literature in this field shows that the influence of the above variables alters as the student progresses through their undergraduate course.

**Transition Across the Undergraduate Degree**

Beginning the first year of university is often experienced as a challenging and demanding phase of the new student’s life. The first year of university requires dislocations from previous routines, environments and people (Chemers et al., 2001). As has been mentioned previously, the new student’s transition to these demands has been the focus of a considerable body of literature. With the focus of the transition literature paying much of its attention to the first year, there is little analysis of the later years of the university degree. Despite the limited research in this area there is some support for the notion that the influence of transition variables alters as the student progresses through their undergraduate course. An intuitive conceptualisation of the university experience would suggest that stress declines as students’ move through their course and become more familiar with the university environment. This is
indeed consistent with research literature that indicates that negative outcomes such as emotional distress occur in close temporal relation to the stressor (Gall, et al., 2000). However, studies in university samples have shown mixed results with evidence of greater stress in second year than first year (Arthur & Hiebert, 1996). Granuke and Woolsey (2005) argue that second year students’ are less committed to the university and experience greater levels of dissatisfaction. Thus, Pattengale (2000) argues that the current focus on the first year leads to adequate supports being instigated in this year, preventing attrition between the first and second year, but their discontinuation after this year leads to more students’ leaving after their second year. While this pattern of attrition has not yet been replicated in an Australian sample with first year attrition continuing to double that of second year, the second year does still show an attrition rate of 10%-11%. (Department of Education, Science & Training, 2004). Further, the importance of second year satisfaction is beginning to be shown in national data with The Australian Council for Educational Research (2008) finding that students’ in the later years of university feel less supported by the university. This finding is particularly pertinent considering that this same research found that students’ who were more engaged at university had higher self reported academic outcomes and intention to return to the university (Australian Council for Educational Research, 2008).

These results imply that university is a multifaceted stressor that requires diverse and sustained adaptation (Gall, et al., 2000). Thus, it is likely that the function, utilisation and influence, of stress-reducing variables alter throughout the course of a student’s undergraduate career. Indeed, preliminary support for this assertion has been noted in the literature on the development of adjustment variables. It has been found that the influence of psychosocial variables, such as coping and self efficacy, alter as a function of situational factors (Gall et al., 2000). Further, the importance of adjustment variables have been seen to alter for different year levels. Researchers Granuke and Woosley (2005) found that increased social contact through on-campus activities was not important to second year students. Thus, these authors identified that
the need for student embededness in the university environment changes, with this variable showing greater importance for first and third year students than second year students. Similarly, Mohr, Eiche and Sedlacek (1998) found that university satisfaction and involvement was not instrumental in senior student’s retention, but had a significant impact on first year student attrition. Thus, it seems that the presence, influence and function of predictive variables may alter across the course of the undergraduate degree as stressors change and familiarity increases.

**Conclusion**

The university experience is an important phase of many people’s lives. Research indicates that there are many variables that can influence how successful the individual will be at navigating the obstacles that occur across the undergraduate degree. These variables include the number and frequency of life events, the establishment and maintenance of social support, psychological variables such as self-efficacy, self esteem and coping styles and academic variables such as study habits and previous academic achievement. However, despite a great deal of research on the individual variables, no studies have performed a comprehensive investigation on how these variables operate for individuals across the undergraduate degree. This deficit in the psychological literature, when considered in combination with research that indicates changes in the use of adjustment variables across the course of the degree, indicates that research is required to comprehensively analyse the transition process across the three years. Such an analysis will enable a specifically geared transition program for students to be devised and implemented. This will increase student satisfaction both through increased psychological wellbeing and academic achievement.
Chapter 2

Study 1: The Transition to University: Factors Predicting Academic Achievement and Psychological Wellbeing Across the Undergraduate Psychology Degree

This study aims to identify those factors that are important to student adjustment. It utilises data from first, second and third year undergraduate psychology students, from the years 2005, 2006 and 2007. Such a large cross sectional data set was utilised in order to be as representative as possible of the undergraduate psychology student experience. Further, in order to be as comprehensive as possible this study conceptualises adjustment as both academic outcomes and psychological well being. In a further effort to capture the student experience across the undergraduate degree as accurately as possible, transition was assessed at each year level. Thus, analyses were performed to ascertain whether predictors of adjustment remain stable at each year level, or whether each year level brings with it idiosyncratic influences that effect the strength or direction of associations. From the literature it is expected that high levels of social support, self efficacy, self esteem and the utilisation of problem focused coping will predict high GPA scores and low scores on a measure of Depression, Anxiety and Stress. Similarly it is predicted that the use of emotion focused coping styles will predict lower GPA scores and higher scores on a measure of Depression, Anxiety and Stress. It is further predicted that previously high academic achievement will predict high GPA scores and low levels of Depression, Anxiety and Stress. Similarly, it is predicted that a greater number of hours a student engages in study and the greater their proficiency in written and verbal English will predict higher GPA scores. It is hypothesised that greater written and verbal English proficiency will predict lower scores on Depression, Anxiety and Stress measures. It is also expected that better study skills such as asking a tutor a question about content or assignments and working in a study group will predict both higher GPA and lower Depression, Anxiety and Stress. Meanwhile seeking an extension is predicted to show higher levels of Depression, Anxiety and Stress and lower GPA. Finally it is
predicted that Depression, Anxiety and Stress will have a negative impact on GPA. These serve as the expected regular trends, it is anticipated that there will be some variability between the year levels in the presence and direction of these relationships.

It is predicted that year level will moderate the strength and direction of the aforementioned relationships. It is predicted that previous academic achievement will have a stronger relationship with GPA in the first year, than either the second or third year. Similarly, it is predicted that social support will more strongly associated with low levels of Depression, Anxiety and Stress and high GPA in the first year than either the second or third. For the remaining associations it is predicted that they will be identified within this year level and not substantially different from the second or third year.

For the second year it is predicted that these students will show poorer outcomes for Stress, Anxiety and Depression. Thus it is predicted that the stress reducing variables of problem focused coping, social support, self esteem and self efficacy will have less effectiveness in the second year than the first and third year. The remaining variables are expected to reflect regular trends.

For the third year there is little literature on how this year level differs from the first and second year. Thus all regular trends are expected, with the exception of the relationship between previous academic achievement and GPA. Thus, it is expected that the association between previous academic achievement and GPA will be weaker in this year level than in either the first or second year.

Method

Participants

The participants were 342 first year, 110 second year and 103 third year psychology students from the RMIT University campuses. Participants were recruited in 2005, 2006, and 2007. Within the first year there were 265 females and 77 males, with a mean age of 21.39 years
and standard deviation of 6.43 years. Within the second year there were 87 females and 22 males, with a mean age of 22.73 years and standard deviation of 9.24 years. Finally, within the third year there were 81 females and 21 males, with a mean age of 21.39 years and standard deviation of 3.8 years. From the whole sample 518 participants were undergraduate students, 17 were graduate diploma students and 3 reported that they were single subject students. Additionally, 10 students noted that they were international students. Furthermore, 461 students were completing a fulltime course load, 22 were completing a part time course load and 2 were double degree students. The remaining students did not identify their course load.

**Materials**

A questionnaire package was used (see Appendix A). This package included a plain language statement and a page ascertaining demographic details. Demographic details included sex, date of birth, student number, ENTER score, country of origin, relationship status, number and age of children, employment status, campus the student attends, student loading and student program. English proficiency was also assessed. This was achieved by asking students to rate both their spoken and written English as either poor, moderate or good. Thus, English proficiency was assessed through self report rankings for spoken and written English on a three point Likert scale ranging from poor to good. Additionally, questions addressing whether a student has sought an extension, participated in study groups, showed another student their work before submission or asked their tutor for help were assessed using a two point yes/no categorical format, with higher scores indicating a negative response. To assess academic achievement students’ semester psychology course results were obtained from psychology course coordinators. A GPA variable was determined by calculating each student’s mean grade from their psychology marks. For first year students’ this involved taking the grade from their one and only psychology subject, while for second and third year students’ this involved taking a mean score from their two psychology subjects in these years. The questionnaire package also
included the following five psychometric scales, administered in the order below. Note that the Life Satisfaction Scale was also included in this package, however its results are not reported.

**Depression, anxiety and stress scale (DASS).**

The DASS is a 21 item scale that assesses psychological health on three scales. These are depression, anxiety and stress (Lovibond & Lovibond, 1995). Items are presented in self-predicated statements which refer to how the student felt over the past week. Examples of items are “I found it hard to wind down” and “I tended to overreact to situations”. Participants are required to respond to each item on a four-point Likert type scale ranging from “did not apply to me at all” to “applied to me very much or most of the time”. Scores are gained from summation of ratings with high scores indicative of greater psychological stress. The DASS has convergent validity with the Beck Depression Inventory and Beck Anxiety Inventory of .74 and .81 respectively, and a Cronbach’s alpha of .96 (Crawford & Henry, 2003).

**The COPE.**

The COPE is a 60 item inventory which assesses 13 different coping styles including Positive Reinterpretation, Mental Disengagement, Venting of Emotions, Instrumental Support, Active Coping, Denial, Religious Coping, Use of Humour, Behavioural Disengagement, Restraint Coping, Emotional Support, Substance Use, Acceptance, Suppression of competing activities and Planning. (Carver, Scheier, & Weintraub, 1989). Items are presented as self-predicated statements such as “I get upset and let my emotions out” and “I laugh about the situation”. The participant is required to respond to each item on a four-point Likert type scale ranging from “I usually don’t do this at all” to “I usually do this a lot”. Responses indicate the participant’s general response to stressful events related to study with higher scores indicating greater use of that coping resource. The subscales of the COPE have Cronbach’s alphas ranging from .62 to .92 and test-retest reliability ranging from .46 to .77 (Carver et al., 1989).
The generalised self-efficacy scale (GSES).

The GSES scale is a 10 item scale that assesses the strength of an individual’s belief in his or her ability to respond to novel or difficult situations and to deal with any associated obstacles or setbacks (Schwarzer & Jerusalem, 1995). Participants respond to self-predicated statements such as “It is easy for me to stick to my aims and accomplish my goals” on a four-point Likert type scale which ranges from “No at all true” to “Exactly true”. Scores are gained from summation of ratings with the highest possible score being 40 which indicates high self-efficacy and the lowest possible score being 10 indicating low self-efficacy. The GSES has a Cronbach’s alpha ranging from .75 to .82 (Lightsey, Burke, Ervin, Henderson & Yee, 2006). The GSES also has criterion validity with significantly higher perseverance and goal attainment scores gained from individuals high on the GSES then people low on the GSES (Tipton, Everett, & Worthington, 1984).

Rosenberg self esteem scale (RSE).

The RSE assesses general appraisal of the self (Rosenberg, 1965). Items are presented as statements such as “On the whole I am satisfied with myself” with half of the items expressing positive attitudes about the self and half expressing negative attitudes about the self. Participants respond to items on a four-point Likert scale ranging from “Strongly disagree” to “Strongly agree”. Possible scores are 10 to 40, with higher scores indicating higher self-esteem. The RSE has a Cronbach’s alpha of .92 (Rosenberg, 1965) and a test-retest reliability of .85 (Bowling, 1997).

The interpersonal support evaluation list (ISEL).

The ISEL is a 48 item inventory that assesses subjective appraisal of social support availability. Items are presented as self-predicated statements with half of the items representing positive statements about social relationships, for example “There is someone I can turn to for advice about handling problems with my family” and half representing negative statements such
as “I feel that there is no one I can share my most private worries and fears with”. Participants respond on a four-point Likert scale ranging from “definitely false” to “definitely true”. Scores range from 48 to 192 with higher scores indicating greater perceived support. The ISEL creates a total Social Support score and also four subscales. The “tangible” subscale is intended to measure perceived availability of material aid; the "appraisal" subscale measures the perceived availability of someone to talk to about one's problems; the "self-esteem" subscale measures the perceived availability of a positive comparison when comparing one's self to others; and the "belonging" subscale measures the perceived availability of people one can do things with. The ISEL has a Cronbach’s alpha of .77 (Cohen & Hoberman, 1983) and a test re-test reliability of .83 (Johnson, Winett, Meyer, Greenhouse, & Miller, 1999). The ISEL has also been shown to have predictive validity for depression and well being as well as stress-buffering effects (Cohen, Mermelstein, Kamarck, & Hoberman, 1985). The Self Esteem subscale is not presented due to redundancies with the Rosenberg Self Esteem Scale.

**Procedure**

Participants were recruited within the first three weeks of semester one through their laboratory classes. This recruitment process occurred in 2005, 2006 and 2007 and targeted all three year levels of the undergraduate psychology degree. This study was approved by the RMIT Human Research Ethics Committee. Students were provided with a Project Information Statement that outlined the aim of the study, the risks and benefits and also informed students’ of what their participation would require. This included informing students’ of the requirement to complete the questionnaire and making explicit that consenting to participate in this study also included consent to access their psychology student grades (see Appendix A). All students were required to read, sign and date this document before they could participate. Furthermore, completion of the questionnaire, which took approximately 30 minutes, was voluntary and alternative assignments were made available to the students who did not wish to participate. The
completed questionnaires were then returned to the researchers in sealed envelopes. To ensure confidentiality each paper was coded and the identifying information locked away.

**Design**

This study was a cross-sectional design that compared cohorts of students’ rather than tracking individual students’ across time. This method was utilised as of the 498 first year students’ enrolled across 2005, 2006 and 2007 only 342 students’ chose to participate in this study. Similarly, of the 210 second year students’ enrolled across 2005, 2006 and 2007 only 110 students chose to participate in this study. Finally, of the 155 third year students enrolled in 2005, 2006 and 2007, only 103 chose to participate in this study. This sample rate in combination with student attrition meant that too few students could be tracked across the entire undergraduate for any meaningful statistics to be conducted. Thus, a cross sectional design was employed. To provide a brief overview of student attrition, Table 1 and Table 2 below present student enrolment and attrition respectively. Table 1 represents the total number of students’ enrolled in the course and the number of students’ who were taking the subject as an elective and as such would not complete any further psychology studies after that year.

Table 1

*Student enrolment in the psychology program at each year level.*

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td>Elective</td>
<td></td>
<td></td>
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<td>First year</td>
<td>151</td>
<td>74</td>
<td>190</td>
</tr>
<tr>
<td>Second year</td>
<td>65</td>
<td>16</td>
<td>64</td>
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<tr>
<td>Third year</td>
<td>60</td>
<td>9</td>
<td>44</td>
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</table>

Table 1 shows that between the first and second year there is large drop in enrolment. This is due in part to the high number of students’ taking psychology as a single subject elective within the first year, and thus not progressing on to the second year. For example, in 2005, 74 of 151
students’ did not go on to study psychology in the second year because of their course structure, leaving 13 students unaccounted for in the second year attrition. Table 2 examines this attrition rate in more detail and outlines the percentage of non-elective students’ who did not go on to study psychology in the subsequent year. As there is no 2008 enrolment data available, the attrition rate from the 2007 sample is not able to be calculated.

Table 2

<table>
<thead>
<tr>
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<tr>
<td></td>
<td>Attrition</td>
<td>Attrition of non-elective students</td>
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<tr>
<td>First year</td>
<td>57.61%</td>
<td>8.61%</td>
</tr>
<tr>
<td>Second year</td>
<td>67.69%</td>
<td>7.69%</td>
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</table>

Table 2 indicates that the majority of students who did not go onto study psychology are those students’ who are taking the subject as an elective. The Department of Education, Science and Training (2004) note that national Australian attrition rates for the first year are approximately 18.5%, with RMIT University showing a first year attrition rate of 18.8%. Table 2 shows that the students’ enrolled in psychology had a much lower attrition rate than the national and university average for first year students’. However, The Department of Education, Science and Training (2004) has indicated that second year students’ have a National attrition rate of 10%-11%. Table 2 indicates lower, though comparable, attrition rates for the second year students’.

**Results**

The data was screened for normality, heteroscedascity, and outliers through inspection of Normal Probability plots and scatterplots (Pallant, 2002). All assumptions were met.
Additionally, multicolinearity was assessed through investigation of correlations. No predictors showed correlations above .7, thus, this assumption was met (Tabachnick & Fidell, 2001).

Further, missing data were minimal and randomly distributed resulting in minimal disturbance to the analyses; as such no adjustment to missing data was made (Tabachnick & Fidell, 2001). To assess those factors that predict student outcomes of academic achievement and adjustment and to investigate the stability of these predictors across the undergraduate degree, the data was analysed utilising a repeated measures design. Several analyses were performed. Table 3 shows the descriptive statistics for each scale by year level. The first analysis was a correlation analysis conducted at each year level to determine the relationship between each predictor and the outcome variables Grade Point Average (GPA), Depression, Anxiety and Stress. Point-biserial correlations are included for categorical variables with two levels. Table 4 through to Table 6 shows these relationships.

Table 3

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<th></th>
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<td>N</td>
<td></td>
<td>M</td>
<td></td>
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<td>.50</td>
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<td>Stress</td>
<td>Self Efficacy</td>
<td>Self Esteem</td>
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<td></td>
<td>253</td>
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activities
Planning 334 10.58 3.37 108 10.23 3.17 101 10.78 2.76

Correlation Analysis Presented by Year Level

Table 4

First Year Transition Correlations

<table>
<thead>
<tr>
<th></th>
<th>GPA</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
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</thead>
<tbody>
<tr>
<td>ENTER</td>
<td>.35*</td>
<td>.01</td>
<td>- .06</td>
<td>.07</td>
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<td>-.04</td>
<td>.03</td>
</tr>
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<td>Hours of study</td>
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<td>-.05</td>
<td>.07</td>
<td>.16*</td>
</tr>
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<td>Ask question about content</td>
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<td>.01</td>
<td>-.05</td>
<td>-.06</td>
</tr>
<tr>
<td>Ask question about assignment</td>
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<td>-.05</td>
<td>-.02</td>
<td>-.10</td>
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<td>.01</td>
<td>.01</td>
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<td>Show others work</td>
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<td>.03</td>
<td>.03</td>
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<td>GPA</td>
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<td>.09</td>
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<td>.65*</td>
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<td>.63*</td>
<td>-</td>
<td>.71*</td>
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<td>.71*</td>
<td>-</td>
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</table>
Table 4 shows that within the first year of University, a student's ENTER score has the strongest relationship with GPA. Hours of Study, Social Support, Active coping, Suppression of competing activities and Planning also showed significant positive correlations with GPA. In contrast Behavioural Disengagement showed a significant negative correlation with GPA. Table 4 further shows that Anxiety, Stress, Denial, Mental Disengagement, Venting, Behavioural Disengagement and Substance Use all share significant positive relationships with Depression, with Stress showing the strongest relationship. As the DASS variables show close relationships to one other, it is informative to look at those variables that share the strongest relationship with these outcome measures outside of the other DASS subscales. Therefore, Table 4 indicates that Self Esteem shows the strongest relationship with Depression outside of the other DASS variables. Additionally, the variables Hours of work, Self-efficacy, Self Esteem, Positive
Reinterpretation, Instrumental Support, Active Coping, Emotional Support, Planning and all of the subscales of Social Support showed significant negative correlations with Depression. For the outcome variable Anxiety, the predictors Depression, Stress, Mental Disengagement, Venting, Denial, Behavioural Disengagement and Suppression of Competing Activities all showed significant positive correlations with Anxiety. Meanwhile, the variables, Self-efficacy, Self Esteem and all of the Social Support subscales showed significant negative correlations with Anxiety. Stress showed the strongest relationship with Anxiety, with Self Esteem showing the strongest relationship outside of the DASS variables. Finally, the variables Hours of Study, Depression, Anxiety, Mental Disengagement, Venting, Instrumental Support, Behavioural Disengagement and Suppression of Competing Activities, all show significant positive correlations with Stress. Anxiety had the strongest relationship with Stress, with Venting showing the strongest relationship to Stress outside of the other DASS variables. Meanwhile, Stress was significantly and negatively associated with Social Support, Social Support (Tangible), Social Support (Appraisal), Self-efficacy and Self Esteem. The correlations for the second year are presented in Table 5.

Table 5

Second Year Transition Correlations

<table>
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<th>Anxiety</th>
<th>Stress</th>
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<td>-.20</td>
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<tr>
<td>Hours of work</td>
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<td>-.05</td>
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<td>.14</td>
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<td></td>
<td>Show others work</td>
<td>GPA</td>
<td>Depression</td>
<td>Anxiety</td>
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<td>-------------</td>
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<tr>
<td></td>
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</table>
Table 5 indicates that within the second year of the undergraduate degree Seeking an extension and ENTER score share significant positive relationships with GPA. Furthermore, ENTER has the strongest relationship with GPA. Meanwhile, Showing others one’s work, Acceptance, Behavioural Disengagement, Anxiety and Depression all share negative relationships with GPA. Table 5 further indicates that the variables Showing others one’s work, Study group, Anxiety, Stress, Behavioural disengagement and Substance use share significant positive correlations with Depression. Meanwhile, the variables, Self Esteem, Self-efficacy, Positive Reinterpretation, Instrumental Support, Active Coping, Planning and all of the Social Support subscales share significant negative relationships with Depression. Anxiety showed the strongest relationship with Depression, with Self Esteem showing the strongest relationship outside of the DASS variables. In addition to this, Table 5 shows that the variables Showing others ones work, Depression, Stress, Venting, Denial, Behavioural Disengagement and Substance Use share significant positive relationships with Anxiety. Furthermore, the variables, Self Esteem, Self-efficacy, Active coping, Planning and all of the Social Support subscales share significant negative relationships with Anxiety. Depression shows the strongest relationship with Anxiety, with Behavioural Disengagement showing the greatest relationship outside of the DASS variables. Finally, Table 5 indicates that the variables Depression, Anxiety, Venting and Substance Use share significant positive relationships with Stress. Meanwhile, the variables, Self-efficacy, Social Support and Social Support (Tangible), Positive reinterpretation, Active coping, Religious Belief, Use of Humour, Restraint and Planning all share significant negative associations with Stress. Depression showed the strongest relationship with Stress, with Self esteem showing the strongest relationship outside of the DASS variables. The correlations for the third year of the undergraduate degree are presented in Table 6.
### Third Year Transition Correlations

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</table>

* Correlation is significant at the 0.05 level (2-tailed)

Table 6 indicates that the variables Hours of Study and Active Coping have a significant positive relationship with GPA, while the variables Depression, Mental Disengagement and Behavioural Disengagement have a significant negative relationship with GPA. Hours of Study showed the strongest relationship with GPA. Table 4 further shows that the variables Substance Use, Denial, Behavioural Disengagement, Anxiety, Stress and Mental Disengagement have a significant positive relationship with Depression. Meanwhile the variables, Self Esteem, Self-efficacy, Active Coping and all of the Social Support subscales have a significant negative relationship with Depression. Anxiety shared the strongest relationship with Depression, with Self Esteem showing the strongest relationship outside of the DASS variables. Additionally, the variables Suppression of Competing Activities, Denial, Behavioural Disengagement, Substance Use, Depression, Stress and Mental Disengagement all share significant positive relationships with Anxiety. The variables, Self Esteem, Self-efficacy and all of the Social Support subscales show a significant negative correlation with Anxiety. Stress shared the strongest relationship with Anxiety, with Behavioural Disengagement showing the strongest relationship outside of the DASS variables. Finally, the variables Denial, Behavioural Disengagement, Substance Use,
Depression, Anxiety, Mental Disengagement and Venting all share significant positive relationships with Stress. Meanwhile, Self Esteem, Self-efficacy and all of the Social Support subscales show significant negative correlations with Stress. Anxiety showed the strongest relationship with Stress, with Self Esteem showing the strongest relationship outside if the DASS variables.

To elaborate on these findings secondary analyses investigated the contribution of each variable to GPA, Depression, Stress and Anxiety respectively. All regression modelling took place using the SPSS General Linear Modelling command (GLM), which permits direct entry of categorical predictors with more than two levels, and automatically re-parameterises them into a form suitable for regression analysis. Those variables that significantly predicted the outcome variables are presented in Table 7 through Table 9.

**Predictor Analysis Presented by Year Level**

**Table 7**

*First Year Predictors of GPA, Depression, Anxiety and Stress*

<table>
<thead>
<tr>
<th>GPA</th>
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<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Active Coping</td>
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<td>.007</td>
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**Depression**

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</table>


Investigating the transition process

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<table>
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Table 7 shows that all variables with significant correlations also showed significant prediction. Further, the strength of correlations translates into strength of prediction, with
ENTER having the highest predictive variance of GPA, self esteem having the highest predictive variance of Depression and Anxiety (outside of the other DASS variables) and Venting having the highest predictive variance for Stress (outside of the other DASS variables). As a three point categorical variable assessing written English competence was included as a significant predictor graphical displays are included to assess the nature of this relationship. Figure 1 shows the nature of this relationship. This graph illustrates that students with good Written English skills have higher GPA scores, with students who assess their skills as moderate showing the lowest GPA scores.

![Graph showing the relationship between GPA and written English competence](image)

*Figure 1. The relationship between GPA and written English in the first year of university (n=342).*

Table 8

*Second Year Predictors of GPA, Depression, Anxiety and Stress*

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<tr>
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Investigating the transition process

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</thead>
<tbody>
<tr>
<td>Depression</td>
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<td>78.33</td>
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</tr>
<tr>
<td>Stress</td>
<td>.32</td>
<td>49.14</td>
<td>&lt;.001</td>
</tr>
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<td>Behavioural Disengagement</td>
<td>.18</td>
<td>23.88</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self Esteem</td>
<td>.16</td>
<td>19.21</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.13</td>
<td>15.68</td>
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<td>Social Support Appraisal</td>
<td>.11</td>
<td>13.29</td>
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</tr>
<tr>
<td>Denial</td>
<td>.11</td>
<td>12.78</td>
<td>.001</td>
</tr>
<tr>
<td>Social Support Total</td>
<td>.08</td>
<td>9.42</td>
<td>.003</td>
</tr>
<tr>
<td>Active Coping</td>
<td>.07</td>
<td>8.29</td>
<td>.005</td>
</tr>
<tr>
<td>Venting</td>
<td>.07</td>
<td>7.45</td>
<td>.007</td>
</tr>
<tr>
<td>Written English</td>
<td>.06</td>
<td>6.80</td>
<td>.010</td>
</tr>
<tr>
<td>Substance Use</td>
<td>.06</td>
<td>6.51</td>
<td>.012</td>
</tr>
<tr>
<td>Social Support Tangible</td>
<td>.05</td>
<td>5.92</td>
<td>.017</td>
</tr>
<tr>
<td>Planning</td>
<td>.04</td>
<td>4.50</td>
<td>.036</td>
</tr>
<tr>
<td>Spoken English</td>
<td>.04</td>
<td>4.19</td>
<td>.043</td>
</tr>
<tr>
<td>Show work</td>
<td>.04</td>
<td>4.02</td>
<td>.048</td>
</tr>
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</table>

## Stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>.44</td>
<td>83.16</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.32</td>
<td>49.14</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self Esteem</td>
<td>.16</td>
<td>20.26</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Substance Use</td>
<td>.15</td>
<td>18.52</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Active Coping</td>
<td>.11</td>
<td>12.88</td>
<td>.001</td>
</tr>
</tbody>
</table>
Table 8 shows that the predictors replicate the results of the correlations with few exceptions. All variables that showed significant correlations were also significant predictors. However, while the strength of correlations translated into strength of prediction for GPA, Depression and Anxiety (ENTER having the highest predictive variance of GPA, Self Esteem having the highest predictive variance of Depression, outside of the other DASS variables, and behavioural disengagement having the highest predictive variance for Anxiety, outside of the other DASS variables) equalled Self Esteem in its predictive variance of Stress, a result not shown in the correlations. As categorical variables are included as significant predictors, Figure 2 though Figure 6 shows the nature of these relationships. These graph show that as Written English proficiency increases so too does GPA. Additionally, they show that Good Written English and Spoken English are associated with lower levels of Anxiety and depression. Meanwhile, for most associations Moderate Written and Spoken English occurs with higher levels of Depression and Anxiety. The only exception to this is the association between Written English and Depression, with Depression decreasing steadily as Written English proficiency improves.
Figure 2. The relationship between GPA and Written English in the second year of university (n=110).

Figure 3. The relationship between Depression and Written English in the second year of university (n=110).
Figure 4. The relationship between Depression and Spoken English in the second year of university (n=110).

Figure 5. The relationship between Anxiety and Spoken English in the second year of university (n=110).
Figure 6. The relationship between Anxiety and Written English in the second year of university (n=110).

Table 9

Third year predictors of GPA, depression, anxiety and stress

<table>
<thead>
<tr>
<th>GPA</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of Study</td>
<td>.13</td>
<td>9.11</td>
<td>.004</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>.11</td>
<td>7.44</td>
<td>.008</td>
</tr>
<tr>
<td>Mental disengagement</td>
<td>.10</td>
<td>6.99</td>
<td>.010</td>
</tr>
<tr>
<td>Depression</td>
<td>.07</td>
<td>4.73</td>
<td>.033</td>
</tr>
<tr>
<td>Active Coping</td>
<td>.06</td>
<td>4.11</td>
<td>.047</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depression</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>.47</td>
<td>87.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Stress</td>
<td>.38</td>
<td>60.11</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self Esteem</td>
<td>.34</td>
<td>50.24</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Anxiety</td>
<td>$R^2$</td>
<td>$F$</td>
<td>$p$</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------</td>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Stress</td>
<td>.52</td>
<td>106.33</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Depression</td>
<td>.47</td>
<td>87.75</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>.24</td>
<td>30.31</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Denial</td>
<td>.22</td>
<td>27.78</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social Support Total</td>
<td>.20</td>
<td>24.09</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social Support Tangible</td>
<td>.19</td>
<td>23.22</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self Esteem</td>
<td>.18</td>
<td>21.57</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Mental disengagement</td>
<td>.15</td>
<td>18.21</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Written English</td>
<td>.15</td>
<td>18.10</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Social Support Belonging</td>
<td>.15</td>
<td>17.92</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.10</td>
<td>10.59</td>
<td>.002</td>
</tr>
</tbody>
</table>
Table 9 shows that the predictors replicate the results of the correlations. All variables that showed significant correlations were also significant predictors. Additionally, the strength of the correlations did translate into strength of prediction with Hours of Study having the highest predictive variance of GPA, Self esteem having the highest predictive variance of Depression
(outside of the other DASS variables), behavioural disengagement having the highest predictive variance of Anxiety (outside of the other DASS variables) and self esteem having the highest predictive variance for Stress (outside of the other DASS variables). As categorical predictors were present as significant predictors, the nature of these relationships is displayed in Figure 7 through to Figure 11. These graphs show that as Written English proficiency increases, Stress, Depression and Anxiety decrease. Similarly, as Spoken English proficiency increased Stress and Depression decreased. Furthermore no student ranked themselves as ‘poor’ on Spoken English proficiency.

![Figure 7](image.png)

*Figure 7. The relationship between Stress and Written English in the third year of university (n=103).*
Figure 8. The relationship between Depression and Written English in the third year of university (n=103).

Figure 9. The relationship between Anxiety and Written English in the third year of university (n=103).
**Figure 10.** The relationship between Depression and Spoken English in the third year of university ($n=103$).

**Figure 11.** The relationship between Stress and Spoken English in the third year of university ($n=103$).
Summary of Correlation and Prediction Analysis

A range of interesting trends emerged from the correlation and regression analyses. For example, while the relationship between GPA and ENTER is important in the first and second year, it no longer maintains a significant level in the third year, with Hours of Study showing the strongest relationship with GPA within this year level. Also interestingly, while Hours of Study has a relationship with GPA in both first and third years, it shows no significant relationship within the second year. Furthermore, Written English shows a significant predictive relationship with GPA in first and second year, but no relationship within the third year. It is also interesting to note that verbal skills (Written and Spoken English) begin to play a role in psychological adjustment in the second and third year that they do not have in the first year. Furthermore, while this relationship is linear in the third year, with improved English skills coinciding with progressively lower maladjustment, the relationship takes on a curved relationship within the second year, with distress peaking for those with moderate English skills.

Some variables however seemed to be fairly stable in their influence. Behavioural Disengagement maintained relationships with all outcome variables across the three years. So too did Self Esteem, Self-efficacy and Social Support for the DASS outcome variables. Additionally, Behavioural Disengagement and Self Esteem often showed the strongest relationship with the adjustment outcome variables outside of the DASS subscales relationships with each other. Other variables such as Venting and Planning also showed reasonably consistent relationships across the three years. Some counter-intuitive findings were also present. For example, Suppression of competing activities was influential in increased stress or anxiety in the first and third years. Table 10 shows each predictor and the corresponding years in which it had influence.
### Table 10

**Direction of Prediction and Year Within Which Prediction Occurred**

<table>
<thead>
<tr>
<th>Variables associated with higher GPA</th>
<th>Year level</th>
<th>Variables associated with lower GPA</th>
<th>Year level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of Study</td>
<td>1 3</td>
<td>Behavioural disengagement</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Planning</td>
<td>1 3</td>
<td>Depression</td>
<td>2 3</td>
</tr>
<tr>
<td>ENTER</td>
<td>1 2</td>
<td>Mental Disengagement</td>
<td>3</td>
</tr>
<tr>
<td>Written English</td>
<td>1 2</td>
<td>Seeking an extension</td>
<td>2</td>
</tr>
<tr>
<td>Showing others ones work</td>
<td>2</td>
<td>Acceptance</td>
<td>2</td>
</tr>
<tr>
<td>Active coping</td>
<td>1</td>
<td>Anxiety</td>
<td>2</td>
</tr>
<tr>
<td>Social Support Total</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support (Tangible)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables associated with higher Depression</th>
<th>Variables associated with lower Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Stress</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Substance Use</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Denial</td>
<td>1 3</td>
</tr>
<tr>
<td>Mental disengagement</td>
<td>1 3</td>
</tr>
<tr>
<td>Show others work</td>
<td>2</td>
</tr>
<tr>
<td>Study group</td>
<td>2</td>
</tr>
<tr>
<td>Spoken English</td>
<td>2 3</td>
</tr>
<tr>
<td>Written English</td>
<td>2 3</td>
</tr>
<tr>
<td>Variables associated with higher Anxiety</td>
<td>Variables associated with lower Anxiety</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>Stress</strong> 1 2 3</td>
<td>Social Support Tangible 1 2 3</td>
</tr>
<tr>
<td>Behavioural Disengagement 1 2 3</td>
<td>Self-efficacy 1 2 3</td>
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<td>Denial 1 2 3</td>
<td>Self Esteem 1 2 3</td>
</tr>
<tr>
<td>Depression 1 2 3</td>
<td>Social Support Total 1 2 3</td>
</tr>
<tr>
<td>Venting 1 2 3</td>
<td>Social Support (Appraisal) 1 2 3</td>
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<tr>
<td>Substance Use 2 3</td>
<td>Written English 2 3</td>
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<tr>
<td>Mental Disengagement 1 3</td>
<td>Social Support (Belonging) 1 3</td>
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<td>Restraint 3</td>
<td>Spoken English 2</td>
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<td></td>
<td>Show work 2</td>
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<td></td>
<td>Planning 2</td>
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<td></td>
<td>Active Coping 2</td>
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<table>
<thead>
<tr>
<th>Variables associated with higher stress</th>
<th>Variables associated with lower Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety 1 2 3</td>
<td>Self-efficacy 1 2 3</td>
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<tr>
<td>Depression 1 2 3</td>
<td>Self Esteem 1 2 3</td>
</tr>
<tr>
<td>Behavioural Disengagement 1 2 3</td>
<td>Social Support Total 1 2 3</td>
</tr>
<tr>
<td>Venting 1 2 3</td>
<td>Social Support (Tangible) 1 2 3</td>
</tr>
<tr>
<td>Substance Use 2 3</td>
<td>Social Support (Appraisal) 1 3</td>
</tr>
</tbody>
</table>
In order to test the significance of the observed variability in these predictors’ influence on GPA and adjustment across the three years, a test of moderation using a regression model was performed. In each analysis, the interaction of year level with the predictor served as a test of moderation (Baron & Kenny, 1986). Only significant results are presented.

**Investigation of between group effects**

A one-way between-groups analysis of variance was conducted to explore the impact of year on levels of Depression, Anxiety, Stress and GPA. There were no statistically significant differences between the groups on these measures. See Table 11.

Table 11

*One way between-groups ANOVA on year level.*

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>p</th>
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<tr>
<td>Depression</td>
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<td>Anxiety</td>
<td>2</td>
<td>2.06</td>
<td>.13</td>
</tr>
<tr>
<td>Stress</td>
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<td>.15</td>
<td>.86</td>
</tr>
<tr>
<td>GPA</td>
<td>2</td>
<td>1.94</td>
<td>.15</td>
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</table>
Moderation Analysis

The results indicated that the relationship between Written English and Depression was significantly moderated by year, $F(4, 538) = 3.12, p = .015$, partial $R^2 = .02$. Table 12 shows the mean and standard error for each Written English classification at each year level.

Table 12

<table>
<thead>
<tr>
<th>Written English</th>
<th>Year 1 $M$</th>
<th>Year 1 $SE$</th>
<th>Year 2 $M$</th>
<th>Year 2 $SE$</th>
<th>Year 3 $M$</th>
<th>Year 3 $SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>6.22</td>
<td>2.80</td>
<td>8.0</td>
<td>3.44</td>
<td>21.00</td>
<td>4.86</td>
</tr>
<tr>
<td>Moderate</td>
<td>6.10</td>
<td>.70</td>
<td>8.14</td>
<td>1.30</td>
<td>8.29</td>
<td>1.84</td>
</tr>
<tr>
<td>Good</td>
<td>5.71</td>
<td>.29</td>
<td>5.12</td>
<td>.51</td>
<td>4.47</td>
<td>.50</td>
</tr>
</tbody>
</table>

Follow-up testing of the interaction effects using simple main effects found a significant difference between the three years for those in the Poor Written English group, $F(2, 538) = 3.48, p = .031$, partial $R^2 = .01$. Pairwise comparisons of estimated marginal means with Bonferroni adjustments indicate that this significant difference exists between first year and third year ($p = .03$).

The results also indicated that the relationship between Written English and Anxiety was significantly moderated by year, $F(4, 537) = 3.10, p = .015$, partial $R^2 = .02$. Table 13 shows the mean and standard error for each Written English classification at each year level.

Table 13

<table>
<thead>
<tr>
<th>Written English</th>
<th>Year 1 $M$</th>
<th>Year 1 $SE$</th>
<th>Year 2 $M$</th>
<th>Year 2 $SE$</th>
<th>Year 3 $M$</th>
<th>Year 3 $SE$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>9.00</td>
<td>2.466</td>
<td>6.50</td>
<td>3.02</td>
<td>21.00</td>
<td>4.27</td>
</tr>
</tbody>
</table>
Follow-up testing of the interaction effects using simple main effects found a significant difference between the three years for those in the Poor Written English group, $F(2, 537) = 4.06, p = .018$, partial $R^2 = .01$. Pairwise comparisons of estimated marginal means with Bonferroni adjustments indicate that this significant difference exists between second year and third year ($p = .02$) and the first and third year ($p = .046$).

Significant differences were also found for the relationship between GPA and the variables ENTER ($F(2, 308) = 8.23, p < .05$, partial $R^2 = .05$), Depression ($F(2, 396) = 3.31, p = .037$, partial $R^2 = .02$), Anxiety ($F(2, 393) = 5.25, p = .006$, partial $R^2 = .03$) and Acceptance Coping $F(2, 390) = 4.59, p = .011$, partial $R^2 = .02)$. The nature of the moderation effect for these variables was ascertained through investigation of $R^2$ values. This investigation indicates that ENTER has a smaller relationship to GPA in year 1 ($R^2 = .12$) and year 3 ($R^2 = .01$), than the relationship between these two variables in year 2 ($R^2 = .19$). Similarly, the relationship between Acceptance coping and GPA is similar in the first year ($R^2 = .01$) and the third year ($R^2 = .00$), but has a stronger relationship in the second year ($R^2 = .05$). This is replicated again in the relationship between Depression and GPA, with the first year ($R^2 = .01$) and the third year ($R^2 = .07$) showing weaker relationships than in the second year ($R^2 = .09$). Finally, this pattern can be seen again in the relationship between GPA and Anxiety, with the first year ($R^2 = .00$) and third year ($R^2 = .01$) showing much weaker associations than the second year ($R^2 = .09$).

Significant differences were also found for the relationship between Stress and the variables Substance Use ($F(2, 531) = 6.25, p = .002$, partial $R^2 = .02$), Planning ($F(2, 530) = 3.35, p = .036$, partial $R^2 = .01$) and Suppression of Competing Activities ($F(2, 529) = 4.93, p = .007$, partial $R^2 = .02$). The nature of the moderation effect for these variables was ascertained through investigation of $R^2$ values. This investigation indicates that Substance Use has a smaller
relationship to Stress in year 1 ($R^2 = .01$) and year 3 ($R^2 = .11$), than in year 2 ($R^2 = .15$). Similarly, the relationship between Planning and Stress is similar in the first year ($R^2 = .00$) and the third year ($R^2 = .00$), but has a stronger relationship in the second year ($R^2 = .09$). This is replicated again in the relationship between Suppression of Competing Activities and Stress, with the first year ($R^2 = .03$) and the third year ($R^2 = .02$) showing weaker relationships than in the second year ($R^2 = .09$).

**Discussion**

The results of this study indicate several variables that are important predictors of student’s academic achievement and emotional adjustment to university. This study adds to this area of literature by analysing the predictive stability of these variables across the course of the undergraduate degree. The results indicate that the influence of some of the predictive variables is moderated by year, with the second year highlighted as particularly influential on these relationships.

The correlation and regression analyses identified multiple variables that are predictive of GPA and the adjustment variables Depression, Anxiety and Stress. However, few variables were stable predictors across all of the year levels. In many cases a variable only showed predictive qualities in one or two years, and in other cases its predictive quality worked in opposing directions depending on year level. For example, inspection of the coping variables indicates that Restraint of competing activities increased anxiety in the third year, but decreased stress in the second year. Meanwhile, the variable Instrumental support increased stress in the first year, but it decreased depression in the second and third year. These results exemplify the variability that year level brings to the transition relationships. Analysis of the predictors shows multiple cases where a variable shows a significant predictive value at one year that is not replicated at other years. This can be seen in both the adjustment variables and the study skills, with differential patterns of variables important to achievement and adjustment appearing at each
level. To test this empirically the moderation analysis was undertaken. This result revealed that
indeed many of these variations do occur as a function of year level.

**Moderation**

Baron and Kenny (1986, p1174) define moderation as a “variable that affects the
direction and/or strength of the relation between an independent or predictor variable and a
dependent or criterion variable”. In this study the student year level served as the moderator and
its influence was found on all of the outcome variables. Investigation of moderation effects
found that the influence of Written English on Depression and Anxiety varies as a function of
year level. The results show that for those students who reported possessing good or moderate
written English year level has no influence. However, for those in the ‘poor’ group the presence
of year level has an impact on the relationship between Written English and Depression,
showing greater levels of depression at third year than first year. This result was replicated for
Anxiety, however the second year was also included, with a significant difference identified
between second and third year. Inspection of the correlations indicates the source of the
moderation. Written English does not have an association with Anxiety or Depression in the first
year, but does show a relationship in the second and third year. This indicates that the narrowing
of student ability within the second and third year is likely to demand a very high standard of
work, making those students who perceive their written English to be low experience symptoms
of low mood, esteem threats and anxiety at these year levels rather than the first year. The
importance of written English in the production of sophisticated assignments and higher grades
is supported by Ying (2003). It seems that this pressure increases across the years levels, making
this relationship especially potent within the third year. This is supported by the findings that
students who had poor written English in the third year showed over twice the distress of
students showing poor written English in the second year. Thus, it seems necessary that written
proficiency be targeted early for struggling students’ to help avoid the distress apparent in this study.

Further inspection of the moderation data shifts the focus from the third year onto the second year. For the outcome variable GPA the predictors ENTER, Depression, Anxiety and Acceptance coping were all moderated by year level. Each time the relationship between these variables was stronger within the second year. This was replicated for Stress, with the variables Substance use, Planning and Suppression of competing activities showing stronger relationships in the second year, than the first and third year.

These results are consistent with previous research that has identified the second year as a time of particular turmoil (Rubin et al., 1990). The second year has been conceptualised as a time of moratorium, with students reevaluating their university and career choices (Graunke & Woolsey, 2005). These students are typically more distant from the institution in terms of commitment to the institution and aid from the institution, leading them to be generally more dissatisfied with their university experience than other year levels (Graunke & Woolsey, 2005). Overall, this period is characterised by heightened stress and uncertainty. This is thought to be derived from students’ attempts to remain engaged with an environment with which they have become disenchanted, and cope with greater academic demands when they may not be certain of their commitment to their course (Sanchez-Leguelinel, 2008).

This so called ‘second year slump’ is supported by the findings of this study that highlight the second year as uniquely influential on transition predictors. Particularly telling is the identification of a stronger association between both anxiety and depression and the outcome variable GPA in the second year. Literature surrounding adjustment indicates that the manifestation of depression and anxiety has a negative impact on academic grades through the concomitant deficits in concentration and motivation, which serve to impede completion of adequate work (Savanum & Zody, 2001). The regression and correlation analyses again give insight into this moderation with depression only showing an impact on GPA in the second and
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third year, and with anxiety only showing an impact on GPA in the second year. Thus, as no
differences between the year levels in amount of depression and anxiety is evident, something
else is occurring in the second year to produce these results. Pattingale and Schreiner (2000)
argue that the second year student is faced with increased expectations, intensified curriculum
and higher academic standards. All of which occur with lowered motivation, feelings of
dislocation and uncertainty about study and career commitment. It could be that the deficits
concomitant with depression and anxiety, such as poor motivation and concentration, have a
greater negative impact during this fusing of heightened academic demand and lower socio-
emotional resources. It is likely that during the first year of university students have fewer
demands or greater resources to ameliorate the impact of anxiety and depression symptoms on
work, while in the third year students are likely to have adjusted to the higher workload and to
have developed adequate coping resources to also reduce the impact of depression and anxiety
symptoms on academic work. However, during the second year, student’s may suffer more from
poor concentration and motivation if they already have a vulnerability to these variables, and
coping resources are difficult to establish or access. This is supported by Boivin, Fountain, and
Bayliss (2000) who argue that difficulties found at all year levels (such as struggling with course
material or interpersonal relationships) have greater potency in the second year because of
concomitant stressors stripping students of resources necessary to meet these challenges.

Interestingly, the association between ENTER and GPA was also stronger within the
second year than either the first or third year. The relationship between previous achievement
and current GPA has been identified by multiple authors (Mckenzie & Gow, 2004; Mckenzie &
Schweitzer, 2001; Ting & Robinson, 1998; Tremblay, Gardner, & Heipel, 2000). This research
has identified previous achievement as a significant predictor of later academic achievement as it
is thought to serve as an indicator of the individual’s cognitive abilities and their acquired
knowledge (Mckenzie & Gow, 2004; Tremblay, Gardner & Heipel, 2000). It is usually expected
that a stronger relationship will exist within the first year between previous and current academic
achievement, as previous achievement has greater predictive power over shorter time periods (McKenzie & Gow, 2004). However, the stronger relationship in the second year may indicate that previous student learning or academic skills become more important within the year that is surrounded by so many stressors and confusion. Thus, students who already possess adequate academic resources may be better equipped to face the second year than students who are still developing such resources. Therefore, those in possession of adequate skills can implement them to achieve higher grades then those struggling with both the year and skill development. This is supported by Gardner (2000) who found that within the second year students’ tend to slide back into study habits they had in high school. Thus, Gardner (2000) found that amongst the difficulties of the second year student’s prefer to use a learning style that was previously effective and required the least amount of engagement with academic endeavours.

Finally, the relationship between acceptance coping and GPA was moderated by year. Inspection of these relationships shows that Acceptance coping is associated with decreased GPA scores in the second year, and has no relationship to GPA in the first and third years. This trend may reflect the different challenges students face across the three years of the undergraduate degree, with students in the second year facing the opposing stressors of increased workload and university disenchantment. The emotion focused technique of acceptance, entails a certain amount of disengagement from the stressor, as the individual resigns themselves to the presence of the stressor (Deangelis, 2003). This resignation is usually effective in providing short term relief, however disengagement from university stressors is likely to result in poor quality work through low motivation to engage with the course. As the second year is especially comprised of doubts over ones future, commitment to university and concern over ones ability at university (Gardner, 2000), second year students may be especially prone to opt for the immediate relief found within Acceptance coping. Additionally, it may be more dangerous for students to adopt this coping mechanism at this year level as the increased demands require greater commitment. Thus, while the first and third years provide protection from the negative
influence of acceptance coping, through either fewer demands or greater alternate coping resources, the second year uniquely sets students up to use a coping mechanism at a time when its implementation is most likely to damage their academic grades.

The unique nature of the second year is replicated in the moderation of the stress relationships, with the coping variables’ Substance use and Planning showing stronger associations within the second year. This again highlights that this year of turmoil significantly impacts the potency of students coping methods and ability to attenuate stress. Planning was found to reduce stress in the second year, but have no impact at the other year levels. This highlights that within this year of dislocation and turmoil time management and seeking active solutions is important to the student’s ability to manage the year, and thus increase their wellbeing. Meanwhile Substance use shows significant correlations with Stress in year two and three, but not in year one. Substance use is an emotion focused coping technique that has been shown to be effective in short term relief of stress, but ultimately results in greater stress over time as it maintains the stressor rather than focusing on its removal. The greater strength of association within the second year may be accounted for by second year students’ tendency to have a higher focus on recreational activities than other year levels (Gardner, 2000; Schaller, 2005). This moderation effect may reflect their greater tendency to engage in recreational substance use, and as such use it as a stress reducing resource (Gardner, 2000). This in combination with the highly stressful nature of the second year is likely to enhance these variables association.

Implications and future research

Overall these results show that the pattern of adjustment is not consistent across the three years of the degree. In particular, this study highlights that the second year is a time of especial strife, impacting significantly the relationship between coping resources and adjustment, and study skills and grades. This study supports the assertions of Rubin et al. (1990) who argue that the second year of university should be the focus of unique interventions. The results suggest
that a focus on time management, problem focused coping, study skills and stress reduction would be useful in helping second year students navigate this difficult year.

The results do show that some variables are important at every year level. The prediction analysis indicates that the variables Self-esteem, Self efficacy and Social support are central to psychological adjustment at each year level. Meanwhile Behavioural disengagement was predictive of all outcome variables at each year level. This is unsurprising as students higher in self esteem and self efficacy are likely to have internal resources that facilitate active engagement with university tasks (Aspinwall & Taylor, 1992; Chemers at al., 2001). Thus, these students will have more confidence to work independently with novel tasks and seek help when needed. They are therefore more able to navigate the difficulties of university and as such are buffered from negative emotional outcomes. Furthermore, students’ higher in these variables are likely to be inoculated against the negative effects of stress through a limited vulnerability to self-relevant threats, thus increasing their emotional wellbeing (Aspinwall & Taylor, 1992). Similarly, individuals higher in social support have an internalised sense of worth, but also access to others who can provide both emotional and material aid when needed (Cohen & Wills, 1985). The combination of these functions allows for better emotional adjustment. While these relationships are expected and well documented, their stability across the three years is impressive. The importance of these variables at each year level indicates that they continue to possess these adaptive functions irrespective of the changing stressors each year brings. This highlights that they are important variables to be considered in transition programs. Similarly, the finding that Behavioural disengagement was equally influential on all variables is consistent with the literature, as avoidance of academic tasks to reduce stress will ultimately lead to the student falling behind (Arthur, 1998). Thus, it appears that no matter what the year level, avoidance of work will lead to poorer transition. Considering these variables importance in the three years of the undergraduate degree it would be essential to address them in any transition program.
The results of this study also have some important implications for the third year. The results show a disturbing relationship between poor Written English and the adjustment variables. This is unsurprising as many third year psychology students’ are competing to continue into postgraduate study. Thus, the emphasis on academic ability is likely to be acutely felt at this year level. The association between Written English and psychological adjustment indicates that early intervention into academic skills would be beneficial to these students’.

Specifically, tutelage that focuses on the advanced writing skills expected in the third year could help to reduce this distress. Such a focus may allow students’ to feel confident in approaching their academic tasks, while also yielding positive rewards in the form of good academic feedback. Thus, this program could be administered in the third year, or may be more useful if implemented pre-emptively in the second year.

The generalisability of the findings from Study 1 should be considered with caution as they apply largely to school leavers whom made up the majority of the sample. Research indicates that differing student demographics can affect these results. Specifically, it has been noted that the first year experience is less stressful and produces higher academic results for mature age students as opposed to school leavers (McKenzie & Gow, 2004). The mature age student’s better academic achievement has been explained by mature age student’s different approach to learning and the psychological assets which come with age. Mature age students’ have been found to have a stronger sense of purpose and more clearly define goals (Krause et al, 2005). In addition, mature age students’ have been found to utilise more productive and deeper learning strategies, to make use of constructive study habits and to be more organised with their study and in possession of better time management then their school leaver classmates (Krause et al, 2005). These characteristics are theorised to account for the mature age students’ greater academic grades. Furthermore, it has been noted that mature age students’ are at an advantage over school leavers because they possess adequate psychological resources to cope with the transition to university. Mature age students’ generally possess a greater amount of maturity then
school leavers. This maturity provides them with a more positive self image, greater impulse control and control over emotions and greater skills for dealing with stressful events (Jackson & Finney, 2002).

Similarly, international students differ in their demographic profile to domestic school leavers and possess different stressors that effect their transition. International students face the additional stress of relocation to a new environment which can result in a sense of loss, intense feelings of anxiety and confusion, isolation and loss of support networks (Hechanova-Alampay, Christiansen & Van Horn, 2002). In addition international students must deal with the culture change that includes new social customs, language (verbal and non-verbal communication), the host nation’s ignorance of their home culture, racism, difficulty in making new social contacts and less access to social support resources. The difficulty the international student faces has been highlighted by authors Krause et al. (2005) and Hachanova-Alampay et al. (2002) who found that international students’ do not adjust to university as successfully as their domestic student counterparts. Thus, the results of this study do not account for these variables and may not be reflective of the international students’ experience. This study did not have an adequate representation of these groups to investigate their transition fully, however future research would benefit from consideration of the transition process for each of these unique groups.

In conclusion, the results of study 1 highlight that transition needs are not consistent across the undergraduate degree. The identification of the second year as possessing features that impact uniquely on transition highlights the need to focus transition programs on this year level. Such a program should include a focus on both psychological adjustment and academic skill development.
Chapter 3

Addressing the Second year Slump: Mentoring Within the University Context

University is a multifaceted stressor that requires constant adaptation. Each year brings with it new stressors and characteristics that can influence this adaptation process. The results of Study 1 indicate that the second year shows a significantly different pattern of adjustment to the other years of the degree. This is consistent with previous research that has shown this year to have idiosyncratic student needs. Researchers who have attempted to address second year student stress and achievement have identified mentoring as a valuable medium through which to attenuate transition issues (Boivin, Fountain & Baylis, 2000). This is consistent with the wider mentoring literature that identifies mentoring as instrumental in the alleviation of distress and increase of student grades. Specifically, researchers argue that students can learn relevant study techniques and problem solving strategies through mentoring programs, which facilitate effective study and learning (Topping, 1998). In addition, mentoring has been shown to increase student wellbeing as it increases student self esteem and support and reduces stress (Topping, 1998). These ideas are beginning to be applied to the second year.

Research is beginning to focus on the second year as a transition process that requires as much investigation and intervention as the first year. Pattengale (2000) reports on the university attrition ‘funnel’. This is the notion that universities lose half as many students in each subsequent year, as they do from the first to the second year. In response to this trend universities have provided multiple programs that seek to attenuate the stressors concomitant with the first year of university. However, Pattengale (2000) argues that these programs have had a “front loading approach” (p32), indicating that first year programs prevent attrition between the first and second year, but their discontinuation within the second year leads to more students leaving after their second year. Thus, Pattengale (2000) argues for the need of the second year to be placed in transition programs focus.
The second year has been associated with a differential pattern of adjustment to the first and third year. During the second year of university the student is now attempting to either recover from a dismal first year, or maintain a certain standard of results (Rubin, Graham, & Mignery, 1990). Further, the second year has been identified as particularly challenging as students become closer to one another in academic ability leading to a significant challenge to previous opinions of their academic selves. This trend has been termed the ‘second year slump’ with previous researchers characterising this phase as a period of greater life dissatisfaction, enhanced stressors, identity crisis, confusion and uncertainty (Rubin et al., 1990).

Lemons and Richmond (1987) extend the discussion of the second year slump, arguing that this slump is derived from doubts about career choices, dissatisfaction with personal relationships and a heightened appreciation for tuition costs. Additionally, these authors argue that these feelings are derived from the sense of ‘no-mans’ land that arises within this year. Specifically, second year students are in a period in which the novelty of university has dissipated, however they are not far enough entrenched in their chosen field to find a sense of identification with their course (Anderson & Schreiner, 2000). Thus, students within this year experience a motivation slump that is derived from disillusionment with the romanticism of university, uncertainty with career choices and feelings of dislocation from peers and faculty (Anderson & Schreiner, 2000). All of which are occurring with an intensified curriculum and potentially greater expectations from both faculty and parents around independence and career investment.

Furthermore, the second year is often a time when universities remove support from students. There is support for this notion within the Australian context with the Australian Council for Educational Research (2008) finding that student perception of support declined from first year across the later years of the undergraduate degree. This report posits that this reflects the lack of support programs in the later years. This is especially pertinent when considered in light of Juillerat’s (2000) findings that sophomores have the highest expectations
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from universities in terms of staff services, financial aid, opportunities for intellectual growth, access to staff and administrators, and students sense of belonging and pride. This research indicates that students both need and want services at the time when services are being withdrawn. The culmination of this research addressing the second year slump indicates that intervention programs similar to those devised for first year students need to be implemented for second year students. This literature is supported by the findings of study 1, which indicated that the second year influences many variable’s protective and destructive influences. Thus, study 1 also highlighted the second year as a uniquely influential year with an idiosyncratic adjustment profile.

Lemons and Richmond (1987) suggest that the best method through which to help second year students is to provide them personalised attention, with the aim of increasing self esteem and offering positive reinforcement within course continuance. Additionally, they recommend the introduction of problem solving strategies and suggest that whenever possible programs geared specifically at second years should be implemented to help alleviate the uncertainty and confusion that often plagues these students. Granuke and Woosley (2005) add to these findings, arguing that programs need to focus on faculty and student interaction, with these authors identifying that this interaction was important to student success. Boivin et al. (2000) agree with the idea that second year students’ benefit from positive university relationships arguing that students gain change through interaction, and the most powerful form of this is the human relationship. These authors argue that second year students need relationships and community, and they propose that this is best gained through mentoring relationships. Mentoring relationships provide students with meaning, information, purpose and support, as well as fulfilling the developmental needs of second year students as identified by Lemons and Richmond (1987). These needs include managing emotions, establishing identity and developing autonomy, competence, interpersonal relationships, purpose and integrity. These authors argue that such programs are necessary for students to gain both growth and security within the
challenges of the second year. Boivin et al. (2000) present several programs that attempt to enhance student competence, autonomy, identity formation and sense of purpose. When they distil the commonalities among these programs they identified that each contained an element of mentoring, which brought the student in contact with someone who could model the pursuit of their chosen profession. The notion that the second year slump can be attenuated through mentoring relationships is supported by several authors. Anderson and Schriener (2000) and Gardner (2000) in their analyses of second year adjustment suggest mentoring as a means to attenuate the feelings of apathy and course uncertainty that occur within the second year. Meanwhile, in a summary of several second year adjustment papers Gardner, Pattengale and Schreiner (2000) argue that mentoring relationships will help alleviate the second year slump.

The implementation of mentoring programs is however hampered by the significant definitional inconsistency across disciplines, which clouds the ability to adequately discuss and compare mentoring programs. Further, with so many programs adopting different conceptualisations of mentoring there are multiple structures that mentoring programs can take, and differing elements of adjustment that they can emphasise. Thus, this chapter attempts to synthesise the multiple definitions to produce a single and comprehensive definition from which mentoring programs can be created. It further presents the multiple aspects important for consideration in devising a mentoring program that specifically targets university students.

**Difficulties in defining mentoring**

Mentoring is a relationship that carries with it a multitude of associated concepts. Though it is often thought of as a simply defined relationship, mentoring is not a clearly conceptualised model. Jacobi (1991) undertook a review of mentoring in an effort to identify its core concepts. Her review identified 15 different definitions of mentoring across the fields of psychology, education, business and research. Within the field of education and psychology the concept of mentor can refer to a specific power relationship, whereby an individual of superior rank or
achievement instructs, counsels and facilitates the growth of another (Blackwell, 1989).

However, some researchers challenge this definition and disregarded the structure of the relationship as important. Instead, these researchers focus on the function and character of the relationship as the central defining characteristic of the mentoring relationship (Levinson, Carrow, Klein, Levinson, & Mckee, 1978). The result of these differing conceptualisations has led to the specific features of mentoring being debated. For example, those authors who espouse the importance of seniority argue that there must be a significant age difference between mentor and mentee (Levinson et al., 1978). This is dismissed by others who contend that age is irrelevant and mentoring can exist between any two people if the quality of the relationship operates in a way that facilitates the growth of one of the pair (Jacobi, 1991). Similarly, some authors argue that the mentoring relationship should span several years, while others contend that it can be a single encounter (Philip-Jones, 1982). Meriam (1983) argues that as the phenomenon of mentoring is not clearly conceptualised or defined, confusion exists within the academic community as to just what is being measured or offered as an ingredient in success. Further, Jacobi’s (1991) review suggests that each discipline has created their own conceptualisation of mentoring, meaning that research cannot be easily generalised. This lack of consensus means that communication about mentoring is difficult, as researchers may be discussing qualitatively different relationships.

In an attempt to reconcile these alternate definitions of mentoring, Jacobi (1991) synthesised the multiple definitions and distilled five common denominators among the different disciplines. These are (a) that the aim of mentoring is achievement for the mentee; (b) that mentoring includes emotional and psychological support, direct assistance with career and professional development, and direct role modeling; (c) mentoring relationships are personal and occur in a direct and private interaction; (d) that while a mentor does not need to be superior to their mentee in terms of age or position, relative to their protégés mentors show greater experience, influence, and achievement within a particular organisation or environment. Finally,
Jacobi (1991) found that relationships which are characterised by these tenets also tend to be reciprocally beneficial for the mentor and mentee. Typically, both experience greater levels of satisfaction, esteem and achievement than those who do not engage in mentoring relationships.

The definition offered by Jacobi (1991) provides the most comprehensive conceptualisation of mentoring that is available across multiple disciplines. Further, more recent publications have noted that it is readily adopted across schools (Sanchez, Bauer, & Paronto, 2006). In its simplest form it states that through direct assistance and support from a knowledgeable other achievement for the mentee should be attained, and further that relationships of this sort are usually beneficial for the mentor also. For this definition to be effectively utilised in a university setting it is important for “achievement” to be properly operationalised and targeted. Previous analysis of student transition has identified two primary areas important for student adjustment to university. These are psychological wellbeing and academic success. Any program that attempts to optimise these areas of adjustment must be able to facilitate the multiple variables that are necessary for these outcomes. Previous research has found that academic skills, social support, self-efficacy, self esteem and appropriate coping are all important for these outcomes in the university context. Thus, in order for mentoring to be a useful conduit to student transition it should be able to facilitate these variables. Multiple authors describe how mentoring is able to achieve these outcomes, and thus achieve success for the mentee as defined in a university context.

**Outcomes for Mentees**

Mentoring within the field of education has been identified as a beneficial method for improving student retention and training across a diversity of fields, including nursing, medicine and teaching. Research into the efficacy of mentoring within educational environments was initiated because the face of higher education was changing. Recent years showed greater diversity of students who now attend higher learning facilities (Giddan, 1988). Specifically,
women and minority groups are increasing in their representation within higher education. Bussey-Jones et al. (2006) write that women and minorities often face daunting academic career paths because of a lack of available role models to reflect the personal experiences of these individuals. As such, many studies have addressed matched mentoring programs that seek to increase the retention and improve the experience of specific minority groups within educational settings and have provided overall support for the effectiveness of such mentoring programs (Bussey-Jones et al., 2006). However, difficulties at university are not faced solely by minority groups. Field, Elliot, and Korn (2006) note that rates of student depression within the general university population are as high as 53%. Meanwhile, student retention rates are an ever present problem in university settings, often costing the university thousands of dollars and restricting the future life endeavours of those who leave prematurely. Therefore, Giddan (1988) raises awareness that while targeted interventions are important, the general student body must not be forgotten. With this thought in mind, researchers have identified that mentoring programs with the general student populace can result in greater academic achievement. Further, research within these populations has identified greater feelings of social support, self-efficacy, self esteem, problem focused coping and lowered depression and anxiety as a result of mentoring programs.

**Academic success.**

Multiple researchers have identified mentoring as a positive influence on a student’s approach to education. Dubois and Silverthorn (2005) in a sample of high school students’ found that mentoring led to greater levels of high school completion and college attendance. Meanwhile Zimmerman, Bingenheimer, and Notaro (2002) showed that mentoring was associated with greater attachment towards and efficacy in school. Sanchez, Esparaza, and Colon (1996) also found that mentoring was associated with positive academic outcomes, including greater expectations for success, higher educational expectations, fewer absences and a greater
sense of belonging. These alterations in student’s approach to education can be explained through Astin’s (1999) model of involvement. Astin (1999) argues that the more a student is integrated into or involved with the university the greater will be that student’s academic achievement and likelihood of graduating. Astin (1999) argues that involvement can take the form of academic involvement (attending lecture etc), faculty involvement and peer involvement. Furthermore, Astin (1999) posits that the latter form of involvement is the most influential in student achievement and adjustment. Tinto (1993) provides a similar theoretical contention, arguing that integration into the university environment will impact a student’s academic goals, future plans and commitment to the university, which will ultimately impact student retention. The importance of student engagement is highlighted within the Australian context by the findings of the Australian Council for Educational Research (2008). This report found that students who were more engaged at university had higher self reported academic outcomes and intention to return to the university. Jacobi (1991) provides support for this contention within the mentoring context, proposing that mentors promote involvement through modelling the benefits of integration into the university, but by also providing the individual with positive peer or faculty experiences (dependent on who the mentor is). The emotional support inherent in this mentoring relationship might encourage students’ who lack confidence or assertiveness to take a more active approach to their education.

Many researchers have found that this increase in involvement translates into higher academic grades. Fox and Stevenson (2006) utilised a first year university sample and found that students identified as at-risk for potentially failing who were integrated into a mentoring program, had a greater number of papers passed then those students who did not complete the program. Further Fox and Stevenson (1996) found that those students who completed the mentoring program had a greater average mark, and a greater gradual increase in their marks, then those who did not complete the mentoring program. Sanchez et al.’s (1996) findings support these outcomes, showing that mentors who had greater educational attainments
facilitated their mentees academic achievement. Thus, Sanchez et al. (1996) postulates that these mentors were able to give concrete advice and provide appropriate role models to facilitate educational advancement.

Other researchers have taken a more direct approach to the development of academic achievement. Rather than increase student grades through modelling and investment in the university, they have included tutelage of academic skills as part of their mentoring programs (Baron & Carr, 2008). These researchers have found that the inclusion of these skills does facilitate better study habits and ultimately better academic achievement. This is important when considering the findings of study 1. Study 1 identified that the second year may inhibit the formation of new study skills. Thus, the implementation of direct tutelage, or the modelling of effective study skills could be integral to a successful second year program.

The results of researchers who identified tangible outcomes of mentoring, such as grades and retention, also indicate the intangible elements of mentoring that are no less vital to mentee success. The research of Astin (1999) and Jacobi (1991) highlights that mentoring increases interpersonal support and individual esteem. While these are important for student retention and success, they are also vital for student wellbeing, and thus should be considered as important in their own right rather than simply as means to academic forms of success. Therefore, the impact of mentoring on student’s experience of social support, self-efficacy, self esteem, coping and emotional wellbeing must be understood in order to create truly meaningful and comprehensive mentoring programs.

Social support.

Social support is the experience of psychological relief and connectedness that comes about through interactions with others. Researchers have identified that social support acts as a beneficial conduit through multiple avenues (Cohen & Wills, 1985; Taylor, 1999). These include the provision of instrumental aid from others, and the provision of emotional support. Emotional
support refers to a network of communication and mutual obligations with others that provides information to the individual that they are cared for, valued, respected and belong to that network (Taylor, 1999). Meanwhile the provision of instrumental aid occurs in the form of material resources, advice and practical help when the individual requires such aid (Cohen & Wills, 1985). Research into mentoring relationships has revealed that mentoring provides both types of social support.

Santos and Reigadas (2002) investigated the importance of tangible aid from mentoring relationship, using a faculty mentoring program. These authors investigated social support outcomes through analysis of the instrumental aid provided by mentoring relationships. They hypothesised that the benefits derived from the mentoring relationship can be conceptualised through a social network theory perspective. This theory postulates that resource mobilisation, upward mobility and social adaptation are more common among those whose social networks are large and diverse. Thus, if an individual has access to an acquaintance that has bridging ties to different social environments, this may facilitate access to resources not readily available in their own social milieu. They sought to support this theory by evaluating the relationship between social embeddedness (defined as frequency of contact with network members) and mentee outcomes, as embeddedness is a key indicator of the mentees potential integration into the supportive community. Results support the social network theory of mentee achievement as they found that the duration of relationship and frequency of contact is important for mentee success. Thus, they conclude that through social integration the mentee is provided with access to certain forms of help, either through networking or exposure to a wider range of experience.

Considering the findings of Study 1, which indicate that second year students’ need additional help to develop relevant skills to navigate the second year, networking with other students’ or academics’ could provide this vital link and expose students’ to multiple areas of aid and advice. Providing additional support for the notion that mentoring facilitates feelings of social embeddedness is research by Pope and Van Dyke (1999). These authors found that mentoring led
to greater feelings of social connectedness for mentees. These feelings of cohesion and clear identification of others on whom one can call allows for greater identification of aid, but also facilitates psychological adjustment through feelings of belonging and support.

This latter assertion indicates that the emotional element of mentoring is important for successful mentee outcomes. Santos and Reigadas (2002) expanded upon their social network theory and write that not only do mentors provide instrumental aid, but they can also be a source of emotional care. Through the development of a mentoring relationship, close ties are formed. These ties are not merely used for practical aid, but are also a source of friendship. This notion was supported by Kilburg and Hancock (2006) who found in their study of 149 mentoring teams that 87% of mentored teachers felt encouraged, empowered, and purposeful when facing challenges with the emotional support provided by their mentors. These authors found that when teachers did not receive this support they felt anxious, insecure and suffered lower levels of confidence. This finding has particular relevance to the finding in Study 1 that second year students’ experience a greater link between anxiety and poor academic achievement. It is postulated that this link is derived from feelings of disconnection within the university. Thus, programs that can help increase feelings of engagement with the university could facilitate better academic outcomes for these students’. Further, the provision of social support could facilitate those coping mechanisms necessary to ameliorate anxiety and the concomitant impact on achievement. Santos and Reigadas (2002) add to these findings highlighting that the emotional quality of the relationship between mentor and mentee in their study aided in the development of positive self images for mentees. The research of Santos and Reigadas (2002) indicates that the mentoring relationship facilitates internal self growth, which is in turn beneficial to the individual. The research of Kilburg and Hancock (2006) and Santos and Reigadas (2002) provide insight into the flow-on effect that a mentors’ support can have for their mentee. The finding that mentoring enables mentees to feel positive, purposeful and empowered when facing novel challenges highlights the importance of mentoring relationships for self esteem.
Self esteem.

Researchers have identified the empowerment and support offered through mentoring programs as a source of individual self esteem. King, Vidourek, Davis, and McClellan (2002) found that a program that promoted individual responsibility and capability while also offering students support resulted in greater levels of self esteem than these students exhibited pre-program. These authors argue that improvements in self esteem can also be gained through improved peer interaction and positive school identification. Koberg, Boss, and Goodman (1998) however tap into the instrumental qualities of mentoring as important in developing self esteem. These authors argue that increased self esteem is derived from the greater confidence a mentee has in the accessibility of aid and also their greater awareness of their own skills. Thus, through the support offered by mentoring, mentees develop an internal sense of confidence and an external sense of security. The development of confidence and security in combination produce higher levels of esteem within their mentoring context (Koberg et al., 1998). The development of these skills could ameliorate the impact of anxiety on achievement in the second year by providing students’ with the necessary resources to meet the challenges of academic tasks. Thus, improved self esteem could provide a buffer from the usual stripping of resources that Boivin et al. (2000) propose happen in the second year because of the additional stressors within this year. This sense of confidence and security translates into greater belief in one’s ability to function within the university environment. Thus, research indicates concomitant improvements in self-efficacy as a result of mentoring programs.

Self-efficacy.

The direct effect of mentoring on self-efficacy was studied by Santos and Reigadas (2002) in a faculty based mentoring program. These authors theorised that a relationship with a mentor expands a student’s awareness of the resources available for coping successfully with demanding academic conditions and, by implication, his or her sense of personal competence.
and self-efficacy. The results of their study indicate that students experienced an increase in college self-efficacy and had better defined academic goals after joining the program.

Hayes (1998) supported these empirical findings in a sample of nurse practitioners and expands on the theoretical underpinnings of this relationship. To explain the positive relationship between mentoring relationships and self-efficacy Hayes (1998) referred to the seminal work of Bandura. Within this theory Bandura states that self-efficacy is the belief in oneself that they can carry out a certain task with a degree of confidence. Self-efficacy can be influenced by multiple features of a task, such as level of difficulty of the task, past successes at attempting the task, or observation of others successfully completing the task. Hayes (1998) argues that within a sample of nurse practitioners this last influencing feature on self-efficacy operates within the mentoring relationship. Thus, Hayes (1998) argues that mentoring contains role modelling as a necessary subcomponent of the relationship and this may influence self-efficacy.

Day and Allen (2004) support this notion, arguing that vicarious experience is not only a central tenet of the mentoring relationship, but also the source of mentee benefit. They expand on this argument and add that self-efficacy is also influenced by verbal persuasion. Thus, the feedback, guidance and verbal support that a mentor provides their mentee should contribute to their self-efficacy. Further, the basic structure of the mentoring relationship falls on line with Bandura’s requirement that the person observed be a credible authority figure. The mentor is by definition more accomplished, experienced and often influential. Therefore they are in an ideal position to help facilitate the mentor’s self-efficacy through modelling and encouragement.

The confidence derived from mentoring programs can also translate into a greater tendency to tackle problems directly. As mentoring increases a mentee’s confidence in themselves, while also increasing their knowledge of how to navigate organisations and on who to call in times of need, mentees typically show advanced problem solving skills. Research has shown that this translates into mentees’ utilising problem focused coping to overcome stressors more readily then individuals who have not received mentoring (Steinahrdt & Doblier, 2008).
This is relevant to the findings in study 1 that planning and the suppression of competing activities was found to be particularly helpful in the alleviation of stress in the second year. Thus, through increasing self efficacy, second year students’ may be more able to utilise these problem-focused coping techniques and experience lower levels of stress. Problem focused coping techniques have been widely recognised as important in successful academic and psychological adjustment to university.

Coping.

Literature that investigates the relationship between mentoring and student outcomes provides information on the potential impact mentoring can have on student coping. Researchers propose that the increased tangible support that mentoring offers serves as a useful tool through which problem focused coping can occur. Thus, Feldman and Thomas (1992) argue that seeking advice and becoming socially integrated into a novel environment serve as important problem focused coping techniques. As mentoring fulfils both of these functions they suggest that mentoring is an avenue through which problem focused coping can be facilitated. The efficacy of transition programs in increasing problem focused coping is supported by Steinahrdt and Doblier (2008), who found that a program which included psychoeducation on effective coping skills, enhanced student resiliency. Additionally, Hsu (2004) shows how a peer mentoring program for new teachers facilitated effective problem solving through modelling and advice.

The culmination of increased social support and self-efficacy, self esteem and coping is a general increase in adaptive functioning. Through the use of these variables mentees gain both external and internal resources that are important in lowering student anxiety, stress and depression. As study 1 highlighted the importance of effective coping for stress reduction and the importance of stress reduction for academic achievement, facilitating these variables in a mentoring program is of primary importance and interest.
Investigating the transition process

Emotional wellbeing.

The stress-inducing nature of university, irrespective of year level and student type, has been well documented. Field et al. (2006) in their study note that rates of student depression within the general university population are as high as 53%. This is exemplified in student drop out rates and university dissatisfaction. However, through mentoring programs researchers have identified that the incidence of anxiety and depression can be markedly lowered. Multiple researchers have identified that the presence of a mentor significantly reduces stress and the incidence of anxiety and depression (Beecroft, Santner, Lee Lacy, Kunzman, & Dorey, 2006; Jacobi, 1991; Southwick, Morgan, Vythilingam, & Charney, 2006). The theoretical underpinnings of this stress reducing function mirror those aspects of the mentoring relationship that increase social support and self-efficacy. Considering the well established relationship between social support, self-efficacy and psychological adjustment, this is hardly surprising.

It is theorised that mentoring facilitates psychological adjustment in two ways. The first is by providing direct assistance in the form of guidance and by helping the mentee navigate the new social environment (Beecroft et al., 2006). The second path to better psychological adjustment is also similar to the concept of emotional support. However, Southwick et al. (2006) extends this literature and theorises that psychological adjustment is gained also through the mentor’s ability to act as ‘external regulators’ for the mentee. Thus, the mentor’s ego capacities and strengths may be ‘borrowed’ by the mentee, until they can gradually internalise them. It is important to emphasise the interrelated nature of the variables of social support, self-efficacy and psychological adjustment, as each outcome is important in and of its self, but also their interrelationships will help inform mentor program coordinators in the future.

The literature on mentee outcomes shows that mentoring can increase variables that are implicated as important in student adjustment to university. These include psychological wellbeing and academic achievement, and their predictors, self esteem, self-efficacy, social support, study skills and coping. These variables influence a students approach to their studies,
and their psychological resources to complete adequate work. Additionally, they impact a student’s psycho-emotional adjustment, which is equally important in student satisfaction, success and wellbeing. Thus, as Study 1 indicated that the second year impedes adequate coping, which in turn has a negative impact on academic achievement, implementing a program that facilitates variables that can increase student wellbeing should be the focus of second year services.

The positive outcomes for mentees is however only half of the picture. As the definition outlined by Jacobi (1991) states mentoring relationships are a two way exchange, with mentors being equally affected by the experience. Research cannot neglect this important half of the mentoring relationship, because without close attention to the mentor’s experience mentoring programs will fail to exist. If mentors see little or no personal value in such schemes the programs are unlikely to succeed.

**Mentor Outcomes**

Intuitively, mentoring programs are devised to benefit mentees. However, research indicates that mentors too derive positive outcomes (Ragins & Scandura, 1999). The benefits that mentoring affords mentors can be divided into intrapersonal and instrumental gains. Ragins and Scandura (1999) and Eby, Durley, Evans, and Ragins (2006) posit that the primary benefit for a mentor is their own sense of satisfaction in fostering the development of a protégé. This sense of satisfaction can be considered in the context of Erickson’s developmental stage theory. Specifically, this sense of personal achievement in fostering a protégé occurs conceptually within the stage of generativity and occurs because contributing to the next generation provides the mentor with a sense of immortality and meaning. Similarly, this sense of satisfaction could be derived from the mentor’s own sense of stagnation within their own university career. When an individual reaches a level suitable to mentor another, their own movement and enthusiasm for the work may have plateaued. Thus, passing on one’s skills to an enthusiastic other can provide a
Investigating the transition process

Sense of achievement and productive use of one’s skills. Furthermore, contact with an enthusiastic other may provide a sense of rejuvenation and shared sense of enthusiasm. This theory has gained empirical support in the seminal work of Kram (1985). Kram (1985) found that mentoring provided the mentor with a sense of support and intrinsic satisfaction from helping others. More recently these results have been replicated by Glasser, Hall, and Halpern (2006).

Research indicates that mentoring provides not only emotional or intrapersonal benefits for the mentor, but it also provides career oriented gains. Glasser et al. (2006) found that mentors felt that involvement in their mentoring program increased their communication skills, knowledge base, improved their social skills, employment skills, self confidence and organisational skills. Heirdsfield, Walker, Walsh, and Wilss (2008) investigated mentor outcomes in a university transition sample and their results indicate that mentors benefit because they develop professional attributes that are both worth fostering and will have long term benefits. These include two way communication skills and new personal insights, which have long term outcomes for self worth, their work and study career. Thus, the leadership skills fostered through the mentoring relationship can lead to later career success. Further, it has been proposed that mentoring facilitates interpersonal skills that can lead to later career enhancement. Within the university context an important outcome for mentors is their greater identification with the organisation or university through mentoring.

Identification with the school or faculty is especially important for university outcomes. Research indicates that the mentor may gain benefits from becoming more involved and visible within the organisation. Within the university context this is congruent with Astin’s (1999) theory of involvement. Thus, mentors may become more involved and dedicated to the learning community, enhancing their academic success through both greater personal commitment, but also through greater visibility which may leave them open to areas of faculty help and advancement that they would otherwise not receive. This is supported by Kram (1985) and
Ragins and Scandura (2002) who found that involvement in a mentoring program improved the mentors recognition and respect from co-workers.

Such research as this indicates that mentoring provides a multitude of positive outcomes for those who wish to be mentors. When taken together with the positive outcomes for mentees, it appears to be an ideal solution for universities worried about student wellbeing and achievement. However, the benefits of mentoring programs are derived from interpersonal relationships. Psychology has long understood that human interactions are tumultuous and often difficult. As such, any review of mentoring and its respective benefits, must take into account the multitude of personality and organisational difficulties which may hamper an otherwise productive mentoring relationship.

**Threats to Positive Mentoring Outcomes**

Mentoring relationships exist on a continuum. While some are effective, others are not. Despite the multitude of benefits mentoring can provide, it can also be a negative and detrimental experience for both mentor and mentee. Eby and McManus (2004) have analysed mentoring relationships and categorised them as either effective, marginally effective, ineffective or dysfunctional. Relationships are defined along this continuum based on the intent behind their ineffectiveness. While some relationships will fail despite both mentor and mentee best efforts, some are characterised by malice and negative intent.

Those relationships that are characterised by malice or negative intent fall within the dysfunctional end of the continuum. Mentors may provide mentees with negative experiences by being exploitative, malevolent or indifferent to the mentee (Eby & McManus, 2004). These relationships are based around gain for the mentor at the expense of the mentee, and usually involve the mentor using the mentee to facilitate their own career rather then guide the mentee through theirs. However, the mentee as the other half of this relationship can also contribute to poor mentoring outcomes. At the dysfunctional end of this continuum the relationship is
characterised by malice or ill-intent. The relationship may be detrimental because of negative relations, malevolent deception, sabotage and harassment (Eby & McManus, 2004). Thus mentees can also abuse the mentoring relationship, demanding too much of their mentor or deceiving them for their own ends. Very few mentoring relationships exist at this poor end of the continuum. Those that are ineffectual usually exist higher on the continuum in the realm of ineffective relationships. These relationships fail despite both parties having positive intent towards one another.

Relationships that fall into the category of ineffectual relationships fail despite positive intentions because of interpersonal difficulties. Ineffective experiences are generally characterised by mismatches in values, work styles and personalities. Eby and McManus (2004) identified categories of interpersonal difficulties that often play a role in these ineffectual relationships. These categories are spoiling, benign deception and submissiveness. Spoiling refers to a good relationship that has soured because of real or perceived disloyalty or disappointment. This disloyalty or disappointment is generally derived from difference in judgment or expectations, but is experienced by either mentor or mentee as a betrayal of trust and intent. Benign deception differs from spoiling in that it includes active deception from one party, however its intent is not malicious. Benign deception includes behaviours such as impression management and ingratiation where intent is to enhance one’s self image. Thus, while no harm is intended it sets up a superficial relationship that is devoid of the relational trust required in an effective mentoring relationship. Finally, submissiveness involves a lack of assertion on the part of the mentee. This is generally characterised by the mentee requiring constant direction or support from this mentor. This kind of behaviour may lead to over dependence on the mentor, which can lead to abuse of power by the mentor, or an experience of frustration towards the mentee. Ineffective relationships generally lead to feelings of frustration or disappointment for both parties and few benefits are derived from the experience.
Marginally effective relationships are those that teeter between effective and ineffective. These relationships provide some mutual benefit, but also include elements that serve to sabotage the mentoring relationship. Eby and McManus (2004) write that these relationships are often characterised by protégé lack of motivation or inability to acquire knowledge. These two features limit the growth of the protégé and investment of the mentor. The flow on effect is a disengagement from both sides, where the mentoring relationship becomes only partially invested in and utilised. Ragins and Scandura (1999) found that inexperienced mentors who faced these negative dynamics reported that mentoring took up more time than it was worth. This finding is supported by Heirdsfield et al. (2008) who found that mentoring can be frustrating for mentors as some students are particularly difficult to engage and motivate. This can lead to self doubt and frustration at lost time. The research of Ragins and Scandura (1999) provides some hope for avoiding such negative interactions as they found that experienced mentors were better able to navigate such relationships and experience positive outcomes as a result. This research indicates that with proper planning and structure programs can be devised that facilitate the greatest outcome for both mentor and mentee.

The question of appropriate structure goes beyond micro skills such as engagement and motivation. To adequately discuss how programs should be set up researcher’s first need to decide on the essential features the program will contain. This includes questions of who will mentor, when will it happen and how will it occur? Answering these questions will provide adequate structure to programs to set up mentoring relationships that have clear boundaries, expectations and roles. Further, a well planned mentoring program will provide appropriate accountability to both mentor and mentee, and appropriate support around the relationship to avoid the potential pitfalls for the relationship. The structure of the program is therefore imperative to mentee learning and mentor outcomes. To evaluate what form of mentoring will be most effective we must go back to the original definition of mentoring and find those that most adequately fulfil the criteria of support, aid, superiority of experience and direct interpersonal...
contact. Research indicates that for university students the most beneficial mentoring model that fulfils these criteria is peer mentoring (Bussey-Jones et al., 2006).

**Proposing a Model of Peer Mentoring**

David Levinson delineates five functions important to the mentoring relationship. These are teaching, sponsoring, guidance, socialisation into a profession, and the provision of counsel and moral support that will aid the mentee in the realisation of their dreams (Bussey-Jones et al., 2006). Traditionally, these functions have been fulfilled by an academic in a place of seniority, such as a supervisor, or trusted teacher. These traditional programs have been beneficial in increasing student’s sense of competence, and have provided important professional links and networks (Bussey-Jones et al., 2006). However, Bussey-Jones et al. (2006) identified several limitations to traditional mentoring models. The first is the inherent bias of power within these relationships, in which the mentee can not achieve an equal and independent relationship with the mentor. Secondly, there are significant time and availability restraints on academics, limiting their ability to provide comprehensive and ongoing support. Finally, there may be significant differences in age, gender or ethnicity, which prohibit effective mentoring relationships developing. In light of these limitations researchers have sought alternate methods of providing mentoring relationships. The most commonly used model is utilising peers within the mentoring role.

Within the peer mentoring model students who are essentially equal in age, experience and rank mentor each other (Bussey-Jones et al., 2006). Bussey-Jones et al. (2006) argue that because the mentor and mentee relationship in the peer model is inherently equal, the relationships are more mutual. The benefit of this equality is a greater likelihood of the relationship to take on friendship qualities, where each feels more comfortable in sharing their experiences and information. Further, peers are more likely to be at similar points in their personal lives, therefore they can more easily relate to one another’s need to balance work and
social/familial commitments. Bussey-Jones et al. (2006) argued that the absence of the power inequality allows for a more reciprocal relationship, providing space for mutual feedback on issues such as career planning and the mentoring relationship itself. Overall, peer mentoring is thought to enhance professional support, a sense of wellbeing and career development (Bussey-Jones et al., 2006). This has gained support from research by Glasser et al. (2006) who found that students prefer relying on peers rather than services offered by the university. Further they found that this reliance was effective as those students who engaged in the peer mentoring program felt a greater sense of belonging and overall a more successful transition achieved. This is relevant to the literature that focuses on the modelling aspect of mentoring and the instrumental aid mentoring can facilitate (Hayes, 1998; Santos & Reigadas, 2002). As study 1 indicated that students’ need to develop new academic skills and coping mechanisms, interacting with a peer who has successfully developed these skills could be of primary interest to second year programs. Such interactions are relevant to the modelling of these skills, as well as the provision of direct instrumental aid from a knowledgeable other who is likely to not only understand their concerns, but have a more accurate idea of how to help as they have so recently managed the same problems.

The utilisation of direct peers does have some limitations. The first is that classmates are often in direct competition with one another, a state which will naturally create a challenge for reciprocal support (Bussey-Jones et al., 2006). Further, the equality of experience may lead to a stagnation of networking and guidance. This equality of experience can also lead to lower levels of motivation and feelings of obligation towards the mentor, and as such can lead to unproductive dynamics. However, research into peer mentoring schemes has identified processes which can facilitate the effectiveness of the peer mentoring experience.

In reviewing a peer mentoring program at the University of Western Sydney, Dearlove, Farrekkell, Handa, and Pastore (2007) note the scheduling of mentor and mentee interaction is a necessary element of successful peer mentoring programs, as their study identified, casual
scheduling was a main problem in their mentor program establishment. These authors draw on the work of Handa (2004) as well as Mcinnis, James, and Hartley (2000) who note that students spend only the necessary amount of time on university campus. These authors argue that students’ time is limited and full of other commitments. Thus, university has transformed from the central aspect of students lives to only a single portion to which their energies can be attributed. This shift has resulted in difficulties in scheduling mentoring sessions in student “free time” as rarely do both mentor and mentee schedules share the same block of unallocated time.

With these considerations in mind Dearlove et al. (2007) argue that the optimal mentoring program would embed the mentoring process within the course, thus it becomes a part of the university degree program and is eligible to have allocated time at the university planning level. Research by Glaser et al. (2006) study highlights some of the difficulties in maintaining attendance at out of class mentoring programs. In their study they found that seven of their mentors reported none of their mentees attended the sessions, while a further fourteen mentors had only one mentee attend their sessions. Analysing the effects of this low attendance rate, Glaser et al. (2006) found that low attendance correlated with low exposure to the program, and lower benefits to both mentor and mentee. Thus careful planning of peer mentoring programs is required before mentor and mentee ever meet, so as to increase the efficacy of the interaction and ensure that the mentor feels supported by the faculty throughout the experience.

Research suggests that support of the mentors is vital not only in the planning of the program, but should also continue across time. Glaser et al. (2006) argue for the continuity of support from training to program administration. These authors in conjunction with Beecroft et al. (2006) contend that mentors need to be provided with appropriate training that provides specific guidelines that inform mentors of their roles and responsibilities. This contention is expanded on by Dearlove at al. (2007) who argue that mentors require a continuous supportive contact on whom they can rely in times to stress and uncertainty. Glasser et al. (2006) suggest that this continuous contact take the form of planned debrief sessions. This session allows the
mentors an opportunity to share their experiences, reflect on what has been occurring with their
groups and debrief on any issues which have arisen. Thus, the debrief allows mentors to feel
supported and gain advice and additional training in any areas which may become problematic.
This ultimately has a beneficial flow-on effect for the mentees.

The time and manner in which the program is to be implemented is therefore of the
utmost importance. Equally important though is the content and structure of the material
addressed within the mentoring scheme. Ten Cate, Snell, Mann, and Vermunt (2004) propose
that mentoring programs should work within the constraints of their Learning Oriented Teaching
model. This model addresses the cognitive, affective and metacognitive components of the
mentee. The cognitive aspect involves the information the individual acquires, while the
affective component deals with the learner’s motivation to start and persist in concentrated
learning. This latter aspect relates to both intrinsic and extrinsic motivations as well as to the
individual’s emotional investment in the material they are studying and their readiness to study.
Elements such as attribution style, self-efficacy and coping styles are all part of this component.
Finally metacognitive skills are those relating to the process of studying: planning to study,
monitor and evaluate study. Thus, it can be extrapolated from this model that mentoring
programs need to address academic specific domains of courses, such as learning skills and
psychosocial or motivational factors. This is confirmed by Study 1, which indicated that both
academic skills and psychosocial coping needs to be addressed for second year students’.

The way in which this information is offered is important. Baron and Carr (2008) and
Steinahrdt and Doblier (2008) utilise a direct tutelage approach within mentoring, having
mentors provide direct information on components such as study skills and coping. However,
Ten Cate et al. (2004) highlight that the way in which this information is presented is important
to consider, as it can lead to either effective learning, or mentee frustration. Ten Cate et al.
(2004) argue that the aim of mentoring programs should not be to replicate a tutoring
relationship, but to aid in facilitating independent learning. However, these authors argue that
students differ in their ability to self regulate their learning and direct the course of a mentoring relationship, thus their need for external guidance may differ. It is important therefore that programs and mentors remain flexible enough to provide no more or less guidance than is needed to their mentee. The provision of more guidance than is needed will lead to wasted energy and adverse effects may result. Students may become lazy, bored or irritated. Alternatively, when too much guidance is given students may not bridge the gap between their lack of knowledge and the required educational task. A balance needs to be found between guidance and self regulation. Vermunt and Verloop (1999) call this the search for constructive friction between learning and teaching. Similar to Vygotsky’s zone of proximal development, this is the distance between the actual developmental level as determined by independent problem solving capability and the level of potential development with the assistance of others. Constructive friction leads to an effort by the student to master new skills and knowledge, by demanding more intellectual effort than routine activities take. A student whose capacity for independent learning is yet undeveloped needs more guidance to experience a constructive friction, while the same amount of guidance may not result in significant learning actions in students who already work well by themselves. Too little or too much guidance, relative to the needs of the student, will result in what has been called destructive friction, and therefore inadequate learning. Either the student will be unable to grasp the level of thinking and will refrain from learning, or he or she will experience a repetition of known information and will not learn in either case.

**Conclusion**

University is a potential stressor that provides unique challenges to students. Research shows that mentoring is one strategy through which to alleviate some of the negative elements of the university transition, for both students engaged as mentors and mentees (Ragins & Scandura, 1999). However, such programs need to be geared to the idiosyncratic needs of the mentee group, as mentoring can be utilised for a variety of different outcomes. Thus, mentoring
programs should begin with analysis of their target population, and then be structured around this population's needs, taking into account some best practice elements that the literature has identified. Thus, the literature indicates that programs need to be carefully constructed in order to gain positive outcomes, with mentoring relationships prone to the dysfunction of all interpersonal relationships. The literature shows that programs which focus on the direct tutelage of skills utilising peers, provide attention to mentor support and training, and flexibility to meet mentee needs and demands, are likely to produce successful outcomes for students. Rigorous analysis of such programs and their construction needs to occur in order to gain better insight into what the beneficial outcomes of such programs are, and to extend the literature on how they can be implemented in the university context.
Chapter 4

Study 2: Addressing the Second Year Slump; Implementing and Evaluating a Peer Mentoring Program.

University is a stressor that requires adaptation across the course of the entire undergraduate degree. Study 1 looked into this adjustment process in detail and found that the negative influence of university related stressors is most pronounced within the second year. This study found that the second year appears to have stressors that are associated with poorer outcomes for students than in both the first and third year. These results are consistent with previous research which has identified the second year as a time of particular turmoil (Rubin, Graham, & Migenerly, 1990). The second year has been associated with a differential pattern of adjustment to that of the first and third year, with students adapting to new roles and academic expectations, experiencing greater disillusionment and disengagement from study and reevaluating their career choices (Rubin et al., 1990). This trend has been termed the ‘second year slump’ with previous researchers characterising this phase as a period of greater life dissatisfaction, greater stressors, identity crisis, confusion and uncertainty than other years in the undergraduate program (Rubin et al., 1990).

Universities that have attempted to address student stress and achievement have identified peer mentoring as a valuable medium through which to alleviate stress and increase student grades. Additionally, researchers who have investigated the second year slump have suggested that mentoring can be effective in ameliorating the negative influence of the second year. Peer mentoring has been associated with a broad range of benefits for mentees including “more active, interactive and participative learning… swift prompting, lowered anxiety with correspondingly higher self-disclosure, and greater student ownership of the learning process” (Topping, 1998, p.53), all of which have the potential to improve learning outcomes for students. In addition, mentoring has been shown to increase student well being as it increases
student self esteem, support and reduces stress (Topping, 1998). As Study 1 implicated self
estate, social support and reduced anxiety, depression and stress as predictive of student
wellbeing, the use of peer mentors appears ideal to help second year students navigate this
difficult year. This is further confirmed by Topping (1998) who argues that students can learn
relevant study techniques and problem solving strategies through mentoring programs that
facilitate effective study and learning. As study 1 highlighted problem focused coping, showing
others ones work and seeking an extension as predictive of adjustment, a program that can target
problem solving and study skills would be beneficial to second year students’. Once again a peer
mentoring program seems uniquely capable to target all of these variables (Topping, 1998).

The majority of the mentoring literature is based on first year students, with few
programs geared toward second year students. Further, few studies are based on empirically
identified student deficits and those factors that can help improve those deficits. This study aims
to extend the findings of study 1 which explored the predictors of performance and well-being in
a study across three years of the undergraduate psychology program. The current study aims to
utilise this information to devise and evaluate a mentoring program that targets second year
students, with the aim of increasing student achievement and lowering student psychological
maladjustment.

Method

Participants

Participants were recruited from the second and third year of the undergraduate
psychology program at RMIT University in 2008. A single tutorial group was selected to receive
the mentoring program. Students’ were informed about the mentoring program and provided
with the opportunity to change out of this tutorial group if they preferred. Mentors’ were
recruited through a brief presentation to them in 2007 which was followed up with an electronic
mail invitation to participate. Mentors’ sent expressions of interest to the researcher. All
expressions of interest were accepted. There were 86 second year students who participated in this study, with 23 participating in the mentoring program and 63 serving as the non-mentored control. Within the mentored group there were 18 females and 5 males with a mean age of 20.77 years and standard deviation of 4.10 years. Within the control group there were 53 females and 10 males with a mean age of 23.46 years and a standard deviation of 4.09 years. Overall, 76 students reported that they were studying full time, while 2 were studying part-time and two were double degree students (students who take on more than one course and complete subjects over a five year period rather than the traditional 3 years). Additionally 83 student’s reported that they were undergraduate students, while 2 were graduate diploma students. The mentors were 7 third year students who had maintained at least a 70% GPA in the previous year. Six of the mentors were female and one male. Mentors ages ranged from 21-25 years.

**Content of Mentoring Program**

The mentoring program was designed in association with RMIT Universities Leadership, Equity and Diversity unit (LEAD), which has designed multiple mentoring programs across the university. Based on the findings of Bussey-Jones et al. (2006) who identified peer mentoring as beneficial, and the findings of McInnis et al. (2000), Tinto (1995) and McInnis and James (1995) who highlight the importance of peer interaction for successful adjustment to University, a peer mentoring program was implemented. The importance of peer interaction was also highlighted by the findings of Study 1 which indicated that showing others one’s work and social support are important in student transition. Based on these findings, small groups were utilised to enhance student interaction. This program was embedded into student tutorials in accordance with the writings of Dearlove, Farrell, Handa, and Pastore (2007) who found that students were unlikely to utilise services in their own time.

The results of study 1 found that previous academic achievement and planning were important in predicting GPA and Stress respectively, however these relationships are negatively
impacted by the second year. Similarly, Depression and Anxiety had a stronger relationship with GPA for second year students’, and the use of emotion focused coping techniques such as acceptance and substance use had poor ramifications for GPA and Stress respectively. As such, a focus on time management, problem focused coping, study skills and stress reduction was deemed useful in helping second year students. Thus, the peer mentoring program groups these elements into two important components for second year adjustment; academic competence and the enhancement of personal resources. These components were organised into six modules presented below in Table 1, which were manualised (see Appendix B).

Table 1

*Mentoring program week structure.*

<table>
<thead>
<tr>
<th>Week</th>
<th>Tutorial Task</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Get to know your mentees</td>
<td>30min</td>
</tr>
<tr>
<td>4</td>
<td>Tips for oral presentations</td>
<td>30min</td>
</tr>
<tr>
<td>5</td>
<td><em><strong>Non-Mentoring week</strong></em></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Coping styles</td>
<td>30min</td>
</tr>
<tr>
<td>7</td>
<td>Assignment breakdown</td>
<td>30min</td>
</tr>
<tr>
<td>8</td>
<td>Finding appropriate resources in psychology</td>
<td>30min</td>
</tr>
<tr>
<td>9</td>
<td>Writing a lab report in psychology</td>
<td>30min</td>
</tr>
</tbody>
</table>
The content of these modules was developed from several sources. Firstly, to address academic competence, information was sourced from the findings of study 1, consultation with second year academic staff and the RMIT Study and Learning Centre. From this synthesis the areas of focus became: oral presentation skills, advanced writing skills and research methodology in psychology. The focus on the oral presentation arose for two reasons. First, verbal skills were identified as important in second year adjustment in Study 1. Second, the oral presentation is an assessment introduced in the second year of the program and second year coordinators recommended focus on it. Utilising an assignment as a basis for this module was considered an effective way to increase student motivation. Research methodology was facilitated through three modules, these were Finding resources in psychology, Lab report writing in psychology and Synthesising information from multiple resources. The module on finding resources was included on the recommendation of the second year course coordinators and the Study and Learning Centre. These sources noted that finding appropriate resources is an important first step in being able to write advanced assignments. The importance of this module was also supported empirically in Study 1, where student writing skills were emphasised in second year. Similarly, the modules Writing a lab report in Psychology and Synthesising information from multiple resources, were included because of the identification of written English as important in study 1, and on counsel from second year coordinators. Additionally,
empowering students’ to be able to actively engage in their own learning and to feel confident in approaching these academic tasks could facilitate their feelings of self efficacy in relation to these assignments. This is important as self efficacy was identified as important in second year adjustment in Study 1.

Areas for increased personal resources were taken from the findings of Study 1, which highlighted the importance of problem focused coping, specifically Planning and the suppression of competing activities to second year adjustment. Thus, the program included psychoeducation and activities on coping, coping styles and problem solving as recommended by Steinahrdt and Doblier (2008) and Hsu (2004). Additionally, the findings from study 1 that student planning was important for transition, and literature which notes that second year students often struggle with motivation, prompted a module on student time management. Thus, a module called Assignment breakdown was included containing both a study schedule and goal setting and rewards to increase student motivation. This module helped students identify what they needed to achieve and set rewards for doing so.

These modules contained useful information for mentees, however, the inclusion of a manual was deemed important for mentor needs also. The use of a structured manual was thought to provide mentors with adequate support and information to facilitate their involvement in the program. However, the program was also influenced by the writings of Ten Cate, Snell, and Vermunt (2004) who highlight the idiosyncratic nature of student learning and the need to balance structure with independent learning, and Schaller (2005) who emphasises the need for student self reflection and responsibility. The program was therefore structured so as to be flexible with student needs, providing time and space for reflection on study habits and coping.

The program ran for half an hour at the end of tutorials in the first semester second year course Biological Psychology for 9 weeks. Six sessions included specific topics of development, with the other three being “break” weeks for students to gain additional time with their tutor. The aim of the program was to increase student coping and academic skills. The focus was not to
address subject content through the program as this was deemed outside of the mentor’s level of competency.

**Materials**

A questionnaire package was used. This package included a plain language statement and a page ascertaining demographic details. Demographic details included sex, date of birth, student number, ENTER score, country of origin, English proficiency, relationship status, number and age of children, employment status, campus the student attended, student loading and program. Additionally, questions addressing whether a student had sought an extension, participated in study groups, showed another student their work before submission or asked their tutor for help were assessed using a two point yes/no categorical format, with higher scores indicating a negative response. To assess academic achievement students’ semester psychology course results obtained from psychology course coordinators. The questionnaire package included five psychometric scales that are reported in Study 1 (see Appendix A).

**Qualitative questionnaire.**

To assess mentee and mentor perceptions of the program, qualitative questionnaires were implemented at different time frames (see Appendix C for a copy). Mentees were given five open ended questions at the mid semester point and at the end of the semester. Examples are “Is there anything about the process of the program that you would like to change?” and “What impact did the mentoring program have on your studies/learning?”. At the end of semester data collection point six additional questions were added utilising a five point Likert scale to gain a better understanding of student perceived benefits. Students were asked to rate how important specific characteristics of the mentoring program were to their transition, example items are “Having someone who could relate to your stress” and “Having someone who could give you advice”. Students rated how important each of these elements were on a five point Likert scale ranging from “Not important” to “Very important”.
Mentors were also given open ended questions at the mid-semester and end of semester points, with an additional pre-program questionnaire administered to establish their expectations of the program. Questions mirrored those given to the mentored students, with the addition of questions that reflected the mentors’ experience and personal gains. For example, mentors were asked and “What do you think your students got out of mentoring?” and “Did you have any personal gains from the mentoring program?”. These questions were appropriately re-worded to suit the time frame.

**Procedure**

This study utilised third year psychology students who had attained at least a distinction average as peer mentors. The program was initially introduced to prospective third year students late in 2007 to gauge participation rates. Following up on this initial recruitment, an email was sent to eligible third year students prior to the start of semester directing them to the studies URL, which contained information about the program. The commitment and responsibilities of mentors was explained and the voluntary nature of participation was emphasised. Mentors completed five hours of training in the first and second weeks of semester. Training for mentors was be provided by both RMIT LEAD and Psychology staff.

Due to the desire to have a mentored and control group, mentors were put into only one of the three psychology tutorials. Additionally, a small group mentoring model was utilised with one mentor working with 3-4 students. However, to guard against disadvantage both mentored and non-mentored students received the same transition focused materials. The project was introduced to second year students in their first lecture. The voluntary nature of the study was explained, with those in the mentored tutorial able to swap into another tutorial if they chose (no student chose to do this). Additionally, these second year students were reassured that all students would receive the same material in tutorials; only the method of delivery differed between the tutor-directed and mentored groups. Mentoring was then explained in more detail to
those students in the mentored tutorials in their third tutorial when they are introduced to their mentors. Second year students in the tutor-directed tutorials who gave their consent served as a control group.

All second year students’ and third year mentors’ were provided with plain language statements informing them of the study aims and requirements. From this document participants were asked to provide written consent. Consent was required from mentors as well as mentees and those second year students in the control group. Following consent, all students undertook the pre-test measures to determine past and current academic skills and coping resources. Data collection occurred at three time points for both mentors’ and mentees’. Specifically data was collected in week 2, week 6 and week 10 of the first semester. Consent was obtained at the week 2 time point for all participants. Both mentors’ and tutors’ were provided with an overhead that outlined how students’ should complete the survey to ensure consistency between the groups.

During the course of the semester 30 minutes of each tutorial was dedicated to transition material for both the control and mentored group. This was administered by the tutor in the control group and the mentor in the mentored group. Mentors received a weekly one hour face to face debriefing session.

**Results**

The mentee and mentor group were compared for potential age differences using an independent samples t-test. This analysis revealed no significant age difference between the two groups, $t(123) = -1.96, p = .052$. Following this the data was analysed separately for mentees and mentors. Mentee quantitative data was obtained at a pre-semester and post-semester time point. The qualitative data was gathered at a mid-semester and end of semester time point. Mentors were assessed through qualitative questionnaires at three time points. These included the week preceding the semester, the mid-semester time point and end of semester time point.
Outcomes for Mentees

Quantitative data.

Mentee data were analysed using a Group x Phase MANOVA to assess any significant change in the outcome variables Depression, Anxiety, Stress and GPA. To follow up on these findings and to assess any change in any of the predictor or outcomes variables the data was analysed using a 2 x 2 mixed factorial ANOVA using the SPSS linear mixed models procedure. The linear mixed models procedure was chosen because of the presence of random missing data and the need to test various models of the covariance underlying the repeated measure. The single within-subjects factor was phase (pre, post) and the single between-subjects factor was group (mentored, non-mentored). Various covariance structure models were tested, with compound symmetry generating the best model fit for the most variables. Table 2 and Table 3 show the means and standard deviations for the mentored and non-mentored groups at the first and second time points respectively.

Table 2

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Table 3

*Mean and Standard deviation of each variable at the post-mentoring time point.*
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Tables 2 and 3 show that within each time period the mentored and non-mentored groups show comparable results. There are some notable differences however. Firstly there is a
seemingly large difference between the mentored and non-mentored group in hours of study at pre-program. At this time point the non-mentored group reports studying for over twice the number of hours the mentored group do. Similarly there appears to be a large increase in the mentored group’s number of hours of study, with these students almost tripling their mean number of study hours at the post-mentoring time point. However, there are no other apparent changes over time, or differences between the two groups on the outcomes variables of Depression, Anxiety and GPA. There does however appear to be an increase in Stress for the mentored group between the pre-mentoring and post-mentoring time points. An initial Group x Measurement Time MANOVA was run investigate changes over time. These results are presented in Table 4.

Table 4

*Group x Phase MANOVA on DASS and GPA.*

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</table>

Table 4 indicates a significant main effect for phase within the stress variable. No other significant changes are evident. To investigate this effect further and to investigate any significant changes between the groups over time in any of the variables a 2 x 2 mixed factorial...
ANOVA using the SPSS linear mixed models procedure was run. Each predictor variable was run in the model. Only significant results are presented.

For active coping, a significant phase by group interaction was found, $F(1, 51.77) = 5.82, p = .019$. Due to the significant interaction the main effects for phase and group were not analysed. Follow-up analysis of the significant interaction using simple main effects found a significant difference between the two groups at pre-test, $F(1, 74.86) = 6.232, p = .014$, but not at post-test, $F(1, 62.17) = 0.05, p = .82$. Further, there was a significant pre-test to post-test change for the mentored group, $F(1, 54.59) = 6.41, p = .014$, but not the non-mentored group, $F(1, 41.62) = 0.21, p = .65$. This shows that across the semester the mentored group increased its level of active coping, while the non-mentored group did not. Table 1 shows that the mentored group had lower levels of active coping at pre-program then the non-mentored group, but had higher levels of active coping at post program than the non-mentored group.

For religious coping, a significant phase by group interaction was found, $F(1, 38.41) = 15.48, p < .01$. Due to the significant interaction the main effects for phase and group were not analysed. Follow-up analysis of the significant interaction using simple main effects found a significant difference between the two groups at post-test, $F(1, 113.58) = 7.51, p = .004$, but not at pre-test, $F(1, 110.86) = 0.06, p = .81$. Further, there was a significant pre-test to post-test change for the mentored group, $F(1, 38.83) = 12.44, p = .01$, but not the non-mentored group, $F(1, 37.42) = 3.12, p = .08$. This indicates that the mentored group used significantly more Religious coping than the non-mentored group at post test, and that this increased for the mentored group across the semester. Table 1 shows the changes in these mean scores.

For hours of study, a significant phase by group interaction was found, $F(1, 55.14) = 4.98, p = .03$. Due to the significant interaction the main effects for phase and group were not analysed. Follow-up analysis of the significant interaction using simple main effects found a significant difference between the two groups at pre-test, $F(1, 120.96) = 5.16, p = .025$, but not at post-test, $F(1, 120.19) = .01, p = .91$. Further, there was a significant pre-test to post-test
change for both the mentored group, $F(1, 57.56) = 24.53, p < .01$, and the non-mentored group, $F(1, 47.08) = 19.57, p < .01$. This indicates that hours of study increased for all students across the semester. However, the mentored students started at a lower number of hours of study than the non-mentored students, but equalled them by the end of semester. Table 1 shows the changes in these mean scores.

For denial coping, a significant phase by group interaction was found, $F(1, 45.51) = 6.01, p = .018$. Due to the significant interaction the main effects for phase and group were not analysed. Follow-up analysis of the significant interaction using simple main effects found a significant difference between the two groups at post-test, $F(1, 113.57) = 4.31, p = .040$, but not at pre-test, $F(1, 117.99) = .60, p = .44$. Further, there was a significant pre-test to post-test change for the mentored group, $F(1, 47.78) = 9.01, p = .004$, but not the non-mentored group, $F(1, 39.01) = .12, p = .73$. This indicates that the mentored group showed higher utilisation of denial coping than the non-mentored group at post-program, and the mentored students increased in this utilisation across the semester. Table 5 shows the changes in these mean scores.

Table 5

<table>
<thead>
<tr>
<th>Mentored</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$Std\ error$</td>
</tr>
<tr>
<td>Active coping</td>
<td>Pre-program</td>
<td>9.45</td>
</tr>
<tr>
<td></td>
<td>Post-Program</td>
<td>11.12</td>
</tr>
<tr>
<td>Religious coping</td>
<td>Pre-program</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>Post-Program</td>
<td>7.29</td>
</tr>
</tbody>
</table>
Outside of the significant interactions several predictors also showed significant main

effects. For Self-efficacy a significant main effect for phase was identified $F(1, 45.10) = 9.38, p = .004$, indicating higher levels of self-efficacy at post-program ($M= 30.92, SD=.58$) then at pre-program ($M=29.27, SD=.62$). The main effect for group and the interaction were not significant. For Stress a significant main effect for phase was identified $F(1, 55.52) = 6.32, p = .015$, indicating higher levels of stress at post program ($M= 7.82, SD=.63$) then pre-program ($M=5.98, SD=.69$). The main effect for group and the interaction were not significant. For Suppression of competing activities a significant main effect for phase was identified $F(1, 65.72) = 7.14, p = .009$, indicating higher levels of Suppression of competing activities at post-program ($M= 9.94, SD=.31$) then at pre-program ($M=8.87, SD=.35$). The main effect for group and the interaction were not significant.

To assess the nature of the relationships between Hours of Study, Active coping, Religious coping, Denial coping, Self efficacy and Suppression of competing activities, and the outcome variables of Depression, Stress, Anxiety and GPA Pearsons correlations were run for each group. Table 6 and Table 7 show these correlations presented by time point.

Table 6

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Table 6

| Hours of study | Pre-program | 4.26 | 1.20 | 9.28 | .97 |
| Denial coping | Pre-program | 4.86 | .47 | 5.27 | .23 |
| Post-Program | 14.49 | 1.65 | 14.26 | 1.56 |
| Post-Program | 6.36 | .39 | 5.37 | .27 |

**Pearsons correlations for the non-mentored group presented by phase.**

<table>
<thead>
<tr>
<th>Pre Mentoring</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
</tr>
</thead>
</table>
### Post Mentoring

<table>
<thead>
<tr>
<th></th>
<th>Depression</th>
<th>Anxiety</th>
<th>Stress</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours of study</td>
<td>-.36*</td>
<td>-.20</td>
<td>-.04</td>
<td>.52*</td>
</tr>
<tr>
<td>Active Coping</td>
<td>-.30</td>
<td>-.34*</td>
<td>.05</td>
<td>.53*</td>
</tr>
<tr>
<td>Religious Coping</td>
<td>-.31</td>
<td>-.27</td>
<td>-.42*</td>
<td>.05</td>
</tr>
<tr>
<td>Denial Coping</td>
<td>.10</td>
<td>.31</td>
<td>.00</td>
<td>-.12</td>
</tr>
<tr>
<td>Self Efficacy</td>
<td>-.33</td>
<td>-.54*</td>
<td>-.13</td>
<td>.43*</td>
</tr>
<tr>
<td>Suppression of competing activities</td>
<td>-.22</td>
<td>-.18</td>
<td>.10</td>
<td>.46*</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed)

Table 7

*Pearsons correlations for the mentored group presented by phase.*
Table 6 and Table 7 provide some interesting insights into the previous analyses. Looking at Active coping it can be seen that this variable correlates negatively with anxiety at pre-test for the non-mentored group, however this is not replicated for the mentored students. Similarly, Religious coping correlates negatively with Stress for the non-mentored students post the mentoring program, but does not have this relationship for the mentored students. Denial coping shows a different pattern with the mentored group showing a positive association between this variable and Anxiety and Stress at post-mentoring. This is unsurprising considering the mentored group increased in their utilisation of this coping mechanism across the semester. Most interesting however, is the lack of association between the Religious coping and Active coping variables and the outcome measures at any time point for the mentored students. Thus, while these variables were able to be increased for the mentored students, their lack of association with the outcome variables may explain why a similar change in Depression, Stress and Anxiety is not noted. Looking at Hours of study an even more interesting pattern emerges. Hours of study is associated with higher levels of Anxiety and Stress at the pre-mentoring time point for the mentored students, however this association disappears at the post mentoring time point. This in combination with the change in the mentored groups mean number of hours of study implies that study time changed in emotional salience for these students. Also interesting
to note is that hours of study is associated with higher GPA at the post-mentoring time point for
the non-mentored students however this association is not replicated for the mentored students.
Analysis of the final correlations show that Self efficacy was associated with lower anxiety in
both groups, lower stress in the mentored group and higher GPA in the non-mentored group.
Meanwhile, Suppression of competing activities was associated with higher GPA in the non-
mentored group.

To provide additional analysis of the mentoring program qualitative analyses were also
performed.

Qualitative data.

The qualitative data were analysed in accordance with Willig’s (2008) thematic analysis.
Themes were identified first for each question, these themes were then analysed in relation to
one another and natural clusters identified. Thus, themes that shared meanings or references or
showed natural hierarchies in relation to one another were grouped to form larger, overarching
themes. Finally, the efficacy of these themes was checked by ensuring they had theoretical
relevance and were substantiated by quotes (Willig, 2008). Themes were identified by the
primary researcher and confirmed by a secondary, dependent researcher. Data is presented
separately for mentees and mentors, and is presented by time of administration.

Mid-semester time point.

Benefits of the mentoring program.

At the mid semester point 14 out of the 15 students who responded to the questionnaire
were able to identify benefits of the program. They tended to fall under the following categories;

Academic outcomes.

Six of the students identified that the program was beneficial from an academic
standpoint, helping them with study hints and methods that they had not previously thought of,
or by providing direct help with areas of their work that they had previously struggled with
(particularly around the lab report), or by providing additional knowledge about content. Four of the 15 students reported no direct impact on their studies, noting that they have already established effective study skills. However, the remaining students noted several improvements in their study skills. One student noted an improvement in ability to find resources necessary for assignments and class work, while five students noted direct changes to their study habits in the form of organisation and planning. The interpersonal element of the mentoring relationship was noted with two students identifying a preference for being able to discuss assignments with a peer rather than a tutor, with both students feeling that their mentor could relate to them and provide them with valid help.

**Supportive functions.**

Five students highlighted the interpersonal elements of the mentoring program as being beneficial. This included benefits noted from the small group structure with students reporting that it allowed them to interact with more classmates, to discuss difficulties in more detail and provided one student with the confidence to speak up which she had not done in the wider tute environment before. This student noted that the program was “helping me speak out more about problems I have. I feel intimidated to talk in tutes as there are more people”. Students also noted that the mentoring interaction provided them with support and instilled hope around surviving the second year as the third year students provided models for coping. Students noted that “seeing that other people have done the same subject as me and have coped well, gives me confidence that I can do the same”. Furthermore, students noted that they appreciated having this support in a challenging subject as it helped to alleviate stress.

**Self reflection.**

Seven students noted that the program allowed them time to reflect on what they do and do not do well. Four students noted that they have identified some negative study habits and had put in place strategies to overcome them, while one student noted that she needed to alter some
of her ways of coping with stress. Other students though found that the program enabled them to identify their strengths. Thus, two students noted that their self reflection allowed them to identify competence with assignments and study skills, as well as competence in their ability to cope. One student in particular noted that the program had highlighted to her some of her positive qualities and also showed her that she could work to improve elements of her study that do not come naturally.

**Challenges and proposed changes.**

Eleven students identified no challenges from the program and seven reported that they would not make any changes to the program. Changes that were suggested fell into two categories: change to the structure or change to the content of the program. In regards to change to the structure, one student noted that the room could get quite noisy and so suggested a quieter meeting place. Larger changes to the program delivery came from a third year (double-degree) student who suggested that the program be implemented in the previous year (their second year), while another student suggested starting the program in first year and continuing it through the second year. This same student suggested that additional meetings be made outside of the classroom in places like the library. As regards changes to the content one student noted that the content could be “quite boring”, and two students wanted the program to be more interesting, but did not offer suggestions on how this might occur. Meanwhile three students wanted the mentoring program to have a greater focus on course content, rather than study and coping strategies.

**End of semester time point.**

**Benefits of the mentoring program.**

Overall the mentoring program was perceived as beneficial by students, with eleven out of fifteen students reporting benefits. Interestingly, of those students who reported no benefits of the program in the open ended section of the questionnaire, three noted benefits of the
quantitative sections. The extent of these benefits were marked at least at a 3 (“moderately important”) for every item, with one student placing each statement as a 5 (“very important”).

Thus, only one student reported no benefits of the mentoring program. This was a third year, double degree, mature age, student completing a second year subject. Table 8 shows the means and standard deviations for the quantitative questions.

Table 8

<table>
<thead>
<tr>
<th>Function</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Someone modeling successful achievement of the course</td>
<td>11</td>
<td>3.64</td>
<td>1.43</td>
<td>Moderately important</td>
</tr>
<tr>
<td>Having someone who could provide direct assistance</td>
<td>11</td>
<td>3.27</td>
<td>1.42</td>
<td>Moderately important</td>
</tr>
<tr>
<td>Relate to stress of second year</td>
<td>11</td>
<td>3.09</td>
<td>1.30</td>
<td>Moderately important</td>
</tr>
<tr>
<td>Having someone to give advice</td>
<td>11</td>
<td>3.55</td>
<td>1.40</td>
<td>Moderately important</td>
</tr>
<tr>
<td>Provide encouragement</td>
<td>11</td>
<td>2.81</td>
<td>1.53</td>
<td>Mildly important</td>
</tr>
<tr>
<td>Talk to about problems at university</td>
<td>11</td>
<td>2.72</td>
<td>1.42</td>
<td>Mildly important</td>
</tr>
</tbody>
</table>

Table 8 shows that on average students found the interpersonal elements of mentoring moderately important, with only two forms of aid (encouragement and having someone to talk to about problems at university) being reported as mildly important. From the open ended questions, the benefits of the program tended to fall under the following headings.

**Academic outcomes.**

The mentees reported an increase in practical skill development such as enhancing micro skills of time management, learning techniques and integrating different pieces of information.

The development of study skills seemed to be particularly important for students, with one student reporting that it was “nice to have study skills explicitly addressed rather than assumed knowledge”. Additional improvements in study skills were noted in the areas of lab report writing and oral presentations. Three students also noted that their learning was improved
through a reduction in stress through better coping skills, with another student noting that these skills improved their motivation to learn. However, these were balanced with concern that there was little to be gained from the program. Two third year students completing this subject as part of their double degree program noted that the time allocated to the mentoring program detracted from potential class time, one student describing this as “harmful” to their studies.

Supportive outcomes.

Students appeared to again value from the one-on-one interactions, with three students noting that the mentors provided support; they were perceived to be “caring” and “approachable”. Mentors also appeared to be effective role models for coping, with four students highlighting the importance of working with someone who had recently experienced the same stressors and who showed that it was possible to get through the year. One student noted that this inspired confidence in approaching the third year.

Self reflection.

The program seemed to again provide students with the ability to reflect on both their areas of competency and areas of improvement. Two students noted that through the program they had identified positive aspects to their study skills and felt that the course was achievable. Meanwhile five students felt that their negative study habits such as procrastination and disorganisation were highlighted and could thus be addressed. However, one student noted that while their deficits in organisation were highlighted to them, they had not made any attempt to rectify these skills.

Challenges and proposed changes.

The main challenge for the program seemed to be the time it took up in the tutorial. Two students reported on this directly, noting that not getting enough time with their tutor was a challenge. However, this seemed to be a concern of four others, who made the suggestion to remove the program from the tutorial time, with one student noting that it was especially difficult having the program in a challenging subject. Some suggestions were to run it outside of
class, another was to run it in a different subject as students felt that class presentations (which
took up the first hour) in combination with the program, detracted from time with their tutor.
Reflecting this, six students wanted the program to address course content more specifically. The
two third year students again questioned the appropriateness of this program for third year
double-degree students. Five students noted that they found the content challenging as it was not
interesting, and thus staying focused was an issue. Seven students noted no challenges from the
program and three proposed that the program stay as it was.

Outcomes for mentors

*Pre-semester time point.*

*Anticipated success as a mentor.*

All mentors anticipated that they would be successful as a mentor. Two noted that they
felt confident because the emphasis of the program was independent learning, so there was no
pressure on the mentors to know everything. Meanwhile, others noted personal characteristics
such as enthusiasm, experience and a relaxed attitude as the foundation for their belief in their
success. Finally, two noted that it was probably going to be a steep learning curve, but they felt
up to the challenge.

*Anticipated challenges.*

The mentors were concerned about how to interact with mentees who were not
cooperative during the program. These included students who are very competent and might not
feel that they need the mentoring program, those who lack motivation, and those who are shy
and difficult to engage. Mentors also had concerns that they might mentor someone they knew.
Mentors also had concerns around their own competency. They were worried about being asked
questions to which they didn’t know the answer, and were worried about how to keep a
conversation going if no one spoke up.

*Expected personal gains for the mentor.*
Three of the seven mentors expected to gain additional knowledge about the course from being mentor. This included providing them with a new perspective on psychology, and increased research, organisational and writing skills. Mentors’ thought that this learning would occur because through the process of facilitating their mentees’ study skills they would have to understand their own study skills better, and thus reflect on elements that needed change. They also thought that through exposure to the course material from a different perspective their understanding of biological psychology would increase. Mentors also saw potential for intrapersonal gains such as accomplishing a personal challenge and the satisfaction of helping others. Finally, other practical benefits that the mentors predicted included skill development and confidence in group leadership, this included the development of better interpersonal skills and the ability to facilitate group discussion.

*Expected gains for the mentee.*

The majority of mentors predicted that the program would provide their mentee with a sense of security. Four mentors characterised this in terms of emotional support and academic support. The mentors predicted that this sense of security would facilitate confidence in students to ask for help (one mentor noted that this might be particularly important for he less confident students’), while also providing students with additional resources in the form of an extra helper. The mentors thought that the presence of someone who had recently experienced their course would be additionally helpful in facilitating both their sense of emotional support, but also in providing a new perspective on the course and their study skills. Thus, two mentors predicted that students would experience improved study skills, marks and motivation. Finally, the mentors predicted that through modelling they would be able to help students navigate the second year as they discussed how they managed and experienced the second year, and how they approached assignments.
Mid semester time point.

Academic outcomes for the mentor.

Interestingly three of the mentors noted that the modules were having a direct impact on their own study skills, showing them new ways of approaching tasks and coping with stress. Further, through involvement in the program mentors noted benefits in better understanding the topic.

Interpersonal skills development of the mentors.

In terms of interpersonal skills mentors noted increased confidence in social and group settings. Specifically, three mentors noted improvements to their leadership and assertiveness skills and also benefits from networking within the department. Finally, one mentor noted an increase in their perceived ability to provide students with support and understanding.

Self reflection for the mentors.

For the mentors the program was an opportunity to reflect on their abilities, and many found that through this process they were able to confirm that they were very competent students. Thus mentors noted that they discovered that they knew how to handle stress and approach study and that they were quite knowledgeable (more than they gave themselves credit for). Additionally, mentors found that they were able to successfully take on a new role. One mentor noted that “I have more confidence than I first thought, and anything is achievable if you put your mind to it”. These revelations are particularly pertinent with one mentor noting that he had gained these insights while also noting that “mentoring is harder than I first thought”. From this reflection mentors also noted the sense of fulfilment and accomplishment they got from tackling a challenge.

Perceived gains for the mentee.

Mentors noted that the program was more beneficial for struggling students, however all students could benefit from the understanding the peer program provided. They highlighted specifically the role they played in normalising student experiences and facilitating their coping.
However, there was also a large emphasis on student motivation. One mentor noted that “I think they will get out what they want to get out of it”.

*Challenges and proposed changes.*

Most mentors suggested some changes to the program, with two suggesting it stay in its current form. One of these mentors noted that their concerns were addressed during the weekly debrief noting “I like the fact that we are able to debrief weekly and as a group and voice any concerns….The program book and guide for mentors is also very helpful”. The remaining mentors noted challenges that were derived either from their own skill set, mentees’ motivation, or the structure of the program.

Two mentors were concerned with their own skill set, noting difficulty in taking a leadership role. They found it difficult to be directive and work to keep the conversation on topic. One mentor noted that a one on one set up “like a tutor” would be more effective for them. Meanwhile, the other mentor noted difficulty in trying to answer questions clearly, so as students would understand. Additionally, two mentors reported that it was difficult to manage the program with their own studies, however they noted that they found the work very rewarding.

Four mentors noted challenges that came from mentees. Specifically, these mentors reported difficulty around unmotivated students, which manifested in either difficult to engage students, or student absences from the tutorial all together. One mentor noted that their lack of motivation was possibly derived “because they are unsure whether they’re continuing with psychology, or it’s too early in the semester/year for them to be stressed”. Student absences led to an additional problem for mentors, with one noting that they had to try and “not become disheartened when they had only one or two” of their mentees come to class. Two mentors suggested that the program should target student motivation more specifically, with one mentor noting that “I don’t think they understand the benefits they could get out of this program”. Thus, mentors suggested starting later in the year when students perhaps felt a greater need for help.
Finally, two mentors proposed changes to the structure of the program, suggesting that
the tutorial in which it was implemented change as they felt there was not enough time with their
students. The idiosyncratic nature of mentoring was also highlighted with one mentor wanting
less structure from the program (in terms of module allocation), and another mentor highlighting
a preference for greater structure.

*End of semester time point.*

*Rating of personal success as a mentor.*

All mentors felt that they were successful in their mentoring role. They noted that they
were able to relate well to the mentees and offer support. Additionally, the mentors felt that they
improved over the course of the semester, though they did not specify the form that this
improvement took. One mentor noted that they were most successful when they had more
structure to work from.

*Academic gains for the mentor.*

All mentors noted that the program was “worth it”. Although there was little elaboration
on why the program was “worth it” one mentor highlighted the lab report material as helpful for
their own writing, with three other mentors noting a consolidation of study skills and learning of
the course material. These same three mentors noted a fulfilling sense of accomplishment from
participating in the program.

*Interpersonal skills development and networking for the mentor.*

The mentors saw benefits to themselves in the form of skill development, specifically
leadership. They also saw practical outcomes such as being able to add this experience to their
CV. However, they also saw benefits that were reciprocal for both mentee and mentor with the
integration of the third and second year students, they saw this as an opportunity for the second year students to network with other students and the department.

*Self reflection for the mentor.*

All mentors used the program to reflect on their academic skills and interpersonal skills. Mentors noted that they learnt that they possess many positive skills that they were unaware of previously. These included leadership skills, confidence, empathy, understanding and the ability to rise to a challenge. Mentors noted that these realisations gave them a sense of pride, with one mentor noting “I can rise to a challenge of being in a mentoring role, even though I struggled in the first week”

*Perceived gains for the mentee.*

The mentors saw benefits for the mentees in the form of academic tools and support. One mentor noted that the program enabled mentees to anticipate upcoming obstacles and develop new skills. While another mentor highlighted the importance of “helpful hints” a peer could provide that perhaps a tutor or academic could not. However, the biggest outcome for mentees from the mentor’s perspective was support. They felt that they could provide understanding and support around the obstacles that the mentees were facing. Mentors thought that this was particularly powerful when it came from someone who had so recently been in the same position.

*Challenges and proposed changes.*

Despite reporting an increase in confidence across the semester mentors still noted some difficulty in interacting with their peers in this role. Two mentors noted that they found it difficult to take a directive role with their mentees. One noted that this was because of the close age and career stage of the mentor and mentee, with another mentor noting that it was difficult to teach students who were only a year behind in their study. Three mentors also struggled with the structure of the program, and would have preferred to be completely mentee-driven rather than adhering to preconceived modules. In line with this, one mentor would have liked more
challenging material. Additionally, three mentors also noted that it was disruptive to their own studies, noting that having to wait around at uni after their own classes impinged on their own opportunities to study.

**Discussion**

The results of this study show that the program was moderately effective in influencing student transition to the second year of university. The program did not have the expected impact on student GPA and psychological adjustment, but did show some changes in student coping and hours of study. Additionally, the qualitative data indicates several benefits that students acknowledged in both academic and psychological adjustment spheres. These benefits are however modest, indicating that the program may not have been wide-reaching enough to effect broader change on student marks and psychological wellbeing. Further, several difficulties were noted by students’ that influenced their ability to receive positive changes from the program. This included difficulties fitting in the mentoring program with other course requirements and subsequently a desire to have more course oriented material, rather than a focus on generic skills. Further challenges included tailoring the program to differing student’s academic levels. While some students’ benefited from the material, others found it boring or inappropriate for their university career stage. The results of this study do however provide a platform from which second year specific programs can be later developed.
Chapter 5

General Discussion

This research attempted to capture a holistic picture of the undergraduate psychology experience. Study 1 indicated several variables that were important predictors of student’s GPA score and psycho-emotional adjustment to university. However, when analysing the predictive stability of these variables across the course of the undergraduate degree, the results indicated that the influence of some of the predictive variables is moderated by year. Thus, few variables were consistently predictors at each year level. In many cases a variable only showed predicted qualities in one or two years, and in other cases its predictive quality worked in opposing directions depending on year level. When this variability was addressed statistically it became apparent that the second year provided a unique influence on many of these relationships. This finding is consistent with the writings of several authors who have identified a differential pattern of adjustment in the second year. These authors have identified the second year as a time of low motivation, disconnection, uncertainty and identity crisis. In an attempt to ameliorate the stressors that are inherent to the second year a peer mentoring program was devised, which showed moderate self reported changes to students learning and study skills and confidence in facing the approaching third year. However, larger changes in Depression, Anxiety, Stress and GPA were not observed.

Outcomes for Mentees

While the program did not have a direct impact on GPA or psychological adjustment it did increase students’ coping repertoire, with an increase in the variables Active coping, Religious coping and Denial coping for the mentored students. This is consistent with the qualitative analysis which showed that students felt at both mid semester and the end of semester that the program enabled them to reflect on and alter their coping styles. These findings are consistent with the research of Steinhardt and Doblier (2008) and Hsu (2004), who found that a
program which included psychoeducation on coping and the modelling of effective coping
enhanced student coping strategies. The importance of increasing these particular coping styles
is however unclear. The results of study 1 indicate that Active coping reduces depression,
anxiety and stress while Religious coping reduces stress in second year students, however this
result was not replicated in the sample of mentored students’, explaining the lack of concomitant
changes in adjustment measures. Meanwhile, Denial was associated with higher levels of
anxiety. However, without broader differences between the mentored and non-mentored group
on the variables of anxiety, stress and depression the utility of these changes is limited.

The program also showed an impact on student Hours of study, with mentored students
showing a greater increase in hours of study than the non-mentored students. This finding has
mixed significance. Previous research has shown that increased hours of study are important to
student GPA and adjustment (Pantages & Creedon, 1975). The findings of study 1 support this
assertion for first and third year students, but show that hours of study have no predictive value
for second year students. This is replicated in Study 2 for the mentored group, but not the non-
mentored group, with the non-mentored group showing an association between hours of study
and GPA. Furthermore, Hours of study was associated with Anxiety and Stress at pre-mentoring
for the mentored group, but not at post mentoring, indicating a change in the utilisation of this
variable across the semester for this group. The conflicting nature of these results indicate that
more research is needed to track these outcomes longitudinally to evaluate the nature of these
variables and whether positive outcomes of such programs are long term rather than immediate.
The lack of association between hours of study and academic achievement in the mentored
group does however explain the lack of concomitant changes in GPA with the dramatic increase
in hours of study for this group. However, it appears that predictors of academic achievement are
difficult to identify in second year students. As the correlations from Study 2 indicate that none
of the variables that the program changed have an association with GPA, and as the discrepancy
between study 1 and study 2 highlight that the elements that predict GPA in the second year are
fickle, it may be that utilising information from the qualitative data can provide the greatest insight into how academic skills can be addressed in the second year. The qualitative data indicates that peer interaction was important for these students. This is supported by study 1, which indicates that showing a peer a ones work is predictive of academic success in the second year. Further, social support was identified as important for second year students on all of the psychological adjustment variables. This indicates that social support may be a conduit through which effective coping can be established. Whether this support helps to increase problem focused coping through the provision of aid and advice, or whether it influences confidence, and thus self efficacy, is unclear and requires further investigation. What ever its mechanism it appears to have the two fold affect of decreasing distress and increasing academic grades. Thus, future programs may have a greater focus on peer integration to facilitate second year student’s academic success and psychological wellbeing.

This analysis indicates that while the quantitative data gives some insight into the benefits and limitations of the program, it is the qualitative analysis that provides the most insightful information on the program’s outcomes. For the mentees it was apparent that students found benefit from the program at both time points, and that these benefits fell consistently under the headings of academic outcomes, supportive functions and self reflection. For academic skills the biggest areas of improvement seemed to be in micro skill development, including elements such as organisation, writing skills and lab report skills. This was true at both time points for 50% of the students. Additionally, students noted improvements in their academic work through better coping or the peer interaction. These findings are consistent with Baron and Carr (2008) who found that including direct tutelage of study skills through mentors increased effective study habits. It should be noted however that while the mentees reported that the program helped their learning, there is no material evidence to support this as changes to GPA were not observed. This implies that students’ merely believed that a change had occurred. This perception could translate into improved confidence in approaching academic tasks. This has
some support from the findings that self efficacy increased as the semester progressed. However, this change occurred for all students’. The source of this change is therefore unclear, as are the long term effects of students’ perceived academic improvements. It may be that the long term effects of these changes take time to manifest. Thus, it may be supposed that implementing a program such as this at the end of the first year could equip second year students with the necessary confidence to approach academic tasks. This is supported by the qualitative mentor data, which indicates that mentors saw the program as beneficial for struggling students and facilitated micro skill development. Thus, these skills could provide an inoculating effect for students entering the second year. Longitudinal analysis is required to further investigate this phenomenon.

The interpersonal element of the mentoring program was also important, with one third of mentees noting that either mentor support or modelling was important to their adjustment. The importance of modelling in mentoring programs has been highlighted previously. Hayes (1998) and Day and Allen (2004) argue that mentoring contains role modelling as a necessary subcomponent of the relationship, and through this mentees gain valuable skills in coping and skill development. Additionally, the supportive element of the mentoring relationship have been identified as beneficial with Santos and Regiadas (2002) finding that the emotional or friendship quality of mentoring provided mentees with feelings of wellbeing and security. The Likert rankings within the end of semester data shed greater light on the source of these interpersonal benefits. The importance of modelling at this time point is apparent, with mentees noting that having a model of successful achievement was moderately important to their transition. However, this data indicates that encouragement and having someone to talk to were only mildly important to mentees. Thus, it seems that the supportive function of mentoring within this sample was derived from the ability of a peer to relate to their stress, model effective coping and provide direct assistance. Additionally, the importance of mentee to mentee interaction is highlighted in the mid semester data, with the inter-student interaction and the tangible aid that
can be gained from these small groups evidenced at this time point. The importance of peer to peer help is supported by Bussey-Jones et al. (2006) who found that the similarity of peers to one another in age and career status allowed for a greater ability to relate to current life stressors, and to have mutual relationships with a friendship quality. Thus, both the peer and small group structure appeared to be successful in facilitating student support.

In addition to academic and supportive outcomes, the mentoring program facilitated mentee self reflection at both time points. This allowed students to identify both the positive and negative elements of their study habits and effect some change on them. This was one of the aims of the program, with Schaller (2005) noting that student self-reflection enabled students to develop a greater connection and investment in their study. It seems that our program was able to develop this to a degree, however with one mentee noting that they identified their deficits but didn’t act to change them it seems that a link between identification and action may be missing. This is consistent with the findings of Sanchez, Bauer, and Paronto (2006), who found in a sample of college freshman, that despite increasing elements of Ajzen and Fishbein’s model of reasoned action, they could only weakly predict behaviour from intent. These authors argued that this result was unsurprising considering the multiple variables that impact academic achievement. Thus, it could be postulated that the multitude of competing stressors within the second year may impede the link between identification of a problem and the actual remedying of a problem. This barrier may be particularly significant as second year students have shown lower motivation and engagement in their courses than other year levels (Gardner, 2000; Pattingale & Schreiner, 2000). Thus, they may be predisposed to leave problems unresolved, a predisposition which is compounded by multiple stressors.

The difficulty students had in making changes indicates that the benefits identified do need to be tempered with the challenges that students faced during the program. At the end of semester time point mentee concerns were far more specific than at the mid semester point. At the final time point their suggested changes centred on the difficulty in managing the program
while getting adequate time with their tutor in class. It is important to note that all second year assignments were due in this half of the semester. The data shows the outcome of this higher assignment load with greater rates of stress occurring at the end of the semester for all students. Thus, the strain of this increased workload is reflected in the increased number of students reporting that they needed extra time with their tutor. Further, this stress led to differing reports of the appropriateness of implementing the program in a difficult subject. At the mid semester point one mentee noted the benefit of having the program in a difficult subject as they felt that they needed the extra support. However, at the end of semester two students noted the difficulty in having the program in a difficult subject as they wanted to maximise time with their tutor. Thus, the initial reports from mentees made it seem that it was a good subject to place the program as it was where they would need support. However as the intensity of the semester increased student focus went to their immediate needs of course content. This finding is supported by Sanchez-Leguelinel (2008), who found that sophomores tend to place greater value on their more immediate needs, and generally prefer information that can be immediately and concretely used. The focus on abstract concepts such as coping and advanced writing skills may have been lost on students who were struggling to grasp core course material at the end of semester time point. There was some evidence of this concern at mid semester, but this was only noted by three students. The majority of students proposed no changes at the mid semester point, with suggested changes generally focusing on increasing the program. This provides some insight into when programs should be implemented for students, with the first half of semester appearing more suitable.

**Outcomes for Mentors**

The program was also seen as beneficial for the mentors. Mentors expected to gain a better understanding of the course material and improved study skills through their involvement with the program. This was shown to have occurred with mentors reporting either an
improvement or consolidation of academic skills and course material at both the mid and end of semester time points. Mentors also anticipated improvements in their interpersonal skills, including leadership skills and group management. This again was shown in the qualitative data with mentors noting improvements in working with groups, including leadership and confidence noted at both intervals. These findings have important implications with authors Heirdsfield, Walker, Walsh, and Wilss (2008) identifying in a university transition sample that these skills are important professional attributes, which are both worth fostering and have long term benefits. Thus, these authors found that the development of good interpersonal skills provided mentors with a foundation for long term outcomes such as self worth, and improvements in their work and study career. This is supported by Glasser, Hall, and Halpern (2006) who found that mentors communication skills improved their social skills, employment skills, self confidence and organisational skills. Additionally, mentors received career oriented benefits through increased coping skills and networking opportunities with staff and students. The importance of this is again supported within the literature with authors Kram (1985) and Ragins and Scandura (2002) finding that involvement in a mentoring program improved the mentors recognition and respect from co-workers. These studies indicate that long term follow up would be worthwhile in identifying the full outcome of this peer mentoring program.

Mentors also anticipated feeling a sense of achievement through the mentoring program. This was evident with mentors noting that the program helped them identify their ability to work empathically with others and rise to a challenge. Overall, all mentors believed that they were successful in their role and that they improved across the course of the semester. These findings are consistent with Ragins and Scandura (1999) and Eby, Durley, Evans, and Ragins (2006) who posit that the primary benefit for a mentor is their own sense of satisfaction in fostering the development of a protégé. Additionally, this finding is important as it suggests that this program could have longevity if mentors find both satisfaction and benefits from it.
The program however did produce some challenges for the mentors that need to be addressed in order to ensure optimal mentor outcomes. One mentor concern when embarking on the program was around their own competence. This concern was reflected at both the mid and end of semester time points with mentors noting difficulty in answering questions and being directive, however these findings are tempered by mentors reports of improving over time and ultimately being successful. Further, mentors’ included acknowledgement of leadership skills and interpersonal skills in their self reflection at the end of semester that were not present at the mid semester point, indicating the internalisation of these skills by the end of semester.

Additionally, mentors’ also predicted challenges around interacting with mentees’ who were not cooperative during the program. This concern came to fruition at the mid semester time point. At the mid semester point mentors noted student lack of motivation and evidenced frustration that mentees’ were not getting all that the mentors’ perceived they could from the program. This is interesting when compared with the mentees’ reported concerns at this time point. The mentees’ were much more positive about the program at the mid semester point, noting several areas of personal gain and even asking for the program to expand. Mentors’ however reported that mentees’ were only gaining interpersonal support from the program, only adding academic outcomes at the end of semester time point. Thus, it seems that mentors’ may have been unaware of the program benefits at this time point. It is further interesting to note that mentors reported no problems with mentee engagement at the end of semester time point, however mentees’ were reporting the most difficulty engaging with the program and doing their studies simultaneously at this time point. This discrepancy is likely to be reflective of mentors’ change in expectations. It is likely that third year students with high academic averages would expect a high standard of investment and motivation from their mentees’, such as they would expect from themselves. However, during this program mentors’ were exposed to a variety of student ability levels and related levels of commitment. Additionally, lower motivation is a characterising feature of the second year (Pattingale & Schreiner, 2000), with students typically
more disengaged from their study than at other year levels (Gardner, 2000). This may have been incongruent with third years self-relevant expectations, which is reflected in their dissatisfaction with mentee commitment at the mid semester time point. However, as their familiarity with the second year students increased, mentors may have altered their expectations of their student’s commitment to more reasonable levels. This may have allowed mentors’ to not only be satisfied with their mentee’s commitment, but to also identify additional areas of achievement in their mentees that they were not sensitive to at the mid semester time point.

The mentors’ concerns around student motivation are however important to address, especially when considered in combination with mentor reports at both time points that the program was impinging on their own study time. This study did not get the same negative reports from mentors as authors like Ragins and Scandura (1999) or Heirdsfield et al. (2008) noted. These authors found that inexperienced mentors who faced negative dynamics reported that mentoring took up more time then it was worth, and that mentors experienced self doubt and frustration at wasted time when faced with students who were difficult to engage and motivate students. Whilst this study did not find such determined dissatisfaction there was one report by a mentor of trying to not become disheartened by poor attendance. Thus, educating mentors on what to expect from lower achieving students may avoid any feelings of misuse. Despite this, lower than anticipated student motivation did not seem to negate the experience for mentors, with mentors generally noting that the program was “worth it” and very rewarding. However, there is always the possibility that there were other negative effects of poor attendance and motivation on the mentee and mentor outcomes that were not assessed. One such could have been that the non-attendance impacted student exposure to the program and thus resulted in fewer gains. Glasser et al. (2006) found this in a sample of college students where mentoring was run out of class time. These authors noted that low attendance correlated with low exposure to the program, and lower benefits to both mentor and mentee.
Another threat to mentor satisfaction was the demands mentees placed on the mentor, and in some cases the demand that mentors placed on themselves, to enter the tutoring role. Mentors noted difficulty at both the mid semester and end of semester time point, in managing the aims of the mentoring program with the mentees need for course material. This led mentors to suggest that the program centre around course material more, or alternatively to be driven by mentee needs each week. However, the data indicates two problems with this approach; Firstly, mentors noted that the structured modules of the mentoring program made them feel secure when entering the mentoring role and that it was useful across the course of the program, facilitating mentor success. Additionally, mentors addressing course material begins to blur the line between mentor and tutor. It is evident that mentees had need to gain course focused material and were trying to gain this information from the mentor, however, mentors are not qualified to provide this tutelage. This dilemma seems to represent Vermunt and Verloop’s (1999) notion of constructive friction in two ways. Firstly, it seems that mentors required differing levels of structure and guidance to be effective, with some finding the manual constrictive and others finding it facilitated their mentoring. Similarly, the appropriateness of certain modules may have impacted mentee constructive friction, with some students finding benefit in the tasks and others finding the tasks redundant. This is exemplified in the qualitative data with one student noting that having study skills explained was beneficial, while others found this “boring”. This highlights the need for programs to take into account both mentor and mentee needs for guidance and structure. An important element of this program that could be used more fully to facilitate this flexibility is the mentor weekly debrief. This session was noted by one mentor as successful in addressing issues as they arose. Thus, this could be an important medium through which to alter or prioritise elements of the program in line with both mentor and mentee needs. It is also relevant to note that mentors initially struggled to provide guidance to students’ only one year below them. This may also suggest that a mentoring program in the final semester of first year could help mentors avoid any feelings of constructive friction while
also equipping students’ with relevant skills before entering the second year. The challenges that both mentors and mentees’ identified throughout this program indicate areas to be addressed in future research.

**Implications, Future Research and Limitations**

The results of this study provide some insight into how mentoring programs can be implemented when taking the full gamut of the undergraduate degree into account. The results of Study 1 highlight several differences between the three years that should be taken into account when implementing a peer mentoring program. Study 1 indicates that each year level has unique needs. This is unsurprising considering the differing demands of each year level. Previous literature tells us that while some first year students are entering university from high school, and others are mature age and entering another phase of life, the university environment is novel to all (Chemers at al., 2001). As such, first year students require integration into the university environment that the other year levels may not need. This has moderate supported from study 1 with the identification that social support was predictive for academic success within this year level, but not later year levels. Although, this finding was not confirmed in the moderation analysis it still indicates that programs with a focus on social relationships could be beneficial within the first year. Hours of study was also important for this group, with behavioural disengagement implicated in lower GPA scores. Thus, the planning and time management elements of the program proposed in study 2 could be beneficial for first year students.

Similarly, for second and third year students written English was important in lowered depression and anxiety and in third year it was associated with lowered stress. In fact both spoken and written English were important in the third year. Thus, this could be a focus of third year programs, or could be initiated pre-emptively in the second year as both of these variables are also important within the second year. This could equip students with adequate skills to enter the third year. Furthermore, for third year students Study 1 indicates that hours of study is the
greatest predictor of GPA scores. This is supported by the finding that mental disengagement and behavioural disengagement are the second and third strongest predictors of low GPA in this year level. This indicates that the planning and time management elements of the program could be useful for third year students.

For all year levels, social support was important to psychological wellbeing, as was problem focused coping. Thus, the inclusion of these elements across the three years could lead to sustained and long term benefits. This is supported by the finding that self esteem and self efficacy were important at each time point, indicating that any skill development or support that can increase confidence is important at all year levels.

The results of study 2 also highlight issues with implementation and structure. These factors are important to consider for a program at any year level. The first structural consideration is that a peer and small group mentoring structure can be successful. However, the use of an embedded versus out of class structure requires further evaluation. This program adhered to a specific structure of regular, scheduled meetings within class time. Further research into alternate structures could help solve the difficulty this study highlighted in implementing a program in class time. This study found that including programs in class time can detract from course material, however previous research highlights the limitations of running programs outside of class time. Thus, the implementation of such programs requires further analysis to determine how second year Australian students engage in on campus life and could use mentoring services. As the literature on second year students’ indicates these students are less engaged with the university environment, an adapted in-class mentoring program may be more beneficial. However, as third and first year students’ do not have this profile, voluntary out of class mentoring could be beneficial and utilised for these students. Overall, in-class programs are an option for any year level, if adjusted to cater for both adjustment needs and course material.

This study highlights different directions future embedded programs could take to facilitate student participation, while reducing impact on course material. The first is for future
programs to alter the time frame in which the program is presented. This solution would be to implement a program that ran in only the first half of the semester as students reported minimal course impact at this time. It is possible that such a shortened program may stratify its focus to psychosocial support, with the withdrawal in the second half of semester to allowing students time with their tutors who could focus on academic elements, tailoring the program to specific course requirements and assignments. The idea of splitting the program between mentors and tutors would ameliorate any concerns around placing peers outside of their level of competence, while providing students with the support and academic skills they found valuable in this program. A structure such as this also seems more practical and financially viable than utilising faculty members as mentors as other authors have suggested (Levinson et al., 1978). This split structure may therefore ameliorate the students concerns around course material, however such a structure would also provide a singular focus for the mentoring program. This could be doubly useful as the aim of increasing both psychosocial and academic outcomes only showed moderate results in this study. This moderate success may be derived from students being unable to gain the full value of these individual variables when they are presented together in one program, with the presence of two aims in one program possibly splitting mentees engagement. This highlights the need for future research to determine the value and implementation of supportive programs versus academic skills tutelage.

Alternatively, future programs could continue to focus on both academic achievement and psychosocial wellbeing, but place the program in a less demanding subject. Placing the program in a difficult subject, while initially beneficial, seems to have engendered unnecessary problems. The use of a less demanding subject may facilitate student engagement through less need to acquire course relevant information. Such a subject would be typified by material that students are already familiar with (such as Developmental Psychology which students receive some tutelage in at First year), or that require the least adjustment to new material. Biological Psychology was a difficult subject because it incorporated new scientific material and statistics,
elements that psychology students traditionally struggle to grasp. Putting the program into a subject that is less anxiety provoking for students may facilitate stronger psychosocial links with the mentors as they feel less pressure to comprehend the course material. Additionally, mentors would be under less pressure to provide course specific information within a subject that students felt more confident in completing. This would also allow students to engage more fully in the micro-skill development this program advocated as they would not be overwhelmed attempting to grasp the difficult course content.

Thirdly, the program could be even more integrated with the course material so that mentee skill development is based directly on assignments. Creating a peer mentoring program in conjunction with a specific subject would allow adequate consideration of assignment due dates to ensure that there is no conflict between the program and course material. This would require a high degree of mentor expertise and thus may require more senior mentors such as post graduates students if this program was to be implemented in the second or third year. Alternatively, this program could be implemented in the first year and evaluated to assess whether the long term benefits continue throughout the three years of the degree.

The results of this study further highlight difficulties in providing a generalist mentoring program that targets students of the second year, without discerning a specific student type for intervention. This incurred difficulties in providing students with appropriate levels of guidance and freedom. These problems are likely derived from factors such as student age and academic ability level. Thus, further research is required into the impact of mentoring programs on specific second year student types. The relevance of being a school leaver compared to mature age student, and the relevance of previous academic achievement on mentoring needs further analysis. In particular the inclusion of third year double degree students in this second year program was problematic. Future programs will need to be flexible in working with these students and alternate forms of this program should be considered to cater for the diverse student population. Such forms may include consideration of electronic forms of mentoring for off
campus students, such as regional or part-time students. Future programs and research will need to identify strategies for meeting these students’ needs, or excluding them from year specific transition programs.

The challenges that mentees experienced and presented to their mentors show the importance of providing mentors with appropriate supportive outlets. Thus, the use of the manual and weekly debrief session were shown to be important features in mentors success. This highlights the importance of employing a debrief facilitator who has intimate knowledge of mentoring, group and interpersonal skills to aid mentors in adapting to student needs. Additionally, continued research into the mentors’ experience is important to establish programs that have longevity.

The methodology used in this study has some significant strengths and limitations. A particular strength is the use of a large data set to investigate student transition across the undergraduate degree. However, in order to implement and assess the mentoring program a much smaller sample size was utilised. Replication of this study on a larger scale and with consideration of some of the difficulties this program highlighted would add valuably to our knowledge of the second year slump and its remedy.

Further, both study 1 and study 2 utilised a limited sample of students. The samples used in this study were all psychology students from a single university. While the results here are promising, further research with other student groups and university undergraduate models (for example four year undergraduate degrees) is required to assess the efficacy of this mentoring model. Targeting students from other disciplines may require altering the content of the program and its evaluation to meet idiosyncratic needs. The use of other assessment modalities such as focus groups would be beneficial in ascertaining the unique needs of different student groups.

The use of an Australian sample is both a strength and limitation of this study. The findings of this study are important as they are the first to address the second year slump in an Australian context. However, as much of the second year slump literature comes from the United
States, more incisive investigations are needed to explore the contributing factors to the Australian second year students’ unique adjustment profile. Thus, the generalist approach of the American college system to the early undergraduate degree is likely to produce different concerns to the Australian university system where career choices are made out of high school. While the data from this study shows that like students from the United States there is a slump in the second year, the mechanisms of this slump require further elaboration in the Australian context. Greater elaboration of the second year slump in conjunction with comparison of Australian and American samples will provide a more complete understanding of the second year of higher education.

Finally, much of the data from both study 1 and study 2 is self report in nature. This is less of a concern considering the validity of the measures used, the use of cross sectional study designs and the incorporation of data such as GPA score, but the potential bias of such report methods should be noted nonetheless. This is particularly pertinent with respect to the self reported English proficiency variables.

**Conclusion**

The results of this study suggested that each year of the undergraduate degree has a unique adjustment profile that impacts student transition. It was found that the second year has idiosyncratic stressors that increase the potency of the relationship between psychological maladjustment and GPA, and increase the importance of previously established academic skills. Additionally, it was identified that the use of positive coping mechanisms such planning, and avoidance of coping mechanisms such as substance use and acceptance coping are important for second year student adjustment and grades. Incorporating this knowledge with other factors identified as important for second year student adjustment into a transition program resulted in a peer mentoring program, which showed moderate efficacy. Modest improvements in student academic focus and coping were identified, as well as modest benefits for mentors. This study
serves as a unique investigation of transition processes and programs outside of the first year. It is hoped that from this study the second year will form a larger point of focus for universities and transition programs alike, so that student adjustment throughout the entire undergraduate degree can be optimised.
References


sophomores succeed (Monograph No.31, pp 67-77). Columbia, SC: University of South Carolina, National Resource Centre for the First-Year Experience and Students in Transition.


INVITATION TO PARTICIPATE IN A RESEARCH PROJECT - PROJECT INFORMATION STATEMENT

Project Title:
Factors predicting academic performance and psychological wellbeing in undergraduate psychology students.

Investigators:

- Dr Andrea Chester (Lecturer, Psychology, RMIT University, andrea.chester@rmit.edu.au, 99253150
- Dr Sophia Xenos (Lecturer, Psychology, RMIT University, sophia.xenos@rmit.edu.au, 99251081

You are invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or 'plain English'. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?
We are lecturers in psychology at RMIT and this project is being conducted as part of our commitment to improve students' experience at university. The research project has been approved by the RMIT Human Research Ethics Committee.

Why have you been approached?
We are approaching all students enrolled in accredited undergraduate psychology courses at RMIT.

What is the project about? What are the questions being addressed?
As teachers we have noticed that some students appear to flourish at university right from the start, while others struggle. Still others overcome initial difficulties to do well, or begin well, but peter out towards the end. The aim of this research is to determine which factors allow students to do well in their undergraduate studies. We are interested in the factors that contribute (and detract) from academic achievement as well as those that impact on wellbeing and adjustment. Our aim is to improve the experiences of undergraduate psychology students. We plan to use the results to make positive changes to the way we teach and prepare students for their studies. The study will run for three years, tracking students as they move through their psychology program. We expect to have about 600 students, drawn from all three years of the undergraduate program, participate in the study.

If I agree to participate, what will I be required to do?
If you agree to take part in this research you will complete a package of questionnaires. The package takes approximately 30 minutes and will be completed in your psychology tutorial. The package includes a form giving your consent to participate in the study, questions about who you are (age, sex, etc.) and questions about the way you think, feel, and behave. In nearly all cases the questionnaires require only that you tick or circle your response. For example, you will be asked to
indicate on a four-point scale how true the following statement is for the last week “I tended to over-react to situations”. You will be invited to complete the questionnaire three times a year for as long as you are studying undergraduate psychology at RMIT.

As well as obtaining information from questionnaires, we will also be seeking your consent to obtain access to your grades in any psychology courses you are enrolled in and asking you to provide your TER.

**What are the risks associated with participation?**
Completing the questionnaire does not present any perceived risks outside your normal day-to-day activities. However, if you are unduly concerned about your responses to any of the questionnaire items you should contact the student counselling service as soon as convenient. The counselling service is located in Buildings 43 and 54, Cardigan Street, City Campus (9925 4365) and in Building 202, Level 2, Bundoora Campus (9925 4365). For more information see [http://www.rmit.edu.au/counselling](http://www.rmit.edu.au/counselling). In addition you may wish to contact the researchers Dr Andrea Chester and Dr Sophia Xenos, whose details are provided below.

**What are the benefits associated with participation?**
The aim of the project is to improve the experiences of undergraduate psychology students at RMIT. Whether the results of the study directly benefit you will depend on how many psychology courses you are still to take. Regardless of whether the results are of direct benefit, participation in the research will provide an opportunity to experience first hand the research process and further our knowledge in this area.

**What will happen to the information I provide?**
All the information you provide will be treated confidentially. Only the investigators and research assistant will have access to the data. You will be asked to put your name on the coversheet of the questionnaire pack so that we can track your responses over time, however, you will not be identified in any publications; only group results will be reported. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) a court order is produced, or (3) you provide the researchers with written permission. The results of this study will be available in December 2007 to all participants at [http://www.rmit.edu.au/browse;ID=cbjxkzjfd7qo;STATUS=A?QRY=Andrea%20Chester](http://www.rmit.edu.au/browse;ID=cbjxkzjfd7qo;STATUS=A?QRY=Andrea%20Chester). All data will be kept securely at RMIT for five years before being destroyed.

**What are my rights as a participant?**
Participation in the study is voluntary and you have the right to withdraw your participation at any time, without prejudice. You have the right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified and you have the right to have any questions answered at any time. Your grades in psychology will not be affected by your decision to participate in the study. The researchers will not be aware of whether you have elected to participate in the study. An independent assistant will input all data and information identifying you will be kept separate.

**Who should I contact if I have any questions?**
If you have any questions about any aspect of the study please feel free to contact Dr. Andrea Chester on 9925 3150 or andrea.chester@rmit.edu.au or Dr. Sophia Xenos on 9925 1081 or sophia.xenos@rmit.edu.au

Andrea Chester, PhD
Sophia Xenos, PhD

Any complaints about your participation in this project may be directed to the Secretary, RMIT Human Research Ethics Committee, University Secretariat, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 1745. Details of the complaints procedure are available from the above address.
RMIT HUMAN RESEARCH ETHICS COMMITTEE

Prescribed Consent Form For Persons Participating In Research Projects Involving Interviews, Questionnaires or Disclosure of Personal Information

PORTFOLIO OF

SCHOOL OF

Science, Engineering, & Technology

Health Sciences

Factors predicting academic performance and psychological wellbeing in undergraduate psychology students.

Name of participant: [Name]

Project Title: [Title]

Name(s) of investigators: (1) Dr Andrea Chester Phone: 9925 3150 (2) Dr Sophia Xenos Phone: 9925 1081

1. I have received a statement explaining the questionnaire involved in this project.

2. I consent to participate in the above project, the particulars of which - including details of the questionnaires - have been explained to me.

3. I authorise the investigators to administer a questionnaire.

4. I acknowledge that:

(a) Having read Plain Language Statement, I agree to the general purpose, methods and demands of the study.

(b) I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied.

(c) The project is for the purpose of research and teaching. It may not be of direct benefit to me.

(d) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.

(e) The security of the research data is assured during and after completion of the study. The data collected during the study may be published, and a summary of the project outcomes will be posted onto the Division website at the completion of the research in 2008. Any information which will identify me will not be used.

Participant’s Consent

Name: ____________________________ Date: ____________________________

[Participant]

Any complaints about your participation in this project may be directed to the Secretary, RMIT Human Research Ethics Committee, University Secretariat, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 1745. Details of the complaints procedure are available from the above address.
This booklet contains a series of questionnaires designed to measure a variety of individual attitudes, feelings and behaviours.
There are no right or wrong responses so try very hard to be completely honest in your answers.

**SECTION A: PERSONAL INFORMATION**

1) What year are you in?    □ First □ Second □ Third

2) What is your sex?    □ Female □ Male

3) What is your date of birth? ____________________________

4) What is your student number? ____________________________

5) If you had an ENTER score what was it? ____________________________

6) What is your country of origin (birthplace)?
    □ Australia □ United Kingdom
    □ North America
    □ Other European (please specify) ____________________________
    □ Asia (please specify) ____________________________
    □ Africa (please specify) ____________________________
    □ Other (please specify) ____________________________

7) If you were born outside Australia, when did you arrive in Australia? ____________________________

8) Please rate your proficiency in written English.
    □ poor □ moderate □ good

9) Please rate your proficiency in spoken English.
    □ poor □ moderate □ good

10) What is your relationship status?
    □ Single □ Non-cohabiting relationship, i.e., not living with your partner
    □ Defacto or married □ Other (please specify) ____________________________

11) If you have any children, please indicate their ages.

12) Employment:
    How many hours a week (on average) do you work? ____________________________ hours

13) On which campus are you doing the majority of your study?
    □ City □ Bundoora

14) Please tick ALL of the following categories that describe you.
If you are an undergraduate student, what is your program?
- B.Soc.Sci (Psychology)
- B.Soc.Sci (Social Work)
- B.Soc.Sci (Social Work & Psychology)
- B.App. Sci (Psychology)
- Other (please specify)

1) In the last week, how many hours did you spend studying, excluding attendance at lectures and tutorials?

______________ hours

2) In the last month, have you contacted your lecturers or tutors outside class time for any of the following reasons?
- To ask a question about content
- To get help with a piece of assessment
- To seek an extension/special consideration
- Other (please specify)

3) In the last month, have you used a study group (a group of other students in your course who meet to talk about their study)?
- Yes
- No

4) In the last month have you shown your work to any other student in the course before submitted it?
- Yes
- No
- Not applicable; I have not done any work.

5) Do you have a computer at home?
- Yes
- No

6) Do you have an Internet connection at home?
- Yes
- No

Below are five statements that you may agree or disagree with. Using the 1-7 scale below indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

7 = Strongly agree
6 = Agree
5 = Slightly agree
In this section we are interested in how students respond when they confront difficult or stressful events related to their study. There are lots of ways to try to deal with stress. This part of the questionnaire asks you to indicate what you generally do and feel when you experience stressful events related to study. Obviously different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress at uni. Then respond to each of the following items by choosing one number for each, using the response choices listed just below.

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I usually don’t do this at all.</td>
</tr>
<tr>
<td>2</td>
<td>I usually do this a little bit.</td>
</tr>
<tr>
<td>3</td>
<td>I usually do this a medium amount.</td>
</tr>
<tr>
<td>4</td>
<td>I usually do this a lot.</td>
</tr>
</tbody>
</table>

Please try to respond to each item separately in your mind from each other item. Choose your answers thoroughly, and make your answers as true FOR YOU as you can. Please answer every item. There are no “right” or “wrong” answers, so choose the most accurate answer FOR YOU – not what you think “most people” would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1. I try to grow as a person as a result of the experience.  
2. I turn to work or other substitute activities to take my mind off things.  
3. I get upset and let my emotions out.  
4. I try to get advice from someone about what to do.  
5. I concentrate my efforts on doing something about it.  
6. I say to myself “this isn’t true”.  
7. I put my trust in God.  
8. I laugh about the situation.  
9. I admit to myself I can’t deal with it, and give up trying.  
10. I restrain myself from doing anything too quickly.  
11. I discuss my feelings with someone.  
12. I use alcohol or drugs to make myself feel better.  
13. I get used to the idea that it happened.  
14. I talk to someone to find out more about the situation.  
15. I keep myself from getting distracted by other thoughts or activities.  
16. I daydream about things other than this.  
17. I get upset, and am really aware of it.  
18. I seek God’s help.  
19. I make a plan of action.  

4 = Neither agree or disagree  
3 = Slightly disagree  
2 = Disagree  
1 = Strongly disagree  

___ In most ways my life is close to my ideal  
___ The conditions of my life are excellent  
___ I am satisfied with my life  
___ So far I have gotten the important things I want in life  
___ If I could live my life over, I would change almost nothing
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>I make jokes about it.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I accept that this has happened and that it can’t be changed.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>I hold off doing anything about it until the situation permits.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>I try to get emotional support from friends and relatives.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>I just give up trying to reach my goal.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>I refuse to believe that it has happened.</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>I hold off doing anything about it until the situation permits.</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>I take additional action to try to get rid of the problem.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>I try to see it in a different light, to make it seem more positive.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>I talk to someone who could do something concrete about the problem.</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>I get sympathy and understanding from someone.</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I let my feelings out.</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>I kid around about it.</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>I give up the attempt to get what I want.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>I look for something good in what is happening.</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>I kid around about it.</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>I get sympathy and understanding from someone.</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>I feel a lot of emotional distress and I find myself expressing those feelings a lot.</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>I force myself to wait for the right time to do something.</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>I feel a lot of emotional distress and I find myself expressing those feelings a lot.</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>I make sure not to make matters worse by acting too soon.</td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>I reduce the amount of effort I’m putting into solving the problem.</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>I kid around about it.</td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>I find comfort in my religion.</td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>I force myself to wait for the right time to do something.</td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>I make sure not to make matters worse by acting too soon.</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>I learn something from the experience.</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>I find comfort in my religion.</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>I make fun of the situation.</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>I reduce the amount of effort I’m putting into solving the problem.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>I learn to live with it.</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>I learn to live with it.</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>I put aside other activities in order to concentrate on this.</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>I learn to live with it.</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>I take direct action to get around the problem.</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>I do what has to be done, one step at a time.</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>I talk to someone about how I feel.</td>
<td></td>
</tr>
<tr>
<td>57</td>
<td>I pretend that it hasn’t really happened.</td>
<td></td>
</tr>
<tr>
<td>58</td>
<td>I pray more than usual.</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION G: PROBLEM-SOLVING**
Here is a list of statements dealing with your general feelings about yourself. If you agree with the statement, circle A. If you strongly agree, circle SA. If you disagree, circle D. If you strongly disagree, circle SD.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. One the whole, I am satisfied with myself.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>2. At times I think I am no good at all.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>3. I feel that I have a number of good qualities.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>4. I am able to do things as well as most other people.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>5. I feel I do not have much to be proud of.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>6. I certainly feel useless at times.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>7. I feel that I’m a person of worth, at least on an equal plane with others</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>8. I wish I could have more respect for myself.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>9. All in all, I am included to feel that I am a failure.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>10. I take a positive attitude towards myself.</td>
<td>SD</td>
<td>D</td>
<td>A</td>
<td>SA</td>
</tr>
</tbody>
</table>

This scale asks you to rate how confident you are that you can do the action that is stated by each item.
For each statement circle whether you are “Very Confident”, “Not at all confident”, or somewhere in between these on the continuum.

This scale is made up of a list of statements each of which may or may not be true about you. For each statement circle "definitely true" if you are sure it is true about you and "probably true" if you think it is true but are not absolutely certain. Similarly, you should circle "definitely false" if you are sure the statement is false and "probably false" if you think it is false but are not absolutely certain.

1. If I wanted to go on a trip for a day (for example, to the country or beach), I would have a hard time finding someone to go with me.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

2. I feel that there is no one I can share my most private worries and fears with.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

3. If I were sick, I could easily find someone to help me with my daily chores.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

4. There is someone I can turn to for advice about handling problems with my family.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

5. If I decide one afternoon that I would like to go to a movie that evening, I could easily find someone to go with me.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

6. When I need suggestions on how to deal with a personal problem, I know someone I can turn to.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

7. I don't often get invited to do things with others.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

8. If I had to go out of town for a few weeks, it would be difficult to find someone who would look after my house or apartment (the plants, pets, garden, etc.).
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

9. If I wanted to have lunch with someone, I could easily find someone to join me.
   1. definitely
   2. probably
   3. probably
   4. definitely
   false false true true

10. If I was stranded 10 kms from home, there is someone I could call who could come and get me.
    1. definitely
    2. probably
    3. probably
    4. definitely
    false false true true

11. If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it.
    1. definitely
    2. probably
    3. probably
    4. definitely
    false false true true

12. If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me.
    1. definitely
    2. probably
    3. probably
    4. definitely
    false false true true
<table>
<thead>
<tr>
<th></th>
<th>definitely</th>
<th>probably</th>
<th>probably</th>
<th>definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>false</td>
<td>false</td>
<td>true</td>
<td>true</td>
</tr>
</tbody>
</table>

**ANY QUESTIONS?**

If you have any difficulties completing these questionnaires or if you have any concerns arising from the issues contained within the questionnaires and would like to be referred to an appropriate contact for further discussion, contact your tutor or the investigators:

Dr Andrea Chester  99253150  andrea.chester@rmit.edu.au
Dr Sophia Xenos  99251081  sophia.xenos@rmit.edu.au
Appendix B

PPATS
Psychology Peer Assisted Tutorial Support

Second year program
Mentors guide
2008
<table>
<thead>
<tr>
<th>Week</th>
<th>Tutorial Task</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Get to know your mentees</td>
<td>30min</td>
</tr>
<tr>
<td>4</td>
<td>Tips for oral presentations</td>
<td>30min</td>
</tr>
<tr>
<td>5</td>
<td><em><strong>Non-Mentoring week</strong></em></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Coping styles</td>
<td>30min</td>
</tr>
<tr>
<td>7</td>
<td>Assignment breakdown</td>
<td>30min</td>
</tr>
<tr>
<td>8</td>
<td>Finding appropriate resources in Psychology</td>
<td>30min</td>
</tr>
<tr>
<td>9</td>
<td>Writing a lab report in psychology</td>
<td>30min</td>
</tr>
<tr>
<td>10</td>
<td>Synthesising information from multiple sources</td>
<td>30min</td>
</tr>
<tr>
<td>11</td>
<td><em><strong>Non-Mentoring week</strong></em></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td><em><strong>Non-Mentoring week</strong></em></td>
<td></td>
</tr>
</tbody>
</table>
**Week 4**

### Tips for oral presentations

**Mentors role**

**Step 1.**
Clarify with students what SOLVER would look like. Then ask them to complete the role plays. During this section facilitate discussion on the impression or feeling that each of the don’t-do body postures’ elicit. Contrast these with the SOLVER position in activity 2.

**Step 2.**
Ask students to attempt to use prompts. If they say that they can’t possibly do it, ask them to identify what it is they have difficulty with, then ask them to brainstorm ways in which they might be able to address these issues.

**Step 3.**
During activity four run student’s through each of the relaxation techniques. Allow time of them to discuss how each felt and how they might use them during or before a presentation.

**Step 4.**
Ask students to read over the ‘Structure of an oral presentation’. Ask them if they know what signalling phrases are (ie a signalling phrase is like a red flag, which tells the audience what your about to talk about. It allows the listener to follow your speech).
Giving the presentation

In any presentation, it is of vital importance to keep the listener attentive. There is nothing worse than getting halfway through your speech and seeing your class mates tune out! While your content is important to what you say, how you say it can be even more important for what your classmates and markers hear.

Non verbal communication

Non-verbal communication, although it is hard to define is one of the most powerful means of communication. It is estimated that 80% of communication is non-verbal! The following checklist may help you to get into some good habits with you communication skills.

S- Squarely face the people you are communicating with
O- Open posture
L- Lean slightly forward
V- Verbal comments should be relevant to what other people are saying
E- Eye contact should be made and reasonably maintained- not overdone
R- Relax, be comfortable and show it.

ACTIVITY 1
Get into pairs and allocate one of you as person A and the other as person B. Next, say the following passage with the appropriate body language (as allocated in the table on the next page);

In psychology, biological psychology, is the application of the principles of biology to the study of mental processes and behaviour. Biological psychologists may often be interested in measuring some biological variable, for example, an anatomical, physiological, or genetic variable, in an attempt to relate it quantitatively or qualitatively to a psychological or behavioural variable

After each role play jot down how you felt while saying the passage, and ask your partner to jot down their impression of you

<table>
<thead>
<tr>
<th>Person A</th>
<th>Person B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands on hips/in pockets</td>
<td>Wringing hands</td>
</tr>
<tr>
<td>Arms crossed</td>
<td>Both arms behind back</td>
</tr>
</tbody>
</table>

Role play 1
Body posture was;
My impression was;
Role play 2
Body posture was;
My impression was;

Role play 3
Body posture was;
My impression was;

Role play 4
Body posture was;
My impression was;

Common interpretations of these types of body language are;

Arms crossed and hands on hips = Aggressive/confrontational
Hands wringing = Nervous, lacks credibility
Arms behind back = Overly causal, doesn't really care about what they’re talking about.

ACTIVITY 2
Now try saying the same passage with an open posture, straight back, squarely facing your partner, and with a relaxed body.

What impression did this give?

Did you or your partner notice that you struggled with any part of this? If so, take note of it and try again paying particular attention to the bit you found difficult.
How to organize your notes

It can sometimes be tempting to write out your whole speech and just read it off. However, this rarely engages the audience (including your marker!). Therefore, it can be useful instead use prompts which will enable you to speak naturally.

Step 1.
Be prepared. It is essential that you know your topic very well and you know what you want to say to your audience.

Step 2.
Use prompts to remind you of the next section of your speech, these can include;
- Single words
- Phrases
- Symbols
- Audio-visual aids.

If you feel naked up there without your whole speech written out, try to have it written in large font and double spaced, and include
- Underline words which can act as prompts
- Note where your changing powerpoint slides
- Mark places where you should look at the audience

Step 3

ACTIVITY 3
Look at the following paragraph.

In many cases, humans may serve as experimental subjects in biological psychology experiments; however, a great deal of the experimental literature in biological psychology comes from the study of non-human species, most frequently rats, mice, and monkeys. As a result, a critical assumption in biological psychology is that organisms share biological and behavioural similarities, enough to permit extrapolations across species. This allies biological psychology closely with comparative psychology, evolutionary psychology, and evolutionary biology. Biological psychology also has paradigmatic and methodological similarities to neuropsychology, which relies heavily on the study of the behaviour of humans with nervous system dysfunction.

Try to identify appropriate prompt words or phrases which would allow you to convey the information in this paragraph, without necessarily reading the paragraph verbatim. You may like to highlight words within the text or use the space provided to write them out individually.
How did you go?
What worked?

Relax

Being relaxed is an important part of any presentation. It helps your audience engage with you, and it helps you to feel good!

ACTIVITY 4

Visualise
Mentally rehearse your presentation and the sequence of events that will occur throughout it, from the time you are introduced through to your concluding statement. This will help you focus on what you need to do to be successful.

Try it now…….

Breathe
When your muscles tighten and you feel nervous, you may not be breathing deeply enough. The first thing to do is sit or stand up straight, be erect and inhale deeply and number of times.

Try it now…….

Release tension
As tension increases your muscles tighten, nervous energy can get locked into limbs. An isometric exercise can help release this tension. Tighten the muscles in your body one at a time, starting with your toes up until your head. Combine each muscle contraction with a deep breath, and relax as you breath out.

Try it now…….

Move
Speakers who stand in one spot and never gesture, experience tension. You need to let your muscles move to release tension build up. Even small movements such as a small step to the side occasionally will help loosen muscle tension. Remember, don’t walk around too much though, this can be disconcerting!
**Structure**

An oral presentation is structured much the same way as an essay: Introduction, Body and Conclusion.

However, because your information/argument is spoken rather than written, there are some further considerations:

1. **Introduction** - tells your audience what you are going to tell them
   - Provides some brief background information to show why your topic is important/relevant
   - Outlines the structure of your presentation, the order in which you will present your information
   - Attracts the audience's attention with, for example, a relevant quote, story, or question for the audience
   - 10% of allotted time

2. **Body** - tells them
   - Contains the main argument of the presentation
   - Presents the issues relating to the main argument (thesis statement)
   - Includes support/evidence for each of the main issues using:
     - statistics
     - diagrams
     - reference to other research
     - examples, reasons
   - Is presented in a logical way, using **explicit signalling phrases and connectives to signal a new point**, an example, a contrast, etc.
   - 70% of allotted time

3. **Conclusion** - tells them what you told them
   - Summarises the main points discussed in the body
   - Evaluates the importance of the information
   - Reviews any implications
   - Brings the presentation to a smooth and natural close
   - Leaves the audience with ideas to think about (e.g., a quote or question)
   - If appropriate, gives the audience the chance to ask questions
   - 20% of allotted time

Week 6

How do you cope with stress?

Mentors Role.

Step 1
Ask student’s to complete the questionnaire and respective questions. During this section encourage the students to share their responses if they feel comfortable doing so.

Step 2
Ask student’s to read through the coping styles sheet. Student’s should begin to identify some of their own coping strategies. Encourage them to give their own example of each coping style.

Step 3
Ask students to complete Part III. The idea of this section is for students to learn that the usefulness of coping strategy depends on whether you can control the stressor. For stressors that you can exert some influence over, its better to use problem focused coping. For example, if you’ve got an assignment due its better to plan how you will complete it and seek assistance when necessary, then avoid the tasks or vent about how it is stressing you out. Conversely, if you cannot control the situation, then regulating your emotions is most useful. For example, you can’t change a bad mark once you’ve got it, so venting about it or positively reinterpreting it may be the best way to handle the stressor.

In addition problem focused and emotion focused coping can be used together. Take the last example. Once you’ve vented you may use the experience to help you plan how to get a better grade next time.

Step 4
Help students establish some problem solving skills. To help formulate solutions to problems use the work sheet “Problem solving”. This work sheet requires students to identify their specific issue, brainstorm multiple ways to solve the problem, and then by looking at the outcome of each of these, choose an appropriate solution. Remember you are not meant to hold all the answers! The aim of this section is help students to learn their own problem solving skills, which will hopefully help them in the future.

The main idea of this section is to get students thinking about how they cope, and to identify that some of their coping strategies which may be unhelpful. Allow students to share their experiences and use each other as guides into effective coping.
ACTIVITY 1

Think about a very stressful personal crisis or life event you experienced in the last year that you had some control over – the more recent and stressful the event, the better for this exercise. How did you handle this situation and your stress? Some of the ways people handle stressful experiences are listed below. Mark an “X” in the space preceding each one you used.

1. _____ Tried to see a positive side to it.
2. _____ Tried to step back from the situation and be more objective.
3. _____ Prayed for guidance or strength.
4. _____ Sometimes took it out on other people when I felt angry or depressed.
5. _____ Got busy with other things to keep my mind off the problem.
6. _____ Decided not to worry about it because I figured everything would work out fine.
7. _____ Took things one step at a time.
8. _____ Read relevant material for solutions and considered several alternatives.
9. _____ Drew on my knowledge because I had a similar experience before.
10. _____ Talked to a friend or relative to get advice on handling the problem.
11. _____ Talked with a professional person (e.g., doctor, clergy, lawyer, teacher, counselor) about ways to improve the situation.
12. _____ Took some action to improve the situation.

 _____ Total of Xs in first six coping strategies (these are strategies focused either on managing your emotions related to the stressful situation, or on avoiding the source of the stress).

 _____ Total of Xs in second six coping strategies (these are strategies focused on the source of the problem and actively trying to resolve it).

Which type of strategies did you use the most?

Why?

What functions did your strategies serve?

Were the strategies you used the most effective in dealing with the stress? Why or why not?
ACTIVITY 2
Now, think about a very stressful personal crisis or life event you experienced in the last year that was out of your control – the more recent and stressful the event, the better for this exercise. How did you handle this situation and your stress? Some of the ways people handle stressful experiences are listed below. Mark an “X” in the space preceding each one you used.

1. _____ Tried to see a positive side to it.
2. _____ Tried to step back from the situation and be more objective.
3. _____ Prayed for guidance or strength.
4. _____ Sometimes took it out on other people when I felt angry or depressed.
5. _____ Got busy with other things to keep my mind off the problem.
6. _____ Decided not to worry about it because I figured everything would work out fine.
7. _____ Took things one step at a time.
8. _____ Read relevant material for solutions and considered several alternatives.
9. _____ Drew on my knowledge because I had a similar experience before.
10. _____ Talked to a friend or relative to get advice on handling the problem.
11. _____ Talked with a professional person (e.g., doctor, clergy, lawyer, teacher, counselor) about ways to improve the situation.
12. _____ Took some action to improve the situation.

_____ Total of Xs in first six coping strategies (these are strategies focused either on managing your emotions related to the stressful situation, or on avoiding the source of the stress).

_____ Total of Xs in second six coping strategies (these are strategies focused on the source of the problem and actively trying to resolve it).

Which type of strategies did you use the most?

Why?

What functions did your strategies serve?

Were the strategies you used the most effective in dealing with the stress? Why or why not?

Coping Styles

Problem Focused Coping
Is the process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects. Problem focused coping includes initiated direct action, increasing ones efforts, and trying to execute a coping attempt in a stepwise fashion.

Planning
Planning involves coming up with action strategies, thinking about what steps to take and how best to handle the problem.
E.g. Steve, a hospital patient who needs to choose a specialist for a serious illness, might seek and study information about different specialist before choosing.

Suppression of competing activities
Putting other projects aside, trying to avoid becoming distracted by other events, even letting other things slide, if necessary, in order to deal with the stressor.
E.g. Judy decides to spend less time with friends on the weekend so she can focus on her assignment.

Restraint coping
Waiting until an appropriate opportunity to act presents itself, holding oneself back, and not acting prematurely.
E.g. Jonathan waits until his lecturer is free to talk before approaching him about getting an extension.

Seeking social support for aid
Seeking advice, assistance or information from friends.
E.g. Sally asks her friends to help her move on the weekend.

Emotion focused Coping
Approaches people use for managing stress that are aimed at regulating their emotional response.

Seeking emotional support from friends
Seeking moral support, understanding or sympathy from friends.
E.g. Tessa’s friends tell her that her that her mum was being completely unfair when she grounded her.

Venting Emotions
Focus on whatever distress or upset one is experiencing and ventilating those feelings.
*E.g.* Willow tells her friends her worries about getting good grades.

**Behavioural Disengagement**
Reducing efforts to deal with the stressor in order to reduce unpleasant feelings.
*E.g.* Dean uses alcohol to escape the pressure of his upcoming presentation.

**Mental Disengagement**
Using strategies such as daydreaming, distraction or immersion in T.V to stop oneself from thinking about the stressful situation.
*E.g.* Stacey watches movies to take her mind off her fight with her boyfriend.

**Positive Reinterpretation**
Trying to create a positive meaning from the situation, generally in terms of personal growth.
*E.g.* Ben realizes that he appreciates life and his family more since recovering from a serious illness.

**Acceptance**
Acceptance can refer to two different modes of coping. The first involves acceptance of the stressor as real and requiring action. The second is acceptance of one’s responsibility in relation to the stressor.
*E.g.* Trudy accepts that she is failing her math course, and she must now seek additional help in order to pass.

ACTIVITY 3
Answer the following questions in response to Activity 1 and 2 above.

Describe any trends you noticed with respect to the types of coping strategies you used in the stressful situation you had some control over versus the one you did not.

Look back and compare the emotion-focused or avoidant coping strategies you used in the stressful situation you had some control over versus those used in the one you did not have control over. In which stressful situation did you find these types of strategies most effective and why?

Look back and compare the problem-focused or active coping strategies you used in the stressful situation you had some control over versus those used in the one you did not have control over. In which stressful situation did you find these types of strategies most effective and why?
Problem solving.

Step 1
What is the problem?

Step 2
What are all of the things I could do?

1

2

3

Step 3
What are the possible outcomes of each choice?

1

2
Step 4
Pick the best one
I choose;

Step 5
How did I do?
### Assignment Breakdown

**Mentors role**
The aim of this module is for student’s to effectively break the assignment down into achievable parts, and to plan how they will achieve their respective tasks.

**Step 1.**
Help the students to plan out all of the tasks that need to be achieved. They can use the table 1 “Project Planning” to do this. Once each task has been identified, help students to prioritize their tasks in the column “Priority”. Next ask students to estimate how much time each task will take, this will be important in the next step.

**Step 2.**
Ask students to read through the “schedule your time section”. Your role in this section is to help students establish realistic time management. Therefore, ask student’s to first use their diary or the provided diary to block in the engagements they already have (ie uni classes, work, family responsibilities, social time). Then using their estimate of how much time each of their allocate project tasks will take, help them to block in the appropriate amount of time to achieve their tasks.

**Problems**
During this section you may need to help student’s refrain from some of their already planned activities so they can fit in their school work. Alternatively, you may need to help student’s effectively use what time they do have, to help with this;

- Go back to the priority list and do things of high priority first
- Help student’s see what tasks in their life they can say ‘no’ to
- Help student’s realize that we’re not striving for perfection, help them plan to complete tasks to get the results they really need.
- Tell student’s that rethinking basic decisions is a waste of time, encourage them to them to make decisions quickly and move on.
- Break down some tasks into even smaller manageable parts if necessary

**Step 3.**
Help students plan immediate rewards which they will give themselves when each of their smaller tasks is achieved, and a larger reward they will give themselves when the project is achieved.
# Project Planning

What tasks need to be completed?

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Priority</th>
<th>How much time will it take?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Scheduling is the process by which you look at the time available to you, and plan how you will use it to achieve the goals you have identified. By using a schedule properly, you can:

- Understand what you can realistically achieve with your time;
- Plan to make the best use of the time available;
- Leave enough time for things you absolutely must do;
- Preserve contingency time to handle ‘the unexpected’;

Minimize stress by avoiding over-commitment to yourself and others.

A well thought-through schedule allows you to manage your commitments, while still leaving you time to do the things that are important to you. It is therefore your most important weapon for beating work overload.

How to schedule your time.

Scheduling is best done on a regular basis, for example at the start of every week or month. Go through the following steps in preparing your schedule:

1. Start by identifying what time in your week is already allocated to other activities
2. Review your Project Planning chart, and schedule in the high-priority urgent activities, as well as the essential maintenance tasks that cannot be delegated and cannot be avoided.
3. Next, block in appropriate contingency time. The reality of many people’s work is of constant interruption. Obviously, you cannot tell when interruptions will occur. However, by leaving space in your schedule, you give yourself the flexibility to rearrange your schedule to react effectively to issues as they arise.

Key points:

Scheduling is then a four-step process:

1. Identify the time you have available.
2. Block in the essential tasks you must carry out to succeed in your job.
3. Schedule in high priority urgent tasks and vital “house-keeping” activities.
4. Block in appropriate contingency time to handle unpredictable interruptions.
## Rewards

### Immediate rewards

### Long term reward

Finding appropriate resources in psychology.

Mentors role
The mentors role in this module is to help students access appropriate sources of information.

Step 1.
Ask students to read the section on search strategies and help them brainstorm search words in each activity.

Step 2.
Facilitate students discussion in the ‘evaluate your sources’ section. Student’s should be able to identify the journal article as superior to the Wikipedia article because it is has an author who is qualified in the field, it has been reviewed by other experts in the field, it is intended for other psychologists, it is recent, it has multiple peer reviewed references and it’s purpose is to add value and information to the psychological community. Whereas Wikipedia can be authored by anyone, reviewed by anyone, it isn’t intended for a professional community (thus it has a less empirical basis), its references are not reviewed, and its information may be too basic because it is intended for the layman.
Developing a search strategy

It is possible to search databases, the Library catalogue or the Internet in a variety of ways and by using features such as Subject Headings to assist you in carrying out effective and efficient searches.

Keyword searching

From your topic or research question you have analysed what are the main concepts. Keywords are single words you have identified from your topic that will find the information you need. It is important to search on not only keywords identified from your topic or question but to search on related and similar keywords. An electronic database searches only for the keywords you type in and so you may miss important articles/information if you limit your search. A database will generally search for keywords in all fields of a database.

Example Key word search

For example the research topic: “Discuss the benefits of tourism and travel information on the Web” may have a keyword list like this:

<table>
<thead>
<tr>
<th>CONCEPT 1</th>
<th>Tourism / travel information</th>
</tr>
</thead>
</table>

**Keywords (Synonyms)**

- Tourism
- Travel
- Holiday
- Vacation

<table>
<thead>
<tr>
<th>CONCEPT 2</th>
<th>The web</th>
</tr>
</thead>
</table>

**Keywords (Synonyms)**

- The Net
- Web
- World wide web
- Computers
- Online bookings

The entire process of identifying main concepts and compiling a list of keywords is known as brainstorming.
ACTIVITY 1
Brainstorm as many potential key words as possible for your lab report topic

Combining keywords

You may wish to search for more than one keyword to find a particular concept or topic. Some databases/catalogues give you the best search results when you use Boolean operators (advanced operators). These allow you to combine words in a variety of ways to bring you relevant search results. They are sometimes used with advanced searching options on the Internet as well.

There are three terms commonly used to combine words. They are **AND**, **OR** and **NOT**.

**AND**: narrows the scope of a search by retrieving only items with **both terms**.

Example: *travel AND tourism* retrieves records where both *travel* and *tourism* occur (indicated by the shaded area)

**OR**: broadens a search by retrieving items with **both or either term**. Good to use when there are variations in spelling (i.e. colour or colour), terminology (i.e. nuclear or atomic) and synonyms (holiday or vacation)

Example: *travel OR tourism* retrieves records where either *travel* or *tourism* occur (indicated by the shaded area)

**NOT**: Limits a search by excluding terms. The use of **NOT** excludes an item from a search and narrows the topic and the possible matches.

Example: *travel NOT tourism* retrieves records with the keyword *travel* but not *tourism* (indicated by the shaded area)
ACTIVITY 2
Brainstorm as many potential combined key words as possible for your lab report topic

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Phrase searching

There may be times when you wish to search for a phrase. Each database you search will have different requirements or search methods for phrase searching. The database “help” page will indicate the preferred method of phrase searching. Often a phrase will need to be in brackets or quotation marks e.g. “”. Examples include:

- (wet season)
- “wet season”
- Other databases use phrase searching as a field choice in a text box. For example: with the exact phrase: wet season

ACTIVITY 3
Brainstorm as many search phrases as possible for your lab report topic

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

Evaluate your sources

The following are evaluation criteria you should use to determine if the information you are reading comes from a trustworthy source:
**Authority and accuracy**
Can you easily identify the author? Look for information about the author in the journal where the article appears, or the front or back cover of the book.
Is the author an authority in the field? What are their credentials?
Evaluation is especially important on the Internet. The authenticity and accuracy of websites need to be verified if you are using them for academic or research purposes. Look for the contributing author's name and a link to their credentials.

**Date of publication**
When was the information published? If the information is more than five years old, it may be out of date.

**Type of publication**
Is the book a popular work or an academic text?
Is the article published in a popular magazine or a scholarly journal?
Does the website include any information about its maintenance?

**Purpose**
What is the purpose of the information? Who is the intended audience?
Is it to inform, persuade, report or to present opinions?
Is the author biased in some way? Is their point of view political, racial or religious?

**Relevance of the content**
Does the book, chapter, article or website contain the information that you require for your essay or assignment?
Does it contain enough detail?
Is the subject coverage broad enough?

**Intended audience**
Who is the intended audience?
Can you understand the material without too much difficulty?
Is too basic perhaps?

**References, citing and reviews**
Has the author done their research? Does the work have a bibliography or reference list?
Have other authors reviewed or referred to this work or website?
ACTIVITY 4
Read the following passages then answer the questions.

Biological psychology

From Wikipedia, the free encyclopedia

In psychology, biological psychology, also known as biopsychology and psychobiology, is the application of the principles of biology to the study of mental processes and behaviour. A psychobiologist, for instance, may compare the imprinting behaviour in goslings to the early attachment behaviour in human infants and construct theory around these two phenomena. Biological psychologists may often be interested in measuring some biological variable, e.g. an anatomical, physiological, or genetic variable, in an attempt to relate it quantitatively or qualitatively to a psychological or behavioural variable, and thus contribute to evidence based practice.

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• 3 Research methods
  o 3.1 Disabling or decreasing neural function
  o 3.2 Enhancing neural function
  o 3.3 Measuring neural activity
  o 3.4 Genetic manipulations
• 4 Topic areas in biological psychology
• 5 Nobel Laureates
• 6 See also
• 7 References
• 8 External links

[edit] History

The study of biological psychology dates back to Avicenna (980-1037), a Persian psychologist and physician who in The Canon of Medicine, recognized physiological psychology in the treatment of illnesses involving emotions, and developed a system for associating changes in the pulse rate with inner feelings, which is seen as an anticipation of the word association test. Avicenna also gave psychological explanations for certain somatic illnesses, and he always linked the physical and psychological illnesses together. He explained that humidity inside the head can contribute to mood disorders, and he recognized that this occurs when the amount of breath changes: happiness increases the breath, which leads to increased moisture inside the brain, but if this moisture goes beyond its limits, the brain would lose control over its rationality and lead to mental disorders.
Biological psychology as a scientific discipline later emerged from a variety of scientific and philosophical traditions in the 18th and 19th centuries. In philosophy, men like Rene Descartes proposed physical models to explain animal and human behaviour. Descartes, for example, suggested that the pineal gland, a midline unpaired structure in the brain of many organisms, was the point of contact between mind and body. Descartes also elaborated on a theory in which the pneumatics of bodily fluids could explain reflexes and other motor behaviour. This theory was inspired by moving statues in a garden in Paris.

Other philosophers also helped give birth to psychology. One of the earliest textbooks in the new field, *The Principles of Psychology* by William James (1890), argues that the scientific study of psychology should be grounded in an understanding of biology:

“Bodily experiences, therefore, and more particularly brain-experiences, must take a place amongst those conditions of the mental life of which Psychology need take account. The spiritualist and the associationist must both be ‘cerebralists,’ to the extent at least of admitting that certain peculiarities in the way of working of their own ophian principles are explicable only by the fact that the brain laws are a codeterminant of their result.

Our first conclusion, then, is that a certain amount of brain-physiology must be presupposed or included in Psychology.”

James, like many early psychologists, had considerable training in physiology. The emergence of both psychology and biological psychology as legitimate sciences can be traced from the emergence of physiology from anatomy, particularly neuroanatomy. Physiologists conducted experiments on living organisms, a practice that was distrusted by the dominant anatomists of the 18th and 19th centuries. The influential work of Claude Bernard, Charles Bell, and William Harvey helped to convince the scientific community that reliable data could be obtained from living subjects.

The term “psychobiology” has been used in a variety of contexts, but was likely first used in its modern sense by Knight Dunlap in his book *An Outline of Psychobiology* (1914). Dunlap also founded the journal *Psychobiology*. In the announcement of that journal, Dunlap writes that the journal will publish research “...bearing on the interconnection of mental and physiological functions”, which describes the field of biological psychology even in its modern sense.

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**References**

1. ^ Merriam-Webster’s Online Dictionary » Psychobiology>

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The transition to university: Factors predicting academic performance in undergraduate students

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Abstract

Providers of higher education are constantly faced with questions of how to improve undergraduate students’ experiences and how to help students better realise their potential. This study attempts to answer these questions in a sample of university students across the three years of an undergraduate psychology course. Students completed a demographic questionnaire and an assessment battery which measures social, psychological and academic performance. The results of this study provide insight into those factors that are predictive of academic achievement, and provide information on how those factors change across the duration of a student’s degree. These findings have implications for university transition programs and counselling services.

The Transition to University

The first year of university is a milestone that entails certain concurrent life stressors. Beginning University requires adaptation to novel responsibilities, greater freedom, and dislocation from previously established friendship groups or the family unit (Chemers, Hu, & Garcia, 2001). The student’s ability to adjust to these life stressors greatly influences their academic achievement (Chemers, et al., 2001). Factors such as the number of life events experienced, language proficiency, and psychological variables such as coping styles, anxiety and depression have all been implicated in successful adjustment (Arthur, 1998; Svanum & Zodie, 2000; Ying, 1988).

The ability of these variables to influence the new student’s transition to university lies predominantly in their ability to attenuate or facilitate stress. For example, life events can add additional stressors to the new students' life by detracting from study time through provision of competing activities (Pantages & Creedon, 1975). The ramifications of this reduced study time, and necessity to adjust to new life stressors, is enhanced anxiety and depression, which are detrimental to academic grades (Vinokur & Selzer, 1975). Similarly, the use of effective coping resources has been shown to influence the new student’s transition to university. Research has indicated that the use of problem focused rather than emotional focused coping is beneficial, since failing to address stressors as they arise in the university setting often results in an accumulation of stressors and an inability to remain up to date with the course, outcomes that ultimately prolong the experience of stress and result in poor academic grades and increased anxiety (Arthur, 1998). Anxiety and depression in turn have been identified as important determinants of academic achievement as their concomitant symptoms of poor concentration
and motivation can influence a student’s ability, and likelihood, to engage in necessary coursework (Svanum & Zodie, 2001).

In addition to psychological variables, academic factors such as previous academic achievement, utilisation of effective study habits, and language proficiency are predictive of successful transition to university. Previous academic achievement reflects a student’s knowledge and academic capabilities (Tremblay, Gardner & Heipel, 2000). Similarly, study habits indicate a student’s level of motivation and reflect their probability of learning (Pantages & Creedon, 1975). Therefore both are predictive of academic grades (Mckenzie & Gow, 2003; Mckenzie & Schweitzer, 2001; Ting & Robinson, 1998). Additionally, language proficiency is considered beneficial as enhanced language skills contribute to the student’s ability to produce assignments of academic merit, thus leading to increased academic grades (Ying, 1988). Moreover, language skills can have a stress-reducing and information gathering effect by increasing successful verbal interaction with classmates (Ying, 1988).

In general the literature has identified previous academic achievement as the most powerful predictor of later grades (Ting & Robinson, 1998). However, the identification of factors that are predictive of academic success over and above previous academic achievement is of practical importance to the development of comprehensive transition programs. Further, previous academic grades are not good predictors of performance for all students, indicating a necessity to identify alternate variables that can predict academic achievement over and above previous grade scores (McKenzie & Schweitzer, 2001).

In addition, the influence of the above variables alters as the student progresses through their undergraduate course. An intuitive conceptualisation of the university experience would suggest that stress declines as students move through their course and become more familiar with the university environment. This is indeed consistent with research literature that indicates that negative outcomes such as emotional distress occur in close temporal relation to the stressor (Gall, et al., 2000). However, studies in university samples have shown mixed results with evidence of greater stress in second year, than first year (Arthur & Hiebert, 1996). These results imply that university is a multifaceted stressor that requires diverse and sustained adaptation (Gall, et al., 2000). Thus, it is likely that the function, utilisation and influence, of stress-reducing variables alter throughout the course of a student’s undergraduate career. Indeed, preliminary support for this assertion has been noted in the literature on the development of adjustment variables. It has been found that the influence of psychosocial variables, such as coping and self efficacy, alter as a function of situational factors (Gall, Evans & Bellerose, 2000). Thus, it seems that the presence, influence and function of predictive variables may alter across the course of the undergraduate degree as stressors change and familiarity increases.

This study attempts to identify those factors that are predictive of academic achievement and how their influence alters as a function of year level. Further, it attempts to identify those factors that are predictive of academic success over and above student’s ENTER scores. This paper is the first from a wider project spanning three years and provides cross sectional information from the students’ first semester.

Method

Participants
The participants are 111 first year, 91 second year and 26 third year psychology students from the Bundoora and city campuses of RMIT University.

Materials
A questionnaire package taking approximately 30 minutes to complete was used. This package included a plain language statement and a page ascertaining demographic details. Demographic details included ENTER score, hours of study, English proficiency, and whether students had sought an extension for an assignment. Written and spoken English was ascertained from dichotomous scales, with higher scores indicating greater proficiency. Class extension was also ascertained from a dichotomous scale, with higher scores indicating the acquisition of an extension for work. Student grades across the entire year were collected and
Investigating the transition process

summed to create a psychology grade point average (GPA). The questionnaire package also included seven psychometric scales comprising:

**Life Events Inventory** The Life events inventory (Jackson & Finney, 2002) is a 34-item checklist of life events covering six categories: academic, family relations, affiliative opportunities, race relations, deviance and physical assault. The Life events inventory requires students to report whether they have experienced a number of potentially stressful life events over the last 3 months, and to evaluate the event as positive or negative with positive events coded as 0 and negative events coded as 1. Scores are gained from summing the total number of events overall with high scores representative of the occurrence of many negative events in a particular domain. The life events inventory has an internal consistency of .36 to .58 a result that is unsurprisingly low as each event is quite independent of the others (Newombe, Huba & Bentler, 1981). However, the life events inventory does have strong content validity as assessed by 1,018 adolescents (Newombe, et al., 1981).

**Depression, Anxiety and Stress Scale (DASS)** The DASS (Lovibond & Lovibond, 1995) is a 21 item scale that assesses depression, anxiety and stress. Participants are required to respond to each item on a four point Likert type scale ranging from “did not apply to me at all” to “Applied to me very much or most of the time”. Scores are gained from summation of ratings with high scores indicative of greater psychological stress. The DASS has convergent validity with the Beck Depression Inventory and Beck Anxiety Inventory of .74 and .81 respectively, and a Crohbs alpha of .96 (Crawford & Henry, 2003).

**The COPE** The COPE (Carver, Scheier, & Weintraub, 1989) is a 60 item inventory which assess 13 different coping styles. The participant is required to respond to each item on a four point Likert type scale ranging from “I usually don’t do this at all” to “I usually do this a lot”. Answers indicate the participant’s general ability to respond to stressful events at university. Higher scores indicate greater use of a specific coping resource. The subscales of the COPE have Cronbachs alphas ranging from .62 to .92 and test-retest reliability ranging from .46 to .77 (Carver, Scherier & Weintraub, 1989).

**Procedure**
Participants were recruited through their laboratory classes. Completion of the questionnaire was voluntary and alternative assignments were made available to the students who did not wish to participate. The completed questionnaires were then returned to researchers in sealed envelopes. To ensure confidentiality, each paper was coded and the identifying information locked away. The questionnaire was administered at the beginning of the first semester to each year level.

**Results**
Table 1 indicates the bivariate relationship between each variable and GPA.

Table 1

<table>
<thead>
<tr>
<th>Variables</th>
<th>GPA</th>
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<tbody>
<tr>
<td>ENTER</td>
<td>.18*</td>
</tr>
<tr>
<td>Written English</td>
<td>.32**</td>
</tr>
<tr>
<td>Spoken English</td>
<td>.21**</td>
</tr>
<tr>
<td>Hours of study</td>
<td>.18*</td>
</tr>
<tr>
<td>Class extension</td>
<td>-.22*</td>
</tr>
<tr>
<td>Depression</td>
<td>-.20*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-.18*</td>
</tr>
<tr>
<td>Life events</td>
<td>-.23**</td>
</tr>
<tr>
<td>Coping:Behavioural</td>
<td>-.22**</td>
</tr>
</tbody>
</table>
Significant relationships between each variable and GPA score are evident. Further, it reveals that seeking a class extension, experiencing a greater number of life events, engaging in behavioural disengagement, or scoring higher on the depression and anxiety scales is associated with lower GPA scores. Alternatively, all other variables are associated with higher scores.

Secondary analyses investigated the contribution of each variable to GPA. Those variables that significantly predicted GPA are presented in Table 2. The results shown in Table 2 indicate that all variables are important predictors of GPA. Interestingly, there were four stronger predictors of GPA than ENTER score.

### Table 2
R-Square Values and F Ratio for Each Significant Variable in Predicting GPA.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written English</td>
<td>.12</td>
<td>21.33</td>
<td>.0001</td>
</tr>
<tr>
<td>Class extension</td>
<td>.09</td>
<td>7.70</td>
<td>.006</td>
</tr>
<tr>
<td>Coping:Behavioural Disengagement</td>
<td>.05</td>
<td>7.78</td>
<td>.006</td>
</tr>
<tr>
<td>Depression</td>
<td>.04</td>
<td>6.72</td>
<td>.01</td>
</tr>
<tr>
<td>ENTER</td>
<td>.03</td>
<td>4.21</td>
<td>.04</td>
</tr>
<tr>
<td>Spoken English</td>
<td>.03</td>
<td>5.57</td>
<td>.02</td>
</tr>
<tr>
<td>Hours of study</td>
<td>.03</td>
<td>5.21</td>
<td>.02</td>
</tr>
<tr>
<td>Life events</td>
<td>.03</td>
<td>5.15</td>
<td>.02</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.03</td>
<td>5.16</td>
<td>.02</td>
</tr>
</tbody>
</table>

To test the efficacy of these findings, a hierarchical regression analysis testing whether the predictors provide significant levels of unique predictive variance over and above ENTER score was performed. These results indicate that Written English, $F(1, 116) = 7.83, p = .006$, partial $R^2 = .06$, Depression, $F(1, 118) = 4.38, p = .04$, partial $R^2 = .03$, and Hours of study, $F(1, 117) = 4.52, p = .04$, partial $R^2 = .04$, were significant predictors of GPA over and above ENTER.

In order to test for the stability of the predictors’ influence on GPA across the three years, a test of moderation using a regression model was performed. In each analysis, the interaction of year level with the predictor served as a test of moderation (Baron & Kenny, 1986). The results indicated that Written English, $F(2, 151) = 3.65, p = .03$, partial $R^2 = .05$, Class extension $F(2, 145) = 3.94, p = .02$, partial $R^2 = .05$, and Anxiety, $F(2, 153) = 6.09, p = .003$, partial $R^2 = .07$, were significantly moderated by year. Table 3 shows the means and standard error for each moderation model utilizing categorical predictors.

### Table 3
Mean and Standard Error for Moderation Models With Categorical Predictors.

<table>
<thead>
<tr>
<th>Extensive</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>66.7</td>
<td>64.6</td>
<td>67.04</td>
</tr>
<tr>
<td></td>
<td>1.83</td>
<td>2.86</td>
<td>2.69</td>
</tr>
<tr>
<td>Yes</td>
<td>59.7</td>
<td>42.5</td>
<td>70.5</td>
</tr>
<tr>
<td></td>
<td>2.35</td>
<td>6.14</td>
<td>5.19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>65.7</td>
<td>64.9</td>
<td>67.39</td>
</tr>
<tr>
<td></td>
<td>1.46</td>
<td>2.66</td>
<td>2.17</td>
</tr>
</tbody>
</table>
Follow-up testing of the interaction effects using simple main effects found a significant difference between the Written English groups within the first year, $F(1, 151) = 6.45, p = .01$, partial $R^2 = .04$. In addition, significant differences were found between the three years for those in the moderate group, $F(2, 151) = 4.80, p = .009$, partial $R^2 = .06$. Pairwise comparisons of estimated marginal means with Bonferroni adjustments indicate that this significant difference exists between first year and second year ($p = .03$), and second year and third year ($p = .02$).

Significant differences were also found between the group who had sought an extension and the group who had not sought an extension in the first year, $F(1, 145) = 5.46, p = .02$, partial $R^2 = .04$. Similarly, significant differences between the no-extension group and extension group were found in the second year, $F(1, 145) = 10.67, p = .001$, partial $R^2 = .07$. Furthermore, significant differences were found between the year levels within the group who had sought an extension, $F(2, 145) = 5.88, p = .003$. Pairwise comparisons of estimated marginal means with Bonferroni adjustments indicate that these differences are between the first and second year ($p = .03$) and the second and third year ($p = .002$).

The nature of the anxiety moderation effect was ascertained through investigation of $R^2$ values. This investigation indicates that while anxiety has a similar relationship to GPA in year 1 ($R^2 = .03$) and year 3 ($R^2 = .01$), there is a markedly stronger relationship between these two variables in year 2 ($R^2 = .29$).

**Discussion**

The results of this study indicate several variables that are important predictors of student’s GPA score at university. This study extends these findings, indicating those variables that are predictive of GPA over and above the most commonly utilised predictor, ENTER score. In addition this study indicates that the influence of some of these variables is moderated by year.

The identification of psychological variables such as depression, anxiety, and life events as important predictors of GPA is consistent with previous research on psychosocial adjustment. Literature surrounding life events indicates that a greater number of negative life events leads to greater stress due to an imbalance between the demand placed on the individual to adjust and their ability to do so (Vinokur & Selzer, 1975). This stress, which is manifest in the depression and anxiety variables, has a negative impact on academic grades as the concomitant deficits in concentration and motivation impede completion of adequate work (Savanum & Zody, 2001). The identification of behavioural disengagement as a predictor of low GPA is consistent with the findings of Arthur (1998) who found that behavioural disengagement was associated with lower academic grades because avoidance of class requirements, which produced stress, leads to an insurmountable accumulation of tasks as the semester continues.

The identification of study related variables, such as hours of study and class extension, as important predictors for GPA, is consistent with the findings of Pantages and Creedon (1975). These authors identified the former variable as indicative of grades as it reflects commitment and quality of work. The seeking of an extension as predictive of lower grades is further consistent with these findings as it may reflect student disorganisation or less available time to complete assignments in a requisite period. Further, the identification of written and spoken English as important predictors of GPA is consistent with Ying (1988) who identified written English as a necessary prerequisite for the production of sophisticated assignments. Spoken English may be beneficial as it is utilised in a similar fashion for oral presentations, or is reflective of a proficient vocabulary is valuable across spoken and written mediums. Finally, the identification of ENTER as an important predictor of GPA is consistent with previous research. This research has identified ENTER as a significant predictor of later academic achievement as it is thought to serve as an indicator of the individual’s cognitive abilities and their acquired knowledge (Mckenzie & Gow, 2003; Tremblay, Gardner & Heipel, 2000).

Investigation of moderation effects found that the influence of written English, attainment of a class extension, and anxiety varies as a function of year level. The results consistently show

<table>
<thead>
<tr>
<th>Year</th>
<th>Moderate</th>
<th>95% CI</th>
<th>63.33</th>
<th>63.33</th>
<th>7.52</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>55.0</td>
<td>3.93</td>
<td>35.1</td>
<td>6.51</td>
<td>7.52</td>
</tr>
</tbody>
</table>
that the second year of university has a detrimental impact on these variables. Specifically, written English influences GPA in the first and third year, but not the second, while GPA does not alter across the years for the ‘good’ group. However, a significant decline is noted in the second year within the moderate group. This pattern indicates that if a student possesses good English abilities, year level does not influence their GPA. However, for those students possessing moderate English abilities, the second year causes a significant decline in their GPA. This pattern is replicated in the class extension moderation with significant differences identified in GPA between the extension and non-extension groups within the first year, and a significant decrease in GPA in the second year for those who sought an extension.

These results are consistent with previous research that has identified the second year as a period of particular turmoil (Rubin, Graham, & Migener, 1990). The second year has been associated with a differential pattern of adjustment to the first and third year, where the student is now attempting to either recover from a dismal first year, or maintain a certain standard of results (Rubin et al., 1990). Further, the second year has been identified as particularly challenging as students become closer to one another in academic ability leading to a significant challenge to previous opinions of their academic selves. This trend has been christened the ‘sophomore slump’ with previous researchers characterizing this phase as a period of greater life dissatisfaction, greater stressors, identity crisis, confusion and uncertainty as students begin to narrow down their majors (Rubin et al., 1990). This is supported by the findings of this study, which identified the strongest associated between anxiety and GPA within the second year. Thus, those students who are not performing optimally, as indicated by lower English proficiency and their need to attain an extension may be particularly vulnerable to these influences and as such display lower GPA scores within this year.

The results of this study provide insight into those factors that should be targeted within intervention programs. Thus, features such as time management and English skills should form the focus of intervention programs. Further, the results of this study suggest that intervention programs should target the second year transition. However, further research is needed to address the consistency of these findings across the two semesters.

References

Investigating the transition process

1. Are they both authored by a person who is an authority in the field?

2. What are some of the problems with the author of one in particular?

3. Is the information recent? How does this impact the resources usefulness?
4. What type of publication is each? How does this impact the resources usefulness?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

5. Who is the intended audience? How does this impact the resources usefulness?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

6. What is the purpose of each? How does this impact the resources usefulness?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

7. Do they have sufficient references?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

8. Have they both been evaluated by authoritative peers?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

10. Would you use both in an assignment? Why/Why not
Key databases for this subject

- **PsycINFO** (CSA). International literature in psychology and related disciplines. This is the main psychology database.
- **ProQuest Psychology Journals**. Nearly 300 academic journals in psychology and related fields, all in full-text.

Other recommended databases

- **APA-Full-Text** – Australian Public Affairs Full-text. Over 130 full-text journals from the APAIS database with emphasis on business, law, sociology, public affairs and environmental science from 1995 onwards.
- **Blackwell Synergy**. Provides full-text access from 1999 onwards to journals published by Blackwell.
- **ERIC** (CSA). International research database covering all aspects of education. Indexes journal articles, conference papers, reports, theses and book chapters in the field of Education. Full text of ERIC documents available online as well as microfiche from 1990 onwards at Bundoora Library.
- **Expanded Academic ASAP**. A full-text multidisciplinary database that indexes journal articles from 1980 onwards.
- **Family & Society**. Provides full-text content of material indexes in FAMILY. Subject coverage includes research, policy and practice issues about, or of relevance to, Australian families.
- **Meditext**. Full-text access to over 60 health and medical journals from 1995 onwards.
- **Medline** (CSA). Comprehensive coverage of biomedical literature. The database contains a broad range of medical topics relating to research, clinical practice, administration, policy issues, and health care services. Also available on WWW as PubMed and as part of the Science Direct database.
- **Proquest (Health and Medical Complete)**. The database covers more than 380 leading health journals and includes thousands of complete articles.
- **PubMed**. Free internet access to Medline.
- **Science Direct**. A multidisciplinary database of over 1800 full-text journals.
- **Sociological Abstracts** (CSA). Covers journals in sociology, economics, education, health and social psychology.
- **Web of Science**. A citation index of 8,500 leading academic journals in the engineering, science, biomedical, social science, arts and humanities areas.

### Week 9

## Writing a lab report in psychology

### Mentors Role

Your role in this exercise is to help student’s consolidate their knowledge of lab reports. Students will already have written one lab report in their previous year. This session is about helping students extend their first year knowledge.

#### Step 1

Ask students about how they feel about lab reports- are they good at them, rubbish at them, do they understand them.

Use your own experience to help students understand how the expectations in the second year change from the first year- was this a shock to you?

#### Step 2

Use the checklists below to help students remember all the sections of a lab report. You may find that students were unaware of all of the things that were needed.

Discuss with students how they approach writing a lab report. Again draw from your own experience in what you found helpful to address all of the elements of a lab report.
Lab report tips

Title
- You must develop your own title and not copy the one from the handout
- Avoid ‘the relationship between’ –type statements. These imply our study used a correlational design (it was an experimental investigation)

Abstract
- This needs to be one paragraph only
- Be succinct – approx. 1 sentence (2 max.) per section of report (Intro, Method, Results, Discussion) = 100-120 words
- Use a justified format with no indent

Introduction
- First paragraph must provide a statement about the research topic and define key terms
- Final paragraph should contain aim and hypothesis
- Avoid talking about what was done in the current study here (this belongs in Method)
- Each paragraph should contain 1 key point (stated in the first sentence of each paragraph)
- Indent the first line of every paragraph
- Don’t just report related research. Use past research to develop a rationale for the current study’s aim and hypothesis
- All claims must be supported with an appropriate reference

Method
- You must comment on the number of dropouts in the Participants section as this had implications for the study
- You must report capital L in Likert
- You should obtain actual findings on the psychometric properties of the SWLS, not just state that they were ‘good’ or copy those listed on the handout word-for-word
- Procedure should be as succinct as possible but with enough detail to replicate the study

Results
- Be clear about our analyses –
- Tables/Figures must be in APA style (see Findlay)
- You must introduce your Table/Figure at the start
- Don’t restate the data from your Table/Figure in a paragraph. It is sufficient to just introduce it

Discussion
- You must begin by restating your hypothesis
- You must link the current study to previous research
- Avoid listing numerous limitations in quick succession. Instead, choose the most important and detail how they limited the study
- Also, avoid speculation about limitations. You should be able to back up most with clear reasoning and/or reference to previous research
- You should extend your discussion to the implications of the research. For example, how can the results be used beyond the research setting?

**References**

- You must use a hanging indent and alphabetical order
- You need to have consistency between your in-text references and your References list
- You must not cite a reference as your own if you sourced it from another article/text without viewing the original. These types of resources require a secondary citation.

**Overall**

- Keep font size and style consistent throughout report
- Do not bold headings
- Use past tense throughout, especially for hypothesis e.g. use 'would' not 'will'
CHECKLIST FOR PSYCHOLOGY LABORATORY REPORTS

Use this checklist when writing your lab reports. Refer to your lab handouts for specific information and instructions. Pay special attention to: *Guidelines for Writing Psychology Laboratory Reports*, *The Relation of Humor and Memory* (a sample literature review lab report), and *Taming Effects of Traumatic Compression of the Housefly* (a sample empirical lab report). **Parts of this checklist may not be relevant for some lab reports because you may not be asked to write all sections of the report.** If you are unsure about any aspect of your laboratory report, ask your lab instructor or professor. They would be very happy to answer your questions!

Page header and page numbers

- Do you have two or three words of your title at the top of every page, followed by 5 spaces and the page number?

Title

- Do you have a title on the paper?
- Does your name appear on the next line?
- Does your affiliation appear on the next line (i.e., College of St. Catherine)?

Abstract

- Did you include an abstract that provides a brief summary of the issues, the methodology used, the most important results, and a preview of the discussion? (Remember to start the abstract flush left, in other words, do not indent the first line.)

Introduction (The heading for the introduction is the title of your paper, not the word “Introduction.”)

- Did you clearly state the main topic of the study or report?
- Did you clearly state why the topic is important?
- Did you include relevant references and sources in your introduction?
- Did you organize the information around ideas and results, rather than just list information?
- Are the citations in APA format? (including those for quotations)
- Did you cite references when you used information from another source (e.g., article)?
- Did you describe the variables you want to study? The independent and dependent variables?
- Is the hypothesis (i.e., specific prediction about the results) clearly stated? (when appropriate)
**Method**

**Participants**
- Did you describe the participants? (e.g., number, sex, mean or range of ages, education level, or other relevant demographic information)
- Did you describe how participants were selected for the study?

**Apparatus**
- Is the equipment, materials, and/or relevant computer disk or program fully described?

**Procedure**
- Are the procedures clearly described? (e.g., the location of the study, how people were assigned to groups, the instructions given to participants)
- Did you further describe the variables and how they were operationalized? If relevant,
  - did you describe the independent and dependent variables?
- Is there enough information and detail so that someone else could replicate this study?

**Results**
- Did you clearly describe the results of the study?
- Did you include all the results, even those that did not support your hypothesis?
- Did you report summary statistics?
- Did you include tables and/or figures to illustrate your results?

**Discussion**
- Did you briefly summarize the results? (i.e., In a sentence or two, describe the results you found.)
- Did you explain the pattern of results that were obtained?
- Did you interpret the results? (i.e., State how the results relate back to the main topic of your paper, and/or the hypothesis. Did they support your hypothesis? Not support it? Were results inconclusive? What do the results "tell" you about the topic you are studying?)
- Are there limitations, methodological problems, or other influences that affect how you interpret the results?
- Did you offer potential explanations for unexpected results?
- Did you discuss what questions remain unanswered?
- Did you describe one or two ideas for future research that could be done?

**Presenting references in APA style**
- Do all the references you included in your paper appear in the reference list?
- Do all the references you included in your reference list appear in the paper?
- Is the reference list alphabetized by first author? (Do NOT rearrange the order of authors within a reference.)
- Are references in APA style, including indents, appropriate information, use of italics, etc.? (Please refer to Guidelines for Writing Psychology Laboratory Reports.)
Overall writing

____ Are there transitions between paragraphs and ideas?
____ Did you paraphrase material and put information and ideas into your own words?
____ Did you use quotations sparingly?

Formatting, spelling, and grammar

____ Is your paper double-spaced, including the references?
____ Did you check and correct the spelling?
____ Did you check and correct the grammar?
____ Are there proper headings for each section of your paper?
____ Are the following headings centered (not bolded, not underlined, not italicized):
  Abstract, Title of your paper, Method, Results, Discussion, and References?
____ Are the following subheadings left flush and italicized: Participants, Apparatus, and Procedure?
____ Did you include any extra data tables or printouts? (This depends on the assignment, see the lab instructions for each lab.)
____ Are the margins 1" on each side?
____ Did you use an 11 or 12-point font?
____ Did you format tables and/or figures in APA style?

This checklist is based on the APA Manual. For more information, see:


**Week 10**

**Synthesising information from multiple sources.**

**Mentors Role**

Your role in this exercise is to help student’s understand the basic principles of information synthesis.

**Step 1**

Ask students to read the introductory information and the “note taking for synthesis” and “writing a synthesis from notes” sections. Allow students to discuss as needed.

**Step 2**

Ask students to identify where each piece of information in the “writing a synthesis from notes” is in the “note taking for synthesis” section. The idea of this step is to get students to see that the author of the paragraph has used the information in a way that makes a point. Thus, they have not simply reiterated the information, but have combined the ideas to form an argument. Similarly, the author has presented the information in their own words.

**Step 3**

Help students to complete the activity. Students are required in this section to combine similar pieces of information together to formulate an argument. You have been provided with a sample paragraph and highlighted versions of the paragraphs that show where their similarities lie. Notice that while some sections are very clear (e.g., the use of the phrase ‘managing their time’ by Cervone and Peak) other sections require interpretation (e.g., the phrase ‘refrain from dwelling on questions in a multiple choice exam’ in Bouffard-Bouchard).

**Step 4**

Once student’s have written out their paragraphs show them the sample paragraph. Help them discuss the similarities and differences with their own. Areas to focus on are:

- The presence of a contention (it should be something along the lines of “self efficacy increases achievement because of x, y, z)
- Writing the information in their own words
- Combining similar ideas rather than rewriting each author separately.

The sample paragraph uses an opening topic sentence which contains the main idea of the paragraph and a concluding sentence which summarises the paragraph.
Remember you are not expected to be a writing guru! The idea of this section is to collaboratively go through the example and the activity, with both you and the mentees recognizing what makes a well synthesized paragraph.
Synthesising.

Synthesising is an important and complex skill required in academic writing. Synthesising involves combining ideas from a range of sources in order to group and present common ideas or arguments. It is a necessary skill used in essays, literature reviews and other forms of academic writing.

Unlike summarising and paraphrasing, which only uses one author’s idea at a time, synthesising combines ideas from more than one text or source.

Synthesising allows you to:

- combine information and ideas from multiple sources to develop and strengthen your argument(s)
- demonstrate that you have read widely on the topic
- use and cite multiple sources.

Use the following steps to synthesise information from different sources.

- Read relevant material.
- Make brief notes using keypoints / keywords. This makes it easier to compare and contrast relevant information.
- Identify common ideas.
- Cite (reference) all the authors you have used.

Note-taking for synthesising

Write down the main points. Remember to cite the references.

<table>
<thead>
<tr>
<th>Topic: English is the global world language</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Text 1 (Bond 2002)</strong></td>
</tr>
<tr>
<td>- international language for business</td>
</tr>
<tr>
<td>- used for international forums (e.g. UN)</td>
</tr>
<tr>
<td>- second language in many countries</td>
</tr>
<tr>
<td><strong>Text 2 (Robertson 2003)</strong></td>
</tr>
<tr>
<td>- used in worldwide technology</td>
</tr>
<tr>
<td>- computers key factor in spread of English</td>
</tr>
<tr>
<td>- internationalisation of education</td>
</tr>
<tr>
<td><strong>Text 3 (Havir 1999)</strong></td>
</tr>
<tr>
<td>- small number of speakers worldwide</td>
</tr>
<tr>
<td>- importance of English linked to US</td>
</tr>
<tr>
<td>power, i.e. “political”</td>
</tr>
<tr>
<td>- more people speak Chinese worldwide</td>
</tr>
<tr>
<td><strong>Text 4 (Kerstens 2000)</strong></td>
</tr>
<tr>
<td>- minority of speakers in world</td>
</tr>
<tr>
<td>- Chinese dominant especially in future</td>
</tr>
<tr>
<td>- English will decline in future</td>
</tr>
</tbody>
</table>

Writing a synthesis from notes

Look at your notes and identify similar and contradictory arguments. Group these together to develop / support your arguments. Cite references appropriately.
ACTIVITY
Read the three passages below and highlight the parts that are similar in meaning. You may need several different coloured pens!

**Bouffard-Bouchard (1993)**
Two main conclusions emerged from this study. First, it became apparent that the student's level of self efficacy and its effect on performance remained continuous throughout their first three years of college. Secondly, as often argued by Bandura (1986), self efficacy is not a mere reflection of actual cognitive competence. Whatever the level of cognitive ability related to a specific task, an individual may perceive him/herself as efficacious or not regarding its resolution. Once established, this perception of efficacy may have greater effects on self regulation (such as persisting with a task, and refraining from dwelling on questions in a multiple choice exam, and possessing greater motivation) and academic performance than cognitive ability itself.

**Chemers, Hu & Garcia (1993)**
Self efficacy has been related to tenacity, persistence, and achievement in educational settings. The contribution of self efficacy to educational achievement is based both on the increased use of appropriate problem solving strategies and on the positive impact of efficacy beliefs on the broader, more general classes of metacognitive skills and coping abilities.

**Cervone & Peak 1986**
Students who were high in self efficacy set themselves higher academic goals, showed greater strategic flexibility in their search for solutions, achieved higher performance, and were more accurate in managing their time than were students of equal ability who were lower in self efficacy. Additionally, students who were high in self efficacy showed greater coping abilities, and thus exhibited less stress than their peers.

Using your highlighted information, formulate a brief paragraph that addresses the question “What impact does self efficacy have of academic achievement?”
Remember to combine the information and use your own words.

------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------
------------------------------------------------------------------------------------------

Comment [.1]: Persistence
Comment [.2]: Time management
Comment [.3]: Self efficacy influences academic achievement
Comment [.4]: Persistence
Comment [.5]: Self efficacy positively influences academic achievement
Comment [.6]: Problem solving strategies
Comment [.7]: Problem solving
Comment [.8]: Self efficacy positively influences academic achievement
Comment [.9]: Time management
Potential answer:
Self efficacy has been widely associated with greater academic achievement (Cervone & Peak, 1986; Chemers, Hu & Garcia, 1993; Bouffard-Bouchard, 1993). The self efficacious persons greater academic abilities is theorised to be derived from greater persistence in overcoming obstacles and the use of efficient problem solving strategies (Bouffard-Bouchard, 1993; Cervone & Peak, 1986; Chemers, Hu and Garcia, 1993). In addition, the student who possess higher self efficacy is able to manage their time more productively, enabling them to work effectively and efficiently (Cervone & Peak, 1986; Bouffard-Bouchard, 1993). The ability to utilise these processes makes the student high in self efficacy more capable of flourishing in the unrestricted environment of the university.

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT - PROJECT INFORMATION STATEMENT

Project Title:
Facilitating psychological adjustment and academic achievement in University students; Introduction of a peer mentoring program

Investigators:
- Tara Quinlivan (Doctoral Candidate, RMIT University, tara.quinlivan@rmit.edu.au)
- Dr Andrea Chester (Lecturer, Psychology, RMIT University, andrea.chester@rmit.edu.au, 99253150)
- Dr Sophia Xenos (Lecturer, Psychology, RMIT University, sophia.xenos@rmit.edu.au, 99251081)

You are invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or ‘plain English’. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?
This project is being conducted as part of a doctoral course thesis. Its aim is to improve students’ experience at university.

Why have you been approached?
We are approaching all students enrolled in accredited second year undergraduate psychology courses at RMIT.

What is the project about? What are the questions being addressed?
As teachers we have noticed that some students appear to flourish at university right from the start, while others struggle. Still others overcome initial difficulties to do well, or begin well, but peter out towards the end. The aim of this research is to help students fulfil their potential and enjoy university, by incorporating mentors into tutorials. Our aim is to improve the experiences of undergraduate psychology students. We plan to use the results to make positive changes to the way we teach and prepare students for their studies. The study will run during first semester 2008, with the aim of implementing it in subsequent years.

If I agree to participate, what will I be required to do?
If you agree to take part in this research you will spend the second hour of your tutorial working in a small group with two third year mentors. Your mentors will spend the hour directing you through exercises and discussions on issues including; how to synthesise information from multiple sources into a paper, how to access academic resources and how to present oral material well. In addition, some time will be spent on helping you cope with some of the stressful aspects of university courses.

What are the risks associated with participation?
Completing the mentoring program does not present any perceived risks outside your normal day-to-day activities. However, if you are unduly concerned about your responses to the program you should contact the student counselling service as soon as convenient. The counselling service is located in Buildings 43 and 54, Cardigan Street, City Campus (9925 4365) and in Building 202, Level 2, Bundoora Campus (9925 4365). For more
information see http://www.rmit.edu.au/counselling. If you have additional academic concerns the Study and Learning centre can be contacted on 9925 3600. In addition you may wish to contact the researchers Tara Quinlivan, Dr Andrea Chester and Dr Sophia Xenos, whose details are provided below.

**What are the benefits associated with participation?**

The aim of the project is to improve the experiences of undergraduate psychology students at RMIT. We believe that participation in this program will help students navigate their course work better, and experience greater enjoyment in their university course. Regardless of whether the results are of direct benefit, participation in the research will provide an opportunity to experience first hand the research process and further our knowledge in this area.

**What will happen to the information I provide?**

All the information you provide will be treated confidentially. Only the investigators will have access to the data. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) a court order is produced, or (3) you provide the researchers with written permission. All data will be kept securely at RMIT for five years before being destroyed.

**What are my rights as a participant?**

Participation in the study is voluntary and you have the right to withdraw your participation at any time, without prejudice. You have the right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified and you have the right to have any questions answered at any time.

**Who should I contact if I have any questions?**

If you have any questions about any aspect of the study please feel free to contact Dr. Andrea Chester on 9925 3150 or andrea.chester@rmit.edu.au or Dr. Sophia Xenos on 9925 1081 or sophia.xenos@rmit.edu.au or Tara Quinlivan on tara.quinlivan@student.rmit.edu.au

Tara Quinlivan                   Andrea Chester, PhD                     Sophia Xenos, PhD

Any complaints about your participation in this project may be directed to the Secretary, RMIT Human Research Ethics Committee, University Secretariat, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 1745. Details of the complaints procedure are available from the above address.
**RMIT HUMAN RESEARCH ETHICS COMMITTEE**

Prescribed Consent Form For Persons Participating In Research Projects Involving Interviews, Questionnaires or Disclosure of Personal Information

### PORTFOLIO OF
**SCHOOL OF**

**Science, Engineering, & Technology**

**Health Sciences**

**Factors predicting academic performance and psychological wellbeing in undergraduate psychology students.**

<table>
<thead>
<tr>
<th>Name(s) of investigators:</th>
<th>Phone:</th>
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<tbody>
<tr>
<td>(1) Dr Andrea Chester</td>
<td>9925 3150</td>
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<tr>
<td>(2) Dr Sophia Xenos</td>
<td>9925 1081</td>
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<tr>
<td>(3) Tara Quinlivan</td>
<td>9925 1081</td>
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1. I have received a statement explaining the questionnaire involved in this project.
2. I consent to participate in the above project, the particulars of which - including details of the questionnaires - have been explained to me.
3. I authorise the investigators to administer a questionnaire.
4. I acknowledge that:
   
   (a) Having read Plain Language Statement, I agree to the general purpose, methods and demands of the study.
   (b) I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied.
   (c) The project is for the purpose of research and teaching. It may not be of direct benefit to me.
   (d) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.
   (e) The security of the research data is assured during and after completion of the study. The data collected during the study may be published, and a summary of the project outcomes will be posted onto the Division website at the completion of the research in 2008. Any information which will identify me will not be used.

**Participant’s Consent**

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<th>Name:</th>
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<td>(Participant)</td>
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1. Can you think of any benefits of the mentoring program?

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2. What impact did the program have on your studies/learning?

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3. What did you find challenging about the mentoring program?

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4. What did you learn about yourself?

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_______________________________________________________

5. Is there anything about the process of the program you would like to change?

_______________________________________________________

_______________________________________________________
END OF SEMESTER EVALUATION

1. Can you think of any benefits of the mentoring program?

________________________________________________________________________
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Rate how important each of the following factors were to your experience of the mentoring program (only relevant for mentored students);

a. Having someone who could relate to your stress

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b. Having someone who encouraged you.

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c. Having someone you could talk to about problems at uni

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d. Having someone who could give you advice

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e. Having someone who could provide you with direct assistance, such as showing you how to do something

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f. Getting to see someone who had been through the course and managed it well.

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2. What impact did the program have on your studies/learning?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
3. What did you find challenging about the mentoring program?

4. What did you learn about yourself?

5. Is there anything about the process of the program you would like to change?
INVITATION TO PARTICIPATE IN A RESEARCH PROJECT - PROJECT INFORMATION STATEMENT FOR THIRD YEAR MENTORS

Project Title: Facilitating psychological adjustment and academic achievement in University students; Introduction of a peer mentoring program

Investigators:
- Tara Quinlivan (Doctoral Candidate, RMIT University, tara.quinlivan@rmit.edu.au)
- Dr Andrea Chester (Lecturer, Psychology, RMIT University, andrea.chester@rmit.edu.au, 99253150)
- Dr Sophia Xenos (Lecturer, Psychology, RMIT University, sophia.xenos@rmit.edu.au, 99251081)

You are invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or ‘plain English’. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?
We are lecturers and tutors in the Division of Psychology at RMIT and this project is being conducted as part of our commitment to improve students’ experience at university. The research project has been approved by the RMIT Human Research Ethics Committee.

Why have you been approached?
We are approaching selected students enrolled in third year Psychology on the City Campus to act as mentors for second year students.

What is the project about? What are the questions being addressed?
Over the years we have noticed that some students find the demands of university stressful. You may well recall your own experiences as a second year student and your own struggles to adapt to the greater demands placed upon you in the second year. The aim of this research is to evaluate a peer-assisted mentoring program for extending students academic and coping skills in the second year. Our hope is that mentors involved in the project will also benefit by strengthening their own research and writing skills and enhancing their interpersonal and group work skills. We plan to use the results to make positive changes to the way we teach and prepare students for their studies. The study will run during first semester 2008, with the aim of implementing it in subsequent semesters.

If I agree to participate, what will I be required to do?
Third year mentors will work in pairs with second year mentee groups of five students. In one hour of tutorials for eight weeks of the semester, mentors will work through a series of structured tutorial activities on issues including: how to use time management skills; how to source and synthesise information from multiple publications; and how to reduce and cope with stress. In the first two weeks of semester all mentors will attend five hours of training in mentoring responsibilities and boundaries, communication skills, and the content of the tutorial activities. Ongoing support will be provided by the primary researcher Tara Quinlivan. Regular online and face-to-face debriefing will be available. Mentors will be provided with the opportunity to talk regularly about their skills, confidence in approaching particular tasks and satisfaction with the processes. Additionally, mentors will be asked to
fill in a questionnaire at the beginning, middle and end of the mentoring program to understand how valuable they found the program.

What are the risks associated with participation?
We expect that mentors will benefit from the experience and we do not anticipate that the experience will present any perceived risks outside normal day-to-day activities. However, if you are unduly concerned at any stage about your role as a mentor or have any concerns about your decision to be involved, you should contact the researchers Tara Quinlivan, Sophie Xenos or Andrea Chester. In addition, you may choose to use the student counselling service. The counselling service is located in Buildings 43 and 54, Cardigan St, City Campus (9925 4365). For more information see http://www.rmit.edu.au/counselling.

What are the benefits associated with participation?
Research on mentoring from across the world suggests a wide range of benefits for mentors. Topping (1998), for example, suggests that simply preparing to be a peer tutor, enhances the thought process of the tutor “by increasing attention to and motivation for the task, and necessitating review of existing knowledge and skills” (p.52). The fundamental skills that mentors will teach to second years are the skills that third years continue to refine and they are the building blocks for fourth year and postgraduate study. Mentors who complete the five hours of training and participate in 15 hours of mentoring during the semester will be eligible for the LEAD Student Leadership Program certificate.

What will happen to the information I provide?
All the information you provide will be treated confidentially. Only the investigators will have access to the data. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) a court order is produced, or (3) you provide the researchers with written permission. All data will be kept securely at RMIT for five years before being destroyed.

What are my rights as a participant?
Participation in the study is voluntary and you have the right to withdraw your participation at any time, without prejudice. You have the right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified and you have the right to have any questions answered at any time. Your decision to participate or not in the project will not affect the way you are graded.

Who should I contact if I have any questions?
If you have any questions about any aspect of the study please feel free to contact Dr. Andrea Chester on 9925 3150 or andrea.chester@rmit.edu.au or Dr. Sophia Xenos on 9925 1081 or sophia.xenos@rmit.edu.au or Tara Quinlivan on tara.quinlivan@student.rmit.edu.au

Tara Quinlivan                               Andrea Chester, PhD            Sophia Xenos, PhD

Any complaints about your participation in this project may be directed to the Secretary, RMIT Human Research Ethics Committee, University Secretariat, RMIT, GPO Box 2478V, Melbourne, 3001. The telephone number is (03) 9925 1745. Details of the complaints procedure are available from the above address.
**RMIT HUMAN RESEARCH ETHICS COMMITTEE**

Prescribed Consent Form For Persons Participating In Research Projects Involving Interviews, Questionnaires or Disclosure of Personal Information

**PORTFOLIO OF**

**SCHOOL OF**

Name of participant: 

Project Title: 

Science, Engineering, & Technology

Health Sciences

Factors predicting academic performance and psychological wellbeing in undergraduate psychology students.

Name(s) of investigators: 

1. Dr Andrea Chester 
   Phone: 9925 3150

2. Dr Sophia Xenos
   Phone: 9925 1081

3. Tara Quinlivan
   Phone: 9925 1081

1. I have received a statement explaining the questionnaire involved in this project.

2. I consent to participate in the above project, the particulars of which - including details of the questionnaires - have been explained to me.

3. I authorise the investigators to administer a questionnaire.

4. I acknowledge that:
   
   (f) Having read Plain Language Statement, I agree to the general purpose, methods and demands of the study.
   
   (g) I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied.
   
   (h) The project is for the purpose of research and teaching. It may not be of direct benefit to me.
   
   (i) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.
   
   (j) The security of the research data is assured during and after completion of the study. The data collected during the study may be published, and a summary of the project outcomes will be posted onto the Division website at the completion of the research in 2008. Any information which will identify me will not be used.

Participant’s Consent

Name: ____________________________ Date: ____________________________

(Participant)

Any complaints about your participation in this project may be directed to the Secretary, RMIT Human Research Ethics Committee, University Secretariat, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 1745. Details of the complaints procedure are available from the above address.
PRE SEMESTER EVALUATION

Please write a brief response to the following questions. ID........

1. What personal gains do you expect to get out of mentoring?

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2. What do you think your students will get out of mentoring?

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3. What difficulties do you expect to face?

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4. Do you think you’ll be successful as a mentor?

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MID SEMESTER EVALUATION

1. Can you think of any benefits of the mentoring program?
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2. What impact did the program have on your studies/learning?
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3. What did you learn about yourself?
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4. Did you have any other personal gains from the mentoring program?
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5. What did you find challenging/what difficulties did you face during the mentoring program?

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6. Is there anything about the process of the program you would like to change?

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7. What do you think your students got out of the mentoring program?

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END OF SEMESTER EVALUATION

1. Can you think of any benefits of the mentoring program?
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2. What impact did the program have on your studies/ learning?
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3. What did you learn about yourself?
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4. Did you have any other personal gains from the mentoring program?
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5. What did you finding challenging/ what difficulties did you face during the mentoring program?
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6. Is there anything about the process of the program you would like to change?
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7. What do you think your students got out of the mentoring program?
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8. Do you think you were successful as a mentor?
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