

Transition in, transition out (TiTo): peer mentoring for sustainable development of first and third year psychology students

Final Report 2013

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Andrea Chester, Lorelle Burton, Sophie Xenos, Karen Elgar and Bianca Denny

Executive summary

Transition In, Transition Out (TiTo) is a student peer-mentoring model designed to simultaneously support commencing and graduating students. Outcomes of the project include development of a sustainable, evidence-based approach for managing student transition and an improved student experience.

TiTo was developed from a sound pedagogical base, drawing on evidence about transition, learning and graduate attributes relevant to the discipline of psychology. As such TiTo brings together the following three overlapping frameworks to support the transition, engagement, and learning of psychology students:

- The Five Senses of Success framework (Lizzio, 2006), which summarise the major predictors of successful transition for first year students;
- Entwistle's (2000) deep, surface and strategic approaches to learning; and
- The concept of psychological literacy, which is the capacity to adaptively apply psychological principles to meet personal, professional, and societal needs (Cranney & Dunn, 2011).

TiTo involves training final year students as mentors. Training and on-going support for mentors is embedded in a third year capstone course. The mentors work with first year students for eight weeks of the semester, facilitating work on assessment tasks and supporting transition to university. The mentoring package is designed to build positive change for both first year students and their third year mentors in the five senses of success, learning approaches and psychological literacies, thus better preparing students as they enter into the psychology discipline and as they prepare to graduate.

In order to evaluate TiTo, we implemented and tested the model in two different university contexts. The first was a large urban university, RMIT University. RMIT has a student cohort of more than 70,000 based on several campuses in urban Melbourne and off-shore. RMIT is part of the Australian Technology Network of Universities (ATN). The second university was the University of Southern Queensland (USQ), a smaller regional provider, with approximately 25,000 students spread across three campuses in the south-east of Queensland. USQ has a particular expertise in online delivery, with more than 75% of students studying off-campus. USQ is part of the Regional Universities Network (RUN).

The evaluation of TiTo undertaken for this project demonstrated the effectiveness of the model for both face-to-face delivery at RMIT University and in blended learning contexts at USQ. First year mentees and third year mentors at both universities rated their experience of mentoring as positive, with the majority of students in each group noting the experience had supported their work on assessment tasks and encouraged a sense of belonging. TiTo was also associated with improvements in aspects associated with success (senses of success) for first year students and mentors as well as positive change in deep, strategic and surface learning over the course of the semester. Increases in psychology literacy were noted for first year students and mentors at both universities. Data collected through focus groups support the value of this initiative. Not all first year students, however, found TiTo useful. Student feedback provides insight into who these students might be and how to better engage them in the process in subsequent iteration of the TiTo model.

Key deliverables of the current project can be considered in three broad categories.

- A set of resources and materials on peer mentoring. This includes the TiTo website, workbooks for both mentees and mentors, and a mentor training program.
- Dissemination of findings through academic and scholarly publications, workshops, and conference presentations.
- The creation of a community of stakeholders in the psychology higher education sector who are engaged to act on the project outcomes.

The outcomes and deliverables of the project can be found in a range of publications as well as on the project website: <<http://emedia.rmit.edu.au/tito/>>

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Introduction

“It was inspirational to have a mentor who has gone through the program.”

First year student, RMIT University

“The main benefit of having a mentor was the continued support I received; nothing was a bother or too hard or silly to ask and that was fantastic.”

First year student, USQ

The issues characteristic of the first year experience have been well documented by previous ALTC projects, including Kethia Wilson and Alf Lizzio’s (2008) project *Enabling commencing students* and Sally Kift’s (2009) Senior Fellowship *Articulating a transition pedagogy to scaffold and to enhance the first year student learning experience in Australian higher education*. As a result of these studies and other relevant Australian data including attrition rates of up to 30% amongst first year students (Krause, 2005), it is clear that engaging students, connecting them with staff and each other and providing meaningful feedback early in their first year of study all have important implications for retention, academic performance and wellbeing (ACER, 2009; Sudano & Chester, 2009).

Kift (2008, 2009) articulated a transition pedagogy, focusing on curriculum as an opportunity for inspiring, supporting, and connecting students. The approach adopted in the current proposal, peer-mentoring embedded in the curriculum, is exemplary of Kift’s pedagogy. The mentoring model developed by the project team comprises third year mentors working with small groups of first year students in class time on an assessment task. This assessment focus enhances the academic skills of both first and final year students and significantly improves the academic performance of first year students (Chester, Xenos, Ryan, Carmichael, & Saunders, 2009). In addition to an academic focus, the mentoring model also incorporates psychosocial elements designed to assist first year students in managing the challenges associated with transition to university. The combined focus of the mentoring model on both academic and psychosocial aspects of the first year experience has demonstrated positive impact on student wellbeing, social support, and retention rates of first year students in addition to the academic improvements noted above (Chester et al., 2010).

The transition issues for final year undergraduate students in psychology have been less well understood, although considerable general work has been conducted on graduate attributes and work-integrated learning as preparation for transition out of the university (see, for example the National Graduate Attributes Project [Barrie, Hughes, & Smith, 2009] funded by the ALTC). A particular challenge for the discipline of psychology is the minimum 6 years of study required to register as a psychologist, including 3 years of undergraduate study and an Honours year that must be completed to a high standard in order to pursue

postgraduate study in a Masters or Doctoral program. While many students successfully enrol in the postgraduate study required for registration as a psychologist, a large proportion of students exit university after the completion of their three-year undergraduate degree. These students often leave the discipline without a professional identity and sometimes feel poorly prepared for their career (Cranney & Dunn, 2011). Providing meaningful work-integrated learning for undergraduate psychology students can also be a challenge, as the skills of professional practice are not taught until the fifth and sixth years of the postgraduate program. In this project we developed the peer-mentoring model to better support graduating students as they transition out of university and into the workforce or further study. Peer-mentoring was embedded into a third year capstone course, providing final year students with the option to volunteer as a mentor as a way of building skills and experience, reflecting on their career aspirations and professional identity, and demonstrating achievement of graduate attributes.

The TiTo Model

The TiTo model was designed to simultaneously support first year and third year students as they transition into and out of university, respectively. The model was conceptualised as a flexible approach, with the capacity to adapt it for both face-to-face and blended learning contexts. TiTo supports the development of a university student identity for commencing students and the transition to a graduate identity for final year students.

Mentoring is embedded into the first year curriculum, provided to all first year students in face-to-face classes or as optional online discussion groups for those involved in blended learning. Mentors work with a small group of five to six first year students on development of skills to support completion of assessment tasks for eight weeks of the semester. In the face-to-face approach mentors attend the second hour of tutorials and work with the students, while the tutor stays in the room. For the blended learning adaptation of the TiTo model, mentors work in pairs to support small groups of 5 to 10 first year students via online course discussion forums on the student learning management system.

The focus in both the face-to-face and blended learning contexts is on supporting the academic skill development to assist first year students to complete their assessment on time and with confidence. In addition, psychosocial transition issues are covered, such as building connections to other students and practical aspects, such as access to support services.

Mentoring is embedded into the third year curriculum, in a capstone course, providing all third year students, regardless of Grade Point Average (GPA), with the opportunity to be a mentor. Mentors are provided with an intensive training package supplemented by weekly classes to prepare, debrief and share ideas. In the online context mentors receive ongoing support throughout the program via weekly online real-time sessions facilitated by their third year lecturer.

Crucial to the face-to-face delivery of TiTo are the first year tutors, who remain in the first year tutorials while the mentors work with the student groups. Tutors attended the mentor training to meet their group of mentors. During the semester they provided timely feedback to mentors based on observations in class and contributed a small component of the third year students' mentoring practice grade. Tutors also provided their mentors with a written

reference at the completion of the semester. For the online context, the first year course examiner provided guidance and advice to the third year mentors and had general access to all mentor group discussions.

TiTo was developed from a sound pedagogical base, drawing on evidence about transition, learning and graduate attributes relevant to the discipline of psychology. As such TiTo brings together the following three overlapping frameworks to support the transition, engagement, and learning of psychology students:

- The Five Senses of Success framework (Lizzio, 2006), which summarise the major predictors of successful transition for first year students;
- Entwistle’s (2000) deep, surface and strategic approaches to learning; and
- The concept of psychological literacy, which is the capacity to adaptively apply psychological principles to meet personal, professional, and societal needs (Cranney & Dunn, 2011).

Positive change was expected for both first year mentees and third year mentors in all three areas.

Five Senses of Student Success

The Five Senses of Student Success framework summarises the variables that predict first year student satisfaction, engagement, and retention in higher education (Lizzio, 2006, 2012). The model is based on student needs in five areas (capability, connectedness, purpose, resourcefulness, and culture) and can be used to shape transition strategies, without prescribing solutions (Lizzio, 2006). The five areas of student success and their characteristics are outlined in Table 1.

Table 1
Five Senses of Student Success

Sense	Characteristics
Capability	Understanding the student role and mastering academic knowledge and skills
Connectedness	Building relationships with peers and staff, as well as identifying with the university
Purpose	Setting realistic goals, engaging with the discipline and developing a sense of vocation
Resourcefulness	Knowing about university resources and procedures. Balancing work, life, and study.
Culture	Appreciating the core values and ethical principles of higher education

The model suggests that succeeding in the undergraduate psychology program involves mastering specific curriculum knowledge (*capability*). This knowledge in the undergraduate psychology curriculum has been specified in six graduate attributes (Cranney et al., 2006) and is set out in the accreditation standards of the Australian Psychology Accreditation Council (2010). The knowledge to be mastered by students includes understanding of core concepts, theories and research in areas such as psychopathology, cognition and personality, understanding and application of research methods and the scientific approach, as well as communication skills in a range of areas including research report writing and applying psychological principles.

The Five Senses model advocates that student success at university involves more, however, than the acquisition of discipline-based knowledge (*capability*). According to Lizzio (2006), the quality of the relationships a student develops with her peers and staff as well as her affiliation with the university (*connectedness*) will impact on her wellbeing and her experience at university. Additionally, a strong sense of *purpose* provides the commitment and persistence necessary to flourish. Successful students also know how and where to seek support for their learning, through university resources as well as policies and procedures, and can balance study with work and family commitments (*resourcefulness*). Finally, successful students develop a cultural competence in the context of higher education (*culture*), understanding the core values and ethics of the institution.

Helping students build capacity in each of these five areas is a complex task and unlikely to be accomplished by a single initiative or confined to the first year of the program. Nevertheless, TiTo was designed to address all five needs in mutually beneficial ways for both first year mentees and third year mentors. The ways in which each of the Five Senses has been integrated into the TiTo experience for both first year students and third year mentors is summarised in Table 2.

Table 2

Application of Five Senses for First Year Students and Third Year Mentors

Five senses	First year students	Third year mentors
Capability	Building capability (course knowledge) by guiding students through the first assessment tasks	Building capability by enhancing not only academic skills, but the graduate attributes identified as important by employers, industry groups, and professional bodies
Connectedness	Developing connection with colleagues through facilitated small group activities	Developing connection with staff and other third year colleagues, helping facilitate an alumni community
Purpose	Exploring sense of purpose , helping first year students work out why they are university and articulate their personal goals	Exploring their sense of purpose , helping third year students articulate career goals and clarify their commitment to work and/or further study after graduation
Resourcefulness	Developing resourcefulness by learning effective time	Developing resourcefulness , learning effective time

	management, independent learning and help seeking skills	management, independent learning and help seeking skills
Academic culture	Learning about academic culture , including academic integrity, from a later year colleague who has successfully navigated the terrain	Embedding themselves in the academic culture by connecting more meaningfully with the staff and students of the discipline and develop a sense of professional identity

Learning Approaches

Together with focusing on the five senses of success, TiTo was explicitly designed to support the development of productive approaches to learning. Many models of learning styles and approaches exist. The TiTo model employed Noel Entwistle's (2000) tripartite model of deep, strategic, and surface learning.

A *deep approach* to learning is associated with a desire to understand material, a tendency to link ideas and seek relationships to other knowledge, the use of evidence to draw conclusions, and an intrinsic motivation for study. The *strategic approach* is associated with time management and planning, confidence, competitiveness, consciousness of the assessment demands, and a capacity to monitor progress. A *surface approach* is characterised by lack of direction, reliance on rote learning, and fear of failure (Walker, Spronken-Smith, Bond, McDonald, Reynolds, & McMartin, 2010). Small but significant changes over time have been noted in deep, strategic and surface learning amongst first year students following purposeful curriculum change (e.g., Walker et al., 2010). TiTo was deliberately planned to develop deep and strategic approaches to learning and minimise surface learning for first year mentees. In helping mentors better understand these aspects of learning it was anticipated that third year mentors would also experience improvements in these areas, however it was unclear to what extent the mentors' learning approaches would be influenced.

Psychological Literacy

Emerging as an important component of the psychology undergraduate curriculum, psychological literacy is the capacity to adaptively apply psychological principles to meet personal, professional, and societal needs (Cranney & Dunn, 2011). It includes not only understanding basic psychological principles, but also using them to understand oneself and others (Burton & McDonald, 2011). Psychological literacy encourages students to use their knowledge and skill to make a difference in their own lives and the lives of others. Developing psychological literacy in the first year of the program has been identified as beneficial to students (Cranney, Morris, Spehar, & Scoufis, 2008). Its application in the final year of undergraduate study has not yet been well researched.

Psychological literacy is conceptualised as a set of abilities. McGovern and colleagues' (2010) description of the following nine abilities guided the design of TiTo:

- Understanding the basic concepts and principles of psychology

- Thinking critically
- Having problem solving skills
- Understanding scientific research practices
- Communicating well in many different contexts
- Applying psychological principles to personal, social or organisational problems
- Acting ethically
- Having cultural competence and respecting diversity
- Having self- and other-awareness and understanding

The mentoring program developed for first year students was designed to reflect each of these nine elements. The training of third year mentors also allowed for development of these literacies.

In summary, the TiTo model brings together three frameworks for thinking about transition, learning and the attributes of psychology graduates within the student lifecycle (Lizzio, 2012). The model is summarised in Figure 1.

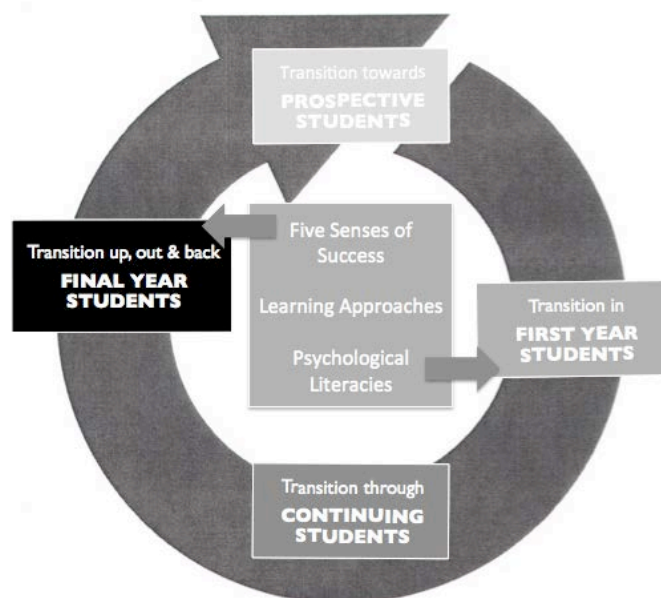


Figure 1. The TiTo model within the framework of the student lifecycle.

Approach and Methodology

The project was designed in four stages, each of which is described below.

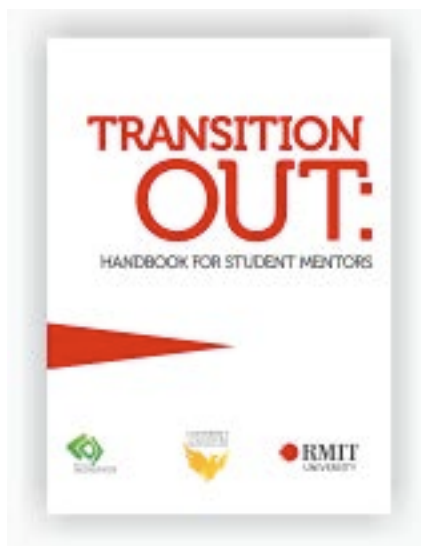
Stage 1: Project formulation and initial planning

Stage 1 ran from October 2011 to February 2012. Initial discussions between project team members from the partner universities (RMIT and USQ) indicated that each partner was independently attempting to resolve the issue of student engagement and progression. Each of the team members expressed an interest in pooling resources and being involved in the project, with a particular focus on a solution that could be applied in large face-to-face

cohorts as well as in online and blended learning courses. Consequently, the project team had been successfully collaborating on the peer mentoring training package since early 2010.

This project extended earlier efforts by the partner universities, providing synergy by building on the strengths and key outcomes of each university's approach. For example, RMIT University had successfully implemented a peer-to-peer transition model since 2008, with delivery of the program in online and blended learning classes at USQ commencing in 2010. The current project further extended the peer-mentoring model to incorporate career identity information for third year psychology graduates and provide a sustainable model for implementation with large cohorts. The current project further built the TiTo model, with its focus on successful transition, learning and development of graduate attributes.

Both partners had input into the project design, thus ensuring that the outcomes of the project were relevant to the needs of each university and that the key deliverables were achieved. Face-to-face meetings of the project team were held at strategic points during the project including a two-day meeting in Melbourne during Stage 1 to finalise the TiTo model, measurement tools and workbooks for students.



The [workbook for mentors \[PDF, 1.12MB, 62 pages\]](#) is designed in two sections:

- Section 1 covers the core aspects of mentor training.
- Section 2 provides key material for the weekly meetings with first year students.

Workbook contributions can be assessed where mentors participate in the program for course credit.

The [workbook for mentees \[PDF, 203KB, 16 pages\]](#) is designed for first year students to complete each week as preparation for their mentoring session.



The project team held workshops at each partner university to meet with program coordinators and careers advisors. The first workshop outlined the objectives of the proposed TiTo Toolkit and Mentor Training program and identified and discussed issues for integrating the model into the first year undergraduate programs at each partner university.

Other key activities undertaken during this period included:

- Ethics clearance from the two partner universities via separate applications at the two institutions.
- The formation of the project reference group. Group members were Alf Lizzio and Jacquelyn Cranney.

Stage 2: Implementation of the TiTo program

The TiTo package was implemented in semester 1 2012 (March to June). Following training, third year mentors provided peer mentoring to first year students enrolled in psychology programs at each university. A pre- post-test design methodology was used to evaluate the effectiveness of the TiTo program for both first year students and third year mentors, including indicators of student success as well as assessment of changes in learning approaches and psychological literacy. Academic grades and students' perception of program efficacy were also assessed. The evaluation framework is described in more detail under Evaluation.

Stage 3: The TiTo toolkit and mentor training package refinement process and initial dissemination

The third stage, running from July to September 2012, involved a more detailed analysis of the data collected in Stage 2. During this stage the TiTo Toolkit and Mentor Training Package were refined and the TiTo website was constructed <<http://emedia.rmit.edu.au/tito/content/what-tito>>.



Figure 2. TiTo website.

During this stage, the project was publicised and key findings-to-date were disseminated to relevant stakeholders via conferences including the International Congress of Psychology in South Africa and the Australian Psychological Society Conference in Perth, Australia.

We had planned to establish a sustainable network of psychology educators during this period using, as a starting point, the major national forum of the Australian Psychological Society conference, at which there is a learning and teaching in psychology presence via the Australian Psychology Educators Network. The project team submitted a proposal for a one-day workshop with first year educators of Psychology from across Australia. However, the APS Conference Scientific Committee did not accept our workshop proposal; instead we presented a paper on the TiTo model and incorporated a dissemination workshop into Stage 4 of the project. Both the project leader and deputy leader are executive members of the Australian Psychological Society's Psychology Educators' Network (APEN), and continued to disseminate key TiTo project outcomes through this network.

Stage 4: Project completion, evaluation and dissemination

The fourth stage took place between October 2012 and March 2013, during which time the team undertook a more detailed analysis of the project outcomes, particularly the first year and mentor data. Final revisions to the TiTo website were completed. At the completion of this stage the team will continue to track the project participants, with follow-up scheduled for 12 months after involvement in TiTo and one year post-graduation. Hence, the project will continue beyond the life of the proposed OLT funding timeframe, with the TiTo website being updated as necessary to incorporate important findings.

In terms of dissemination, outcomes and deliverables from this project were distributed to stakeholders and the wider academic community in three ways in line with the OLT Dissemination Framework.

First, the project team has established a project website on the RMIT website, accessible via

<<http://emedia.rmit.edu.au/tito/>>. This site is the public face of the project and houses information such as the project's rationale, project outcomes, resources for implementation of TiTo and research reports produced throughout the project's life.

Second, the project team has shared the TiTo Toolkit, Mentor Training Package and resources with Australian universities to enable them to develop strategies to embed the model in their first year psychology programs. A major focus of the dissemination strategy was a half-day workshop detailed under Engaged Dissemination later in this report.

Third, the project outcomes and deliverables were disseminated through scholarly publications and presentations at major psychology and higher education conferences, both within Australia and internationally. Additionally, a further proposed study by members of the TiTo research team will build on findings of the current project by focusing on the career preparedness of psychology graduates.

Project Outcomes and Impacts

Outcomes and Deliverables

The project produced an evidence-based model for supporting student transition into and out of the undergraduate psychology program.

Additional deliverables include:

- *TiTo Toolkit* – this toolkit includes first and third year workbooks, a training schedule for mentors and video interviews with first year students and mentors. The mentor workbooks offer generic activities in a weekly format, which can be customised according to the specific focus of the mentoring program at each university.
- *Evaluation package* providing the method and key measures for assessing the impact of TiTo on first year mentees and third year mentors.

Access to all outcomes is provided on the project website <<http://emedia.rmit.edu.au/tito/>>

Two planned outcomes were modified during the course of the project, with the proposed community of practice (CoP) and CD of resources delivered in alternative formats. The team had initially planned to establish a third year psychology coordinators' community of practice (CoP). Feedback from attendees of the TiTo workshop in March 2013 indicated that a new CoP was not necessary, and that psychology educators would continue to communicate via established community networks. A planned CD of resources was instead presented in an online format, and made available on the TiTo website. This option is more sustainable and environmentally friendly, and more easily accessible.

Advancement of Knowledge

The project advances knowledge in a number of key ways. Most importantly, the project extends on the concept and application of psychological literacy, an aspect considered critical to student success. While developing psychological literacy in the first year of a university program has been identified as beneficial to students (Burton & McDonald, 2011; Cranney et al., 2008), little research has been undertaken on psychological literacy within

the third year student experience. It is likely that psychological literacy is critical for third year students, given that these students are at a stage of contemplating life beyond their undergraduate degree. Empirical evaluation of TiTo revealed significant changes to students' psychological literacy over the duration of the semester. These results offer a necessary first step to enhancing psychological literacy in students across all year levels. Given the unique challenges and transition issues across the undergraduate psychology degree, this focus on first and third year students is warranted.

Secondly, and equally important, the project is exemplary of Kift's (2009) pedagogy of enhancing the academic skills of both first and final year students and focusing on the curriculum as a site for inspiring, supporting, and connecting students. In the current project, mentoring was embedded into the first year curriculum and provided to all first year students in face-to-face classes or as optional online discussion groups for those in blended learning. Mentoring was also embedded into the third year curriculum, providing all students with the opportunity to be a mentor. For first year students, the focus was on supporting the development of skills to assist them to complete their assessment on time and with confidence. Additionally, transition issues were covered, including building connections to other students and practical aspects, such as accommodation. For the third year students, the peer mentoring project aimed to provide an opportunity to not only develop skills and experience, such as manage a group, explain important academic concepts to first year students, and assist first years in their transition to university, but also to reflect on their own career aspirations and professional identity, and demonstrate achievement of graduate attributes. This component was a particular strength of the project. Until recently, much of the focus on student transition has been focused on the first year experience, with the unique transition issues for final year students being less well documented. Also, increasing focus is being placed on the importance of graduate attributes and work-integrated learning for psychology students in particular, as many third year psychology students often leave the discipline without a professional identity and sometimes feel poorly prepared for their career (Cranney & Dunn, 2011). In light of these considerations, the current project provided third year psychology students with the opportunity to reflect on their professional identity and demonstrate achievement of graduate attributes, such as the development of a curriculum vitae, written reflections on the skills and knowledge developed over the course of the mentoring program, and an opportunity to problem solve challenges faced during the mentoring program. It is of note that the empirical data obtained from the pre-post program evaluation revealed that career preparedness was one of the most positive aspects of the experience for the third year students.

A third strength of the project is that it embedded Lizzio's (2006, 2012) Five Senses of Success framework. The mentoring program was successful in not only enhancing students' acquisition of psychology knowledge, but was also shown to positively impact on the relationships for both the first year students and mentors with their peers, staff, and wider university, further consolidating students' sense of purpose and commitment to study, as well as knowledge of university resources, values and ethics.

Generalisability of Approach and Outcomes

While the TiTo model developed in this project was designed to address issues in the discipline of psychology, the model has the potential for application to any discipline or context (including postgraduate education) where connecting students and supporting their transition is identified as important.

The TiTo mentoring program has elements that are specific to psychology programs, such as psychological literacy. Different programs may need an alternate focus, aligned with specific graduate attributes and assessment requirements. Other aspects of TiTo, however, are generic, including the Five Senses of Success (Lizzio, 2006, 2012) and learning approaches (Entwistle, 2000). These elements might apply to any program for both first and final year undergraduate students.

In disseminating the project within the higher education community we have been asked about the extent to which third year students in other disciplines might master the skills of mentors. Psychological literacies are relevant to all disciplines, not just psychology and our previous experience in applying an early iteration of the model in the disciplines of both Engineering and Design suggests the outcomes are not unique to psychology (Telley & Chester, 2009).

The TiTo model provides both a mentoring package that can be used as the basis for further refinement in different contexts, as well as measurement tools for assessing change. The online administration of measures and the embedding of these measures into assessment tasks is a process recommended for securing strong response rates.

Analysis of Critical Factors

Factors that were critical to the success of this TiTo project include a good working relationship between the two partner universities, consultation with key stakeholders, inclusion of a project reference group, and dissemination of information through publications and conference presentations.

The project team set realistic aims and built on an ongoing partnership between two partner universities. This established partnership has proved invaluable and has contributed greatly to the success of the project in efficiently achieving its stated goals. Both partner institutions had established team leaders with strong support networks at their respective institutions. The team members were able to draw on each other's strengths and abilities through regular contact via Skype and face-to-face meetings. It is clear that employing a dedicated project manager assisted greatly with administrative tasks and keeping the project team co-ordinated and focussed. At all times the project leader provided a clear way forward and was supported by a small and cohesive project team committed to improving the student experience.

The project team engaged widely to elicit input from a range of key stakeholders in the areas of psychology. They included:

- Deans, heads of school, discipline leaders, program leaders and careers coordinators from partner institutions.
- Students of both universities involved in the mentoring programs.
- Academics from other Australian universities.

The project team met with the project reference group to discuss the design and implementation of the TiTo model. The project reference group supported the project team by providing constructive feedback on the initial design and delivery of the project. The groups' sharing of personal insights of effective problem solving and management of possible challenges also helped ensure that the project objectives were met in an efficient manner.

The project team has developed a peer mentoring training manual, backed by a suite of resources including a website and workbooks. The resources are ready for integration into the psychology curricula at other Australian universities. This is a significant outcome of this collaborative project. The learning resources provide flexible opportunities to embed peer mentoring into psychology programs nationally. The resources were initially developed for face-to-face delivery; however, the success of the current project demonstrated the suitability of the resources for adaptation to online and blended learning environments. The project team, however, recognises the challenges in embedding the peer mentoring program into an already crowded curriculum; further analysis needs to occur around the facilitation of the uptake and impact of the program.

The deliverables of the current project can be considered in three broad categories.

- The set of resources and materials on peer mentoring. This includes a website, workbooks for both mentees and mentors, and a mentor training program.
- Dissemination of findings through academic and scholarly publications, workshops, and conference presentations.
- The creation of a community of stakeholders in the psychology higher education sector who are engaged to act on the project outcomes.

The small project team of three academic staff has been very productive in the academic sphere, with 4 paper presentations at national and international conferences in 2012; another 3 are accepted for 2013. Additionally, the project team has published 1 book chapter and 1 refereed journal article with 1 currently under review.

The dissemination of the project outcomes has been strong, continuing the collaborative theme threaded throughout the project. The conference presentations, workshop, consultation with the project reference group and constant sharing of information has not only ensured that the project outcomes have been widely disseminated, but have also created an engaged, cohesive, and committed stakeholder group. Evidence of this can be found in an application for OLT Seed funding in 2013 from Flinders University. This project, titled *Compassion to Completion*, builds on the TiTo mentoring model, with a particular focus on supporting first year students through TiTo to increase completion rates.

Evaluation

The project was designed to produce an evidence-based model for transition into and out of the undergraduate psychology program. The effectiveness of TiTo was evaluated for both face-to-face and blended learning classes. These outcomes are summarised for each group separately below. More detailed reports of these findings are presented in the publications arising from the project.

Implementation of TiTo in Face-to-Face Classes



Figure 3. Mentoring session at RMIT University.

First Year Students

The face-to-face implementation of TiTo provided access to mentoring in tutorial time for all first year psychology students at RMIT. The evaluation captured feedback from nearly all first year students, as the evaluation surveys were incorporated into assessment tasks. Of the 276 students enrolled in the course, 231 (166 females and 65 males) provided pre and post-test data and gave permission for us to access their grades.

Five Senses of Student Success

Figure 4 shows increases on four of the five sense of success over the course of the semester. Repeated measures t-tests revealed small but significant increases on connectedness, culture, and resourcefulness. Although an increase was noted for capability, this was not a significant change. No significant change was noted for purpose.

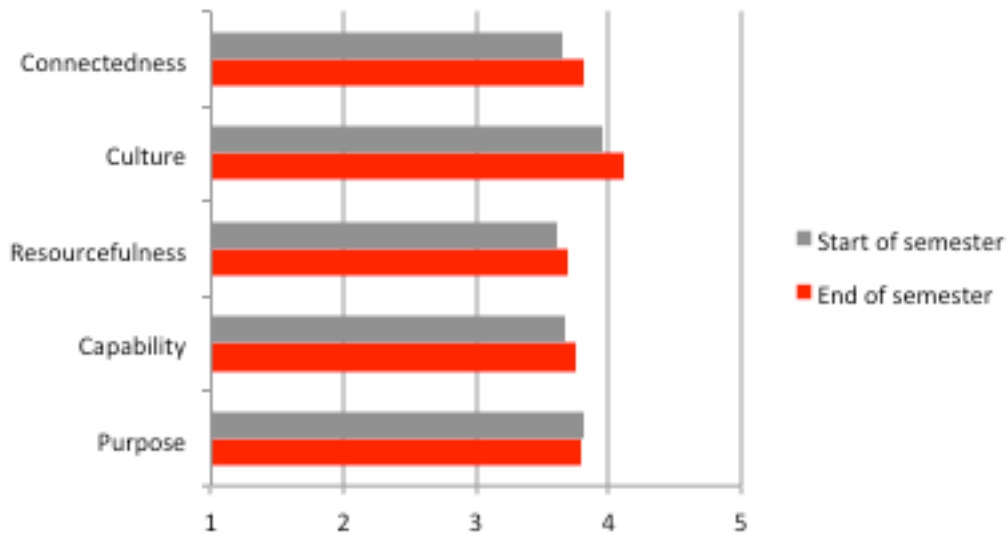


Figure 4. Mean senses of success scores for face-to-face first year students before and after mentoring ($N = 231$).

Learning Approaches

While deep and strategic learning both increased by the end of semester (with large effect sizes), surface learning decreased (moderate effect size) as show in Figure 5. All changes between pre- and post-test were significant at .001 level.

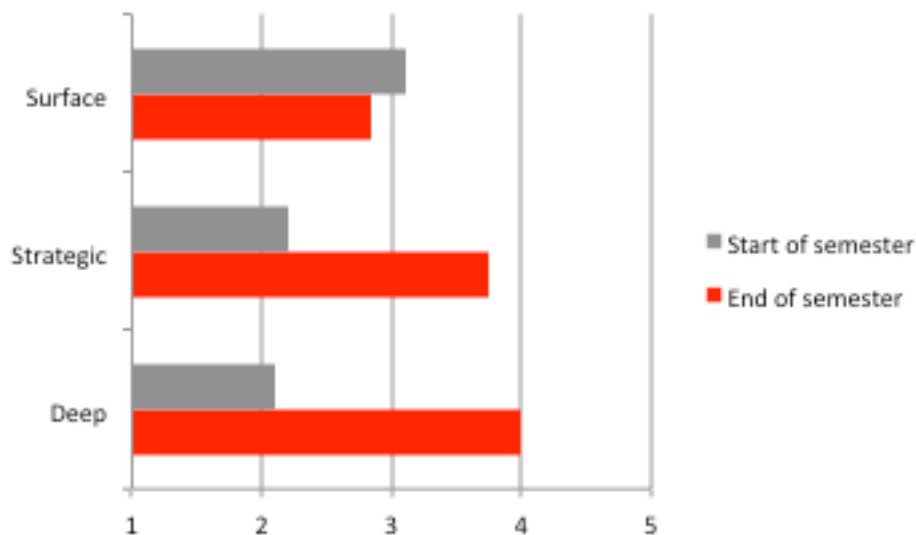


Figure 5. Mean learning approach scores of face-to-face first year students before and after mentoring ($N = 231$).

Psychological Literacies

A comparison of psychological literacy scores at the beginning and end of semester revealed increases on all nine literacies. These scores are summarised in Figure 6. Eight of the nine psychological literacies demonstrated significant change, with no change detected in self-awareness.

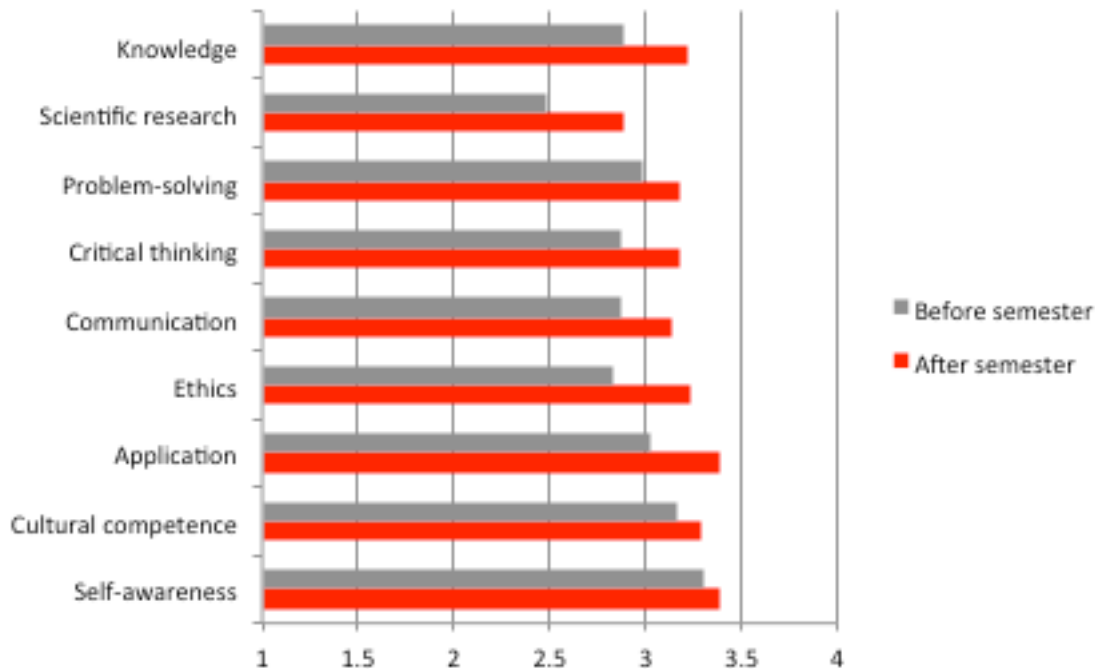


Figure 6. Mean psychological literacy scores for face-to-face first year students before and after mentoring ($N = 231$).

Student Evaluation

Table 3 shows the percentage agreement with the three statements used to evaluate the TiTo program. Overall, first year mentees evaluated the program favourably. The majority of first year students enjoyed the program (70%) and perceived it to positively influence their sense of belonging (61%) as well as their academic work (59%). Despite this generally positive perception, it is of note that 20% of students expressed a neutral position and a further 20% did not support the value of the program either academically or socially.

Table 3

Evaluation of TiTo by Face-to-Face First Year Students (N = 231)

	Percentage of students				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Peer mentoring helped the quality of my work	19	40	20	13	8
Peer mentoring helped me feel like I belong	20	41	23	10	6
I enjoyed peer mentoring	30	40	16	9	5

Student evaluations of the course as a whole were compared with a previous year in which no mentoring was offered (Table 4). Results suggest a substantial improvement in the evaluation of the first year course at RMIT following the introduction of TiTo.

Table 4

Evaluation of First Year Face-to-Face Course Before and After Introduction of TiTo

	Number of students enrolled	Response rate	Good Teaching Scale Score	Overall Satisfaction Index
Before TiTo	250	45.6%	55.5%	75.9%
With TiTo	271	48.3%	82.7%	86.3%

The quantitative data summarised above was supplemented by responses to open-ended questions about the best aspects of the mentoring program and suggestions for improvements. In addition a focus group was used to explore a range of themes. Perceived to be most helpful was the opportunity to work in small groups, facilitating opportunities to build relationships with colleagues, and reinforcing the importance of the *connectedness* sense of success. Also highly rated were the study tips that mentors shared.

The most common suggestions to improve mentoring related to the skills and knowledge of specific mentors, clarification of the mentor role, and reducing the duration of the mentoring session. As one student commented,

I thought that there was a little too much emphasis on peer mentoring - it was definitely helpful and interesting but we often got through the content very quickly and spent ages just sitting around chatting instead of doing work.

A smaller group of students did not see peer mentoring as relevant to their learning

experience. For example, one mature age student who had already completed a degree commented, “having a much younger person with less university and life experience try to mentor ... felt a little condescending.” Further post-hoc exploration of the relationship between age and peer mentoring evaluation responses revealed small, but significant negative correlations ($p < .01$) between age and the perceived value of peer mentoring to help improve work quality ($r = -.19$) and sense of belonging ($r = -.20$), as well as enjoyment of peer mentoring ($r = -.19$).

Grades

Final marks in the first year course in which mentoring took place were compared with final marks from a previous cohort who completed comparable assessment and had similar teaching but no tutorial-based mentoring (Figure 7). While the proportion of students who failed the course was comparable, the proportion of students with pass grades decreased, and, with TiTo, a higher numbers of students achieved grades over 60%. The proportion of failing students who did not submit one or more pieces of assessment did not alter.



Figure 7. Comparison of final marks before ($N = 248$) and after mentoring ($N = 276$) for face-to-face first year psychology course.

Third Year Mentors

Mentors in the face-to-face implementation of TiTo chose mentoring from a range of choices in a third year capstone course. Of the 53 students in the third year course, 39 choose the mentoring option and 34 (23, females and 11 males) provided pre and post-test data for the project. As in the first year implementation, the surveys were embedded into assessment tasks.

Five Senses of Student Success

Figure 8 shows increases on four of the five senses of success over the course of the semester for third year students. Repeated-measures t-tests revealed significant increases on connectedness (with a moderate effect size), resourcefulness, capability, and purpose. No change was observed on the dimension of culture.

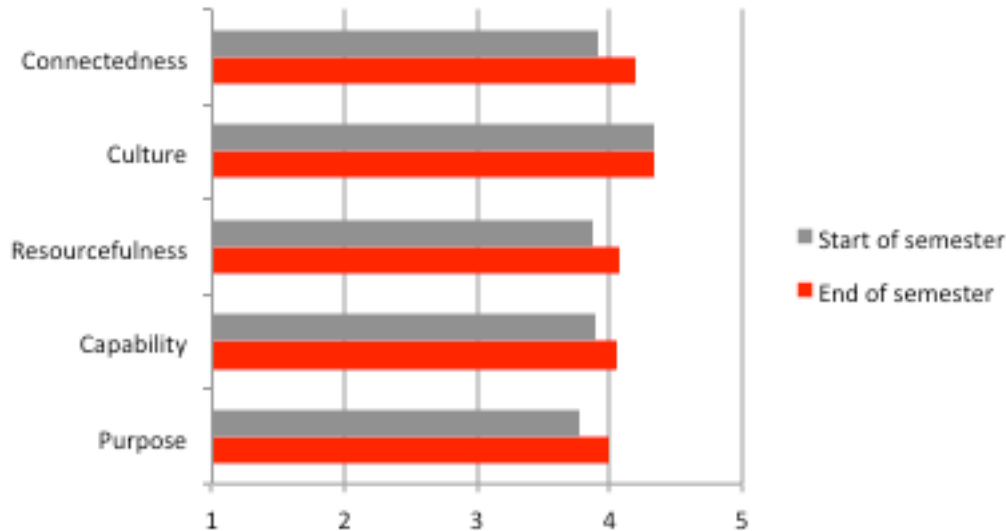


Figure 8. Mean senses of success scores for face-to-face mentors before and after mentoring (N = 34).

Learning Approaches

Significant increases were observed in deep and strategic learning of third year face-to-face mentors. While surface learning decreased, this change was not significant. The findings are summarised in Figure 9.

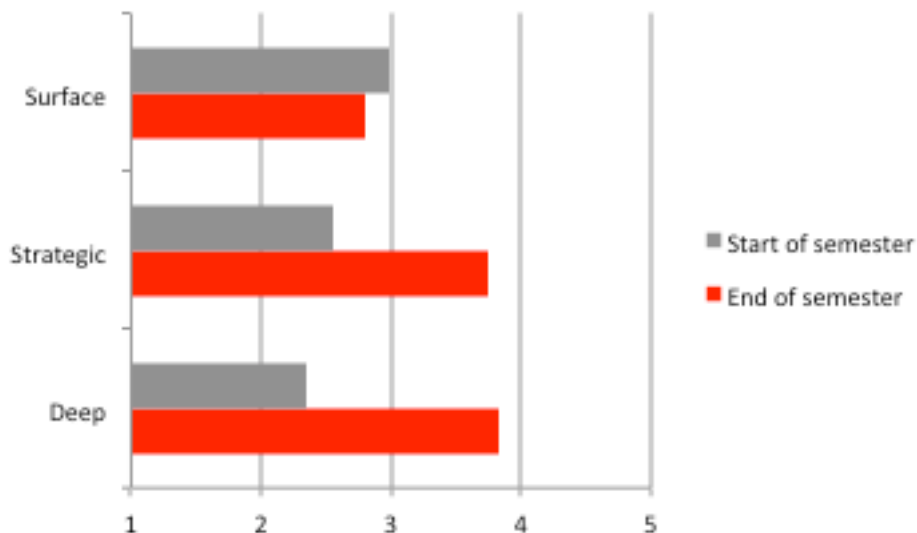


Figure 9. Mean learning approach scores of face-to-face mentors before and after mentoring (N = 34).

Psychological Literacies

A comparison of psychological literacy scores at the beginning and end of semester revealed increases on all nine literacies among third year face-to-face mentors, with one change, knowledge and understanding, reaching significance level. The results are summarised in Figure 10.

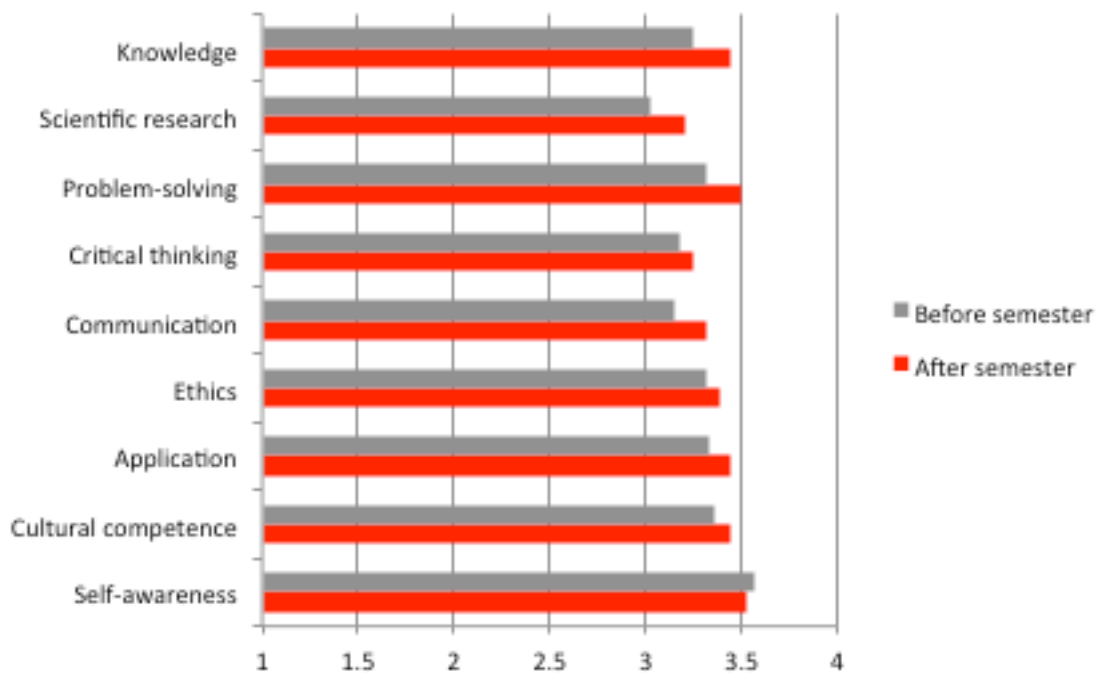


Figure 10. Mean psychological literacy scores for face-to-face mentors before and after mentoring ($N = 34$).

Student Evaluation

Table 5 shows the percentage agreement with three statements used to evaluate the TiTo program. Third year face-to-face mentors evaluated the program favourably. All the mentors enjoyed the program. The majority perceived the program to support their academic work (85%) and nearly all (94%) felt it helped their sense of belonging.

Table 5

Evaluation of TiTo by Face-to-Face Mentors (N = 34)

	Percentage of students				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Peer mentoring helped the quality of my work	41	44	15	0	0
Peer mentoring helped me feel like I belong	53	41	6	0	0
I enjoyed peer mentoring	74	26	0	0	0

The quantitative data summarised above was supplemented by responses to open-ended questions about the best aspects of the mentoring program and suggestions for improvement. Perceived to be most helpful were assisting mentors in the development of a sense of purpose and skill development. As one student commented, “the mentor program helped me build up on vital life skills in leadership and communication...it was rewarding learning how to facilitate a group because I can see how that will be used in my career”. Also rated highly were self-awareness and self-reflection and better insight into teaching and lecturing. As one student noted, “it was helpful to reflect on the concepts and advice I was providing the first year students as it applied to myself”, and be more self aware of my strengths and weaknesses and most importantly how I could improve my approach”.

The most common reflections on the most challenging aspects of their mentoring experience related to managing the group dynamic, encouraging the engagement of mentees, and overcoming anxiety and nervousness. A smaller group of mentors requested additional clarification of the mentor role. Several mentors also commented on the classrooms within which mentoring took place. In some cases these were not large enough to accommodate the mentoring groups. Focus group data supported these themes.

Implementation of TiTo in Blended Learning Classes

First Year Students

The USQ online implementation of TiTo provided first year students with optional access to mentoring via online discussion forums. Of the 361 students enrolled in the course, 31 (30 females and 1 male) participated in the mentoring program. Of these, 19 (18 females and 1 males) provided pre- and post-test data and gave permission for us to access their grades.

Initial power calculations indicated that more than 100 students were required in order to have an 80% chance of detecting a significant change. For a range of reasons mentoring could not be built into the online tutorials in the first year blended learning course.

Mentoring was therefore offered as a voluntary, additional component. Although efforts were made to recruit a large sample, at the conclusion of the semester the number of matched data sets was small. Because the small number of both first year students and

mentors presents challenges for inferential testing the following data is analysed descriptively and includes comments on trends.

Five Senses of Student Success

Figure 11 shows positive change for four of the five senses of success scores, in particular, for the sense of connectedness. Little change is noted for capability and a reduction on the dimension of culture was reported.

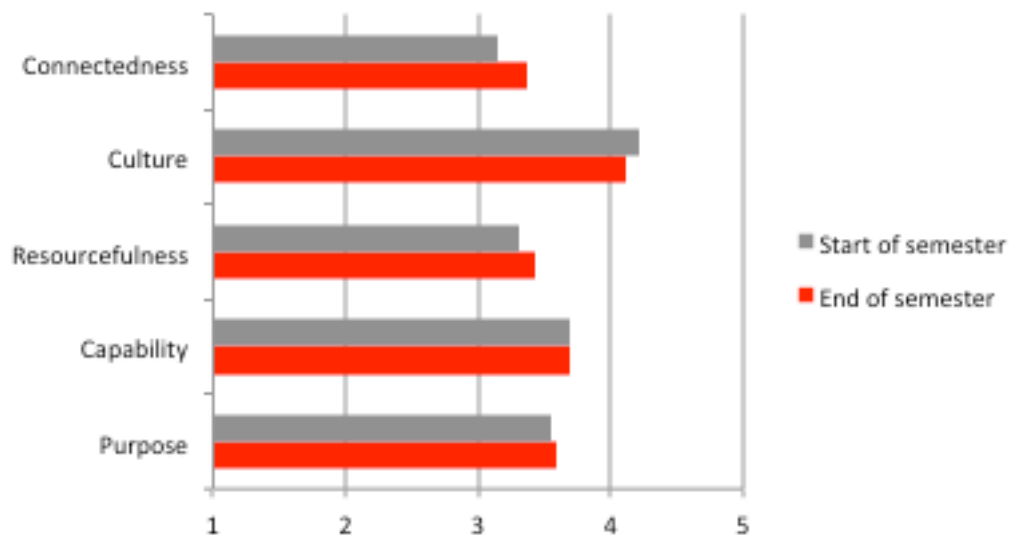


Figure 11. Mean senses of success scores for online first year students before and after mentoring (N = 19).

Learning Approaches

Although trending in the anticipated directions of increased deep and strategic learning and decreased surface learning, change on these dimensions for the first year online students was small, as shown in Figure 12.

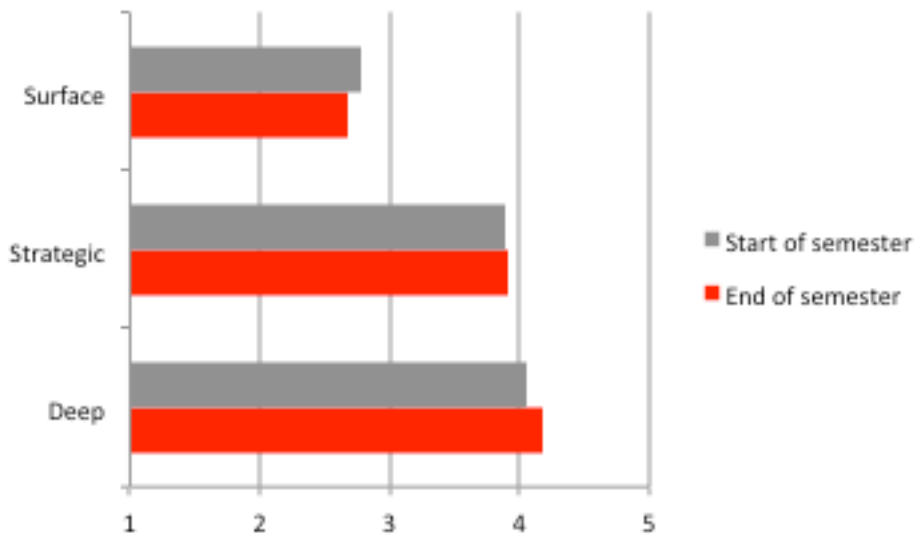


Figure 12. Mean learning approach scores of first year online first year students before and after mentoring ($N = 19$)

Psychological Literacies

A comparison of the psychological literacy scores at the beginning and end of semester revealed positive increases on four of the nine literacies, with the largest changes indicated that these online first year students felt more confident in their understanding of core psychological concepts and research by the end of semester. As shown in Figure 13, three of the literacies showed a negative change over time and self-awareness demonstrated no change.

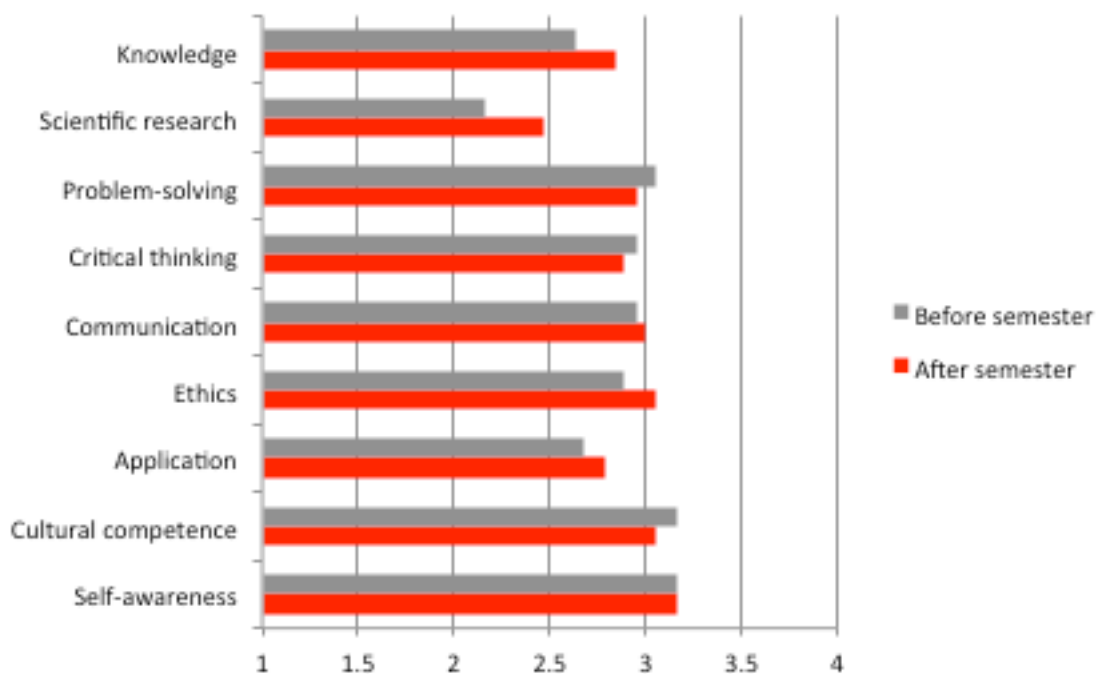


Figure 13. Mean psychological literacy scores for online first year students before and after mentoring ($N = 19$).

Student Evaluation

First year students in the blended learning context rated their experience of mentoring highly, supporting the value of the program.

Table 6 shows the percentage agreement with the three statements used to evaluate the TiTo program. The blended learning peer mentoring program was perceived very favourably by the first year peer mentees, with more than 90% of participants indicating that the mentoring helped the quality of their work. Additionally, almost 85% agreed or strongly agreed that the blended learning peer mentoring program helped them feel like they belonged. Approximately 92% of respondents indicated that they enjoyed the blended learning peer mentoring program.

Table 6

Evaluation of TiTo by First Year Online Students (N = 13)

	Percentage of students				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Peer mentoring helped the quality of my work	62	31	0	0	7
Peer mentoring helped me feel like I belong	47	38	0	15	0
I enjoyed peer mentoring	61	31	8	0	0

The quantitative data summarised above was supplemented with qualitative information from first year students in the blended learning course. Overall these students evaluated the program favourably, with most noting the best aspect of the program to be student support and collaboration. The connection felt by online students is also of note; as one mentee stated, "it was a wonderful real time environment - mentors and students engaged with warmth, humour, intelligence and honesty... It felt like everyone benefited", while another stated, "hearing their [mentors'] concerns helped me to understand that I was not alone." Additionally, several mentees noted the positive impact of TiTo participation on study management. For example, one student stated that peer mentoring "encouraged accountability", and provided "a good direction in regard to time management and assignment preparation."

One first year student noted that participating in TiTo supported her return to study as a mature-age student:

Although I had studied at university previously it was many years ago and as an on-campus student. So this time, taking on external study was very daunting. Chatting with the mentoring group eased my fears and concerns, boosted my confidence and made me realise I wasn't alone in the way I was

feeling. My current area of study is very different to my previous studies, so all the advice I received about study and assessments was invaluable.

Mentees also noted several areas for improvement, including the ability and preparedness of mentors. On a positive note, some mentees highlighted the need for more sessions; one mentee noted that “being able to interact in real time was invaluable”, with further sessions required to strengthen the relationship between mentors and mentees.

Third Year Mentors

Mentors in the online implementation of TiTo chose mentoring from a range of choices in a third year core course. Of the 148 in the third year course, 14 chose the mentoring option and 8 (6 females and 2 males) provided pre and post-test data for the project. An additional 4 shared their insights via focus group discussions. As in the first year implementation, the surveys were embedded into assessment tasks.

Five Senses of Student Success

Figure 14 summarises minor reductions in the five senses over the course of the semester for the third year mentors in the blended learning context. This suggests no real change on these dimensions for this group of students.

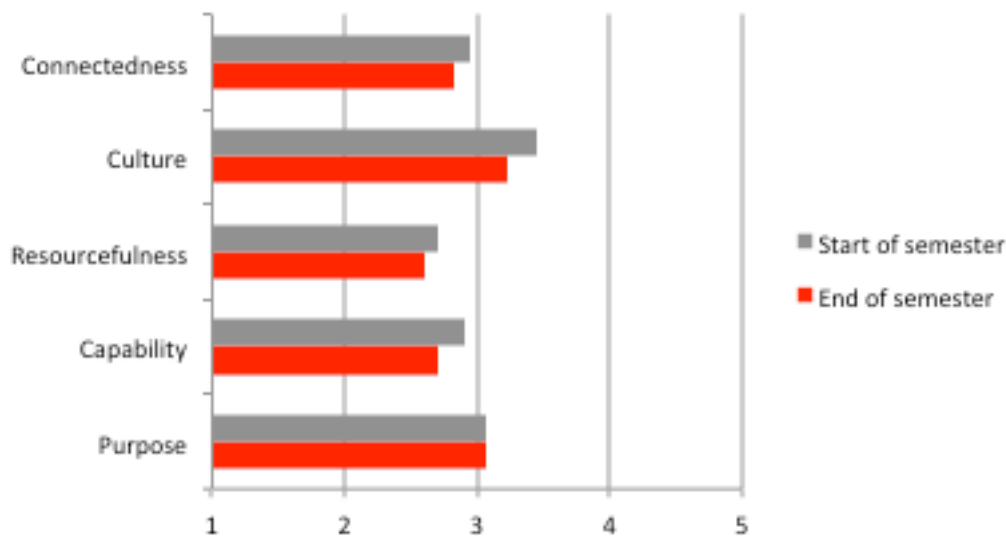


Figure 14. Mean senses of success scores for online mentors before and after mentoring ($N = 8$).

Learning Approaches

Similarly no changes were observed on learning approaches for the online mentors, as shown in Figure 15.

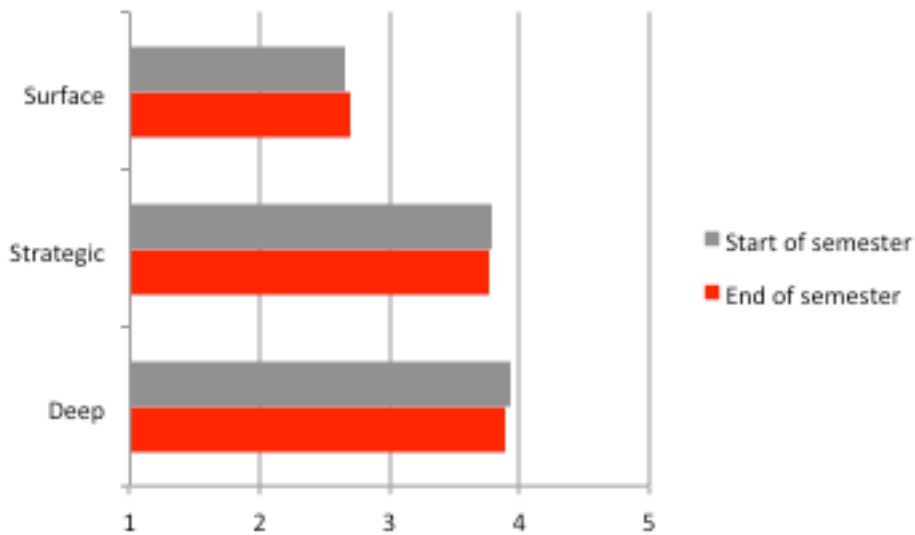


Figure 15. Mean learning approach scores of online mentors before and after mentoring ($N = 8$).

Psychological Literacies

In contrast to the lack of change noted on the five senses and learning approaches, a comparison of the psychological literacy scores of third year online mentors at the beginning and end of semester revealed positive increases on all nine literacies, with the largest on the dimension of communication.

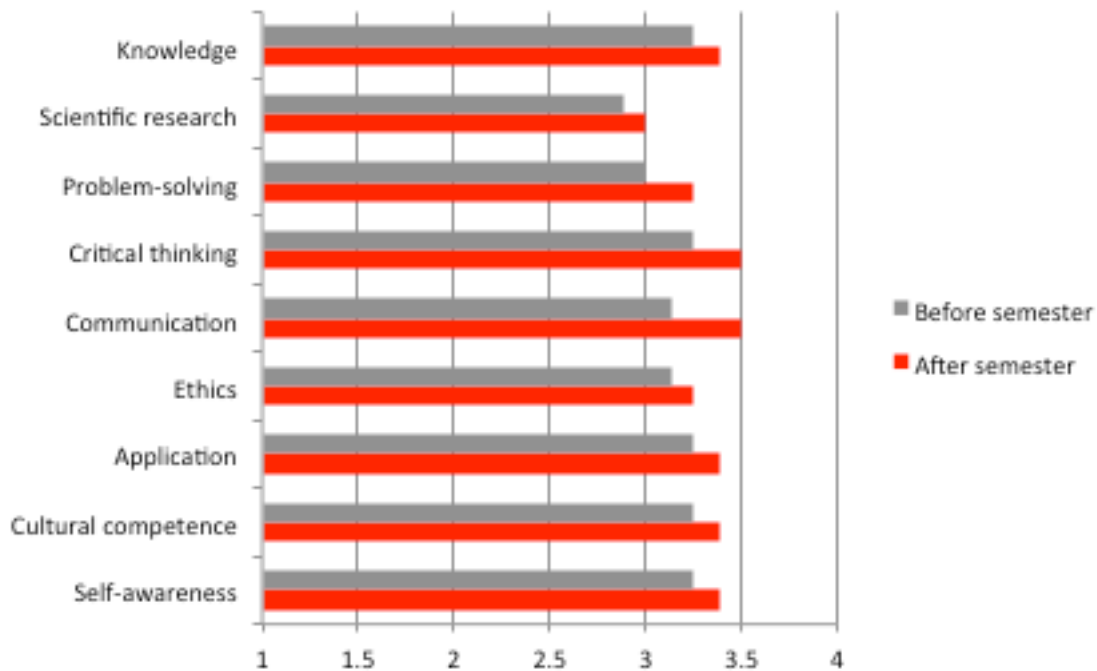


Figure 16. Mean psychological literacy scores for online mentors before and after mentoring ($N = 8$).

Student Evaluation

Table 7 shows the percentage agreement with the three statements used to evaluate the TiTo program. Unfortunately, the small sample size limits the ability to make conclusions regarding the extent to which the third year online mentors perceived the mentoring program to assist with the quality of their work. However, all respondents indicated that they agreed or strongly agreed that the online peer mentoring program helped them develop a sense of belonging. This is especially important as the mentoring program was offered online via weekly discussion forums and it shows the potential benefits to online forums in breaking down distance barriers and providing support to individuals studying outside the traditional face-to-face model. The majority of the third year mentors indicated that they enjoyed participating in the online mentoring program.

Table 7
Evaluation of TiTo by Online Mentors (n = 4)

	Percentage of students				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Peer mentoring helped the quality of my work	25	25	25	25	0
Peer mentoring helped me feel like I belong	25	75	0	0	0
I enjoyed peer mentoring	25	50	0	25	0

Qualitative data collected from third year online mentors provided useful information regarding the implementation of TiTo in a blended learning environment. Third year online mentors noted the best aspects of the program to be developing a sense of connection and sense of purpose. One student noted that the benefit of relationships that developed between mentors and first year students. Additionally, mentors noted the positive experience of developing friendships and supportive relationships with other mentors. Another noted the sense of purpose brought about by helping students through tasks such as “defining a concept, outlining enrolment patterns, or in managing and structuring assignments.” Mentors also noted the positive impact of the experience of the role on their own studies. They reported an awareness of their own learning, “[it] made me evaluate why I do things the way I do and if there is a better way to study”. More than a quarter of the mentors noted its positive impact on their future career planning, with comments such as “this program confirmed to me that this is exactly what I am meant to be doing with my life”, and “it has motivated me to continue as I rediscovered my passion for psychology.”

Areas identified by mentors as requiring improvement included further assistance with enacting their role, with mentors wanting more support in relation to the type and amount of information with which to provide first years. Mentors also noted the personally

challenging and fulfilling nature of mentoring, with one stating that it encouraged her to “believe in myself and my knowledge and my abilities, having confidence that I had something of value to offer others.” Mentors acknowledged the benefit of the skills developed for their professional development. As one mentor noted, mentoring

provided an opportunity to practise skills learnt in various units, including ethical considerations such as discrimination and confidentiality.... It provided an opportunity to practise communication skills and conflict resolution... and because I was an external [student], helped me feel a greater connectedness and involvement with the university.

Finally, mentors offered advice to future mentors, including being prepared and being open to experiences that might arise during mentoring. They noted the importance of preparing for weekly sessions and providing first year students with an agenda. Flexibility and openness in the role was also encouraged, with mentors stating that prospective mentors need to be “prepared to be flexible to fit the needs of mentees” while being “willing to learn more about yourself”.

Summary of project evaluation outcomes

The implementation of TiTo in face-to-face and blended learning classes revealed positive outcomes for both first year students and their third year mentors. Significant positive changes were noted for both groups of students across the senses of success measure, with both groups reporting increases in connectedness and resourcefulness by the end of the semester. These results suggest that the TiTo model facilitates the development of important relationships as well as an enhanced understanding of university resources and procedures for both groups of students.

Importantly, TiTo was associated with significant positive change on all three learning approaches for both groups. Significant increases were reported on both deep and strategic learning and a decrease on surface learning for both first year students and the third year mentors, respectively. These changes indicate a move to more productive ways of learning. The significant changes for third year students are particularly pleasing as they suggest that a focus on this aspect in their mentoring can flow through to their own practice.

First year students in the face-to-face model also evidenced significant change on perceived competence in eight of the nine psychological literacies. While we cannot claim the mentoring program alone was responsible for these positive changes, the reported outcomes suggest that the first year face-to-face package provides solid engagement with psychological literacy. In comparison, mentors, who not surprisingly, reported higher scores than the first year students on all psychological literacies at the beginning of semester, reported an increase in only one literacy - psychological knowledge - over the course of their mentoring experience, suggesting that even in this final year of the program mentors can develop a better understanding of core psychological concepts. Qualitative feedback from mentors underscores the importance of providing opportunities for third year students to apply their knowledge and skills.

While caution needs to be applied to any interpretation of the outcomes derived from the blended learning context due to the small number of students involved, trends were

positive, with increases noted for the first year students on four of the five senses of success, including the strongest change in connectedness, a theme echoed amongst the face-to-face first year students. Although no changes were noted across the five senses for mentors, this group did reveal positive changes on all nine psychological literacies, with the largest change in communication. First year students in the blended learning context reported positive change on four of the nine literacies, with relatively large improvements in perceived psychological knowledge and scientific research. Like the face-to-face group, first years in the blended learning context demonstrated positive changes in learning approaches over the course of the semester, with increases noted on both deep and strategic learning and a reduction in surface learning. Finally, the evaluations, particularly from the first year students who used the Wimba classroom to engage in online mentoring during the semester, support the value of the TiTo model.

Focus group data collected from both first year students and mentors at both universities further underscored the value of the approach and provided valuable information to inform continued refinement of the model. In particular, managing first year students' preparation for and engagement in the mentoring process were identified as particular issues for mentors in both face-to-face and online learning contexts.

Dissemination

Engaged Dissemination

A half-day workshop was held at RMIT University to share the resources developed during the project and to disseminate outcomes. Participants also shared innovations to support transition of first and third year undergraduate psychology students.

Invitations were sent to heads of discipline in psychology at all Australian universities. The Psychology Educators Network of the Australian Psychological Society endorsed the event. Eighteen participants representing eight universities from Victoria, South Australia, Queensland and the ACT attended the workshop. They included first and third year coordinators and directors of teaching and learning. First year students, third year mentors and tutors who participated in the program shared their insights. Approximately half of the participants had prior experience with mentoring programs.



Figure 17. Workshop participants

Quantitative feedback on the workshop is summarised in Figure 18. With high scores indicating greater agreement with the evaluation items, mean results presented in Figure 18 indicate an overall favourable evaluation of the workshop. Results show that participants endorsed the overall relevance and quality of the workshop and found the resources useful. Results also suggest that participants appreciated the opportunity to network with colleagues. Additionally, all participants indicated that they would recommend the workshop to colleagues.

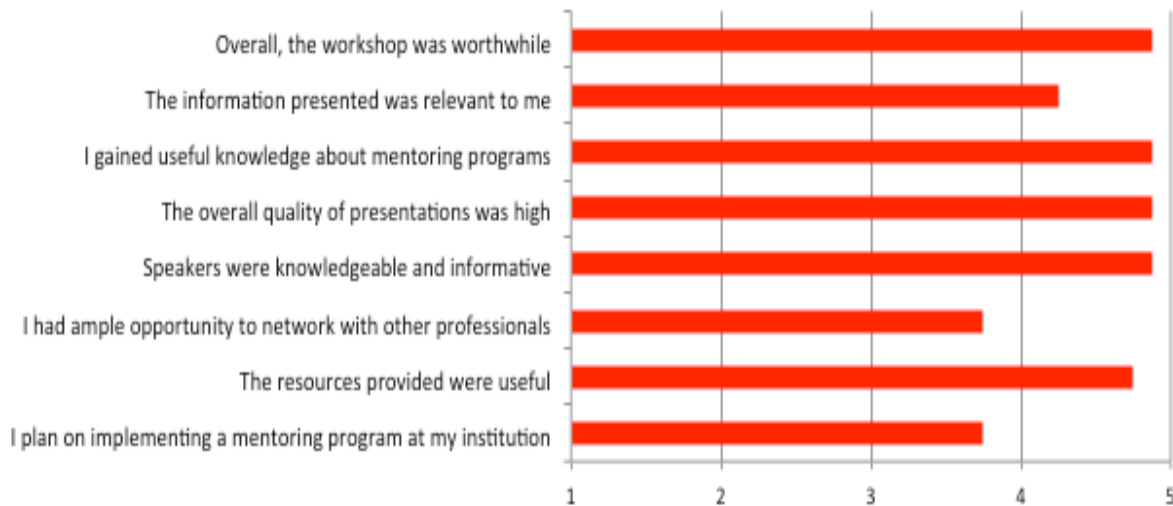


Figure 18. Evaluation of TiTo workshop (N = 8).

In addition to quantitative feedback, participants provided oral and written qualitative feedback. Participants noted the most valuable aspect of the workshop to be the opportunity to hear of transition programs at other institutions. Additionally, participants raised several issues for consideration in the implementation of TiTo, including the logistics of introducing the model to large cohorts, introduction of the model in curriculum and capstone courses, and the efficacy of introducing the program in a compulsory or opt-in capacity.

Peer Reviewed Publications

Burton, L.J., Chester, A., Xenos, S., & Elgar, K. (2013). Peer mentoring to develop psychological literacy in first-year and graduating students. *Psychology Learning and Teaching*, 12 (2), 136-146.

Chester, A., Xenos, S., & Burton, L. (2012). Peer mentoring: An embedded model to support first year psychology students. In S. McCarthy, J. Cranney, K. L. Dickson, A. Trapp, & V. Karandashev (Eds), *Teaching psychology around the world: Volume 3*. (pp.135-154). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

Chester, A., Burton, L.J., Xenos, S., & Elgar, K. (2013). Peer mentoring: Supporting successful transition for first year psychology students. *Australian Journal of Psychology*, 65, 30-37.

Chester, A., Burton, L., Xenos, S., Elgar, K., & Denny, B. (2013). Transition in, transition out: A sustainable model to engage first year students in learning. A practice report. *The International Journal of the First Year in Higher Education*. 4 (2), 125-130.

Additional publications are in preparation.

Conference Presentations

- Burton, L. Chester, A., & Xenos, S. (2012, July). Peer mentoring to successfully transition first year students to university. Paper presented at the 5th International Congress of Psychology, Cape Town, South Africa.
- Chester, A., Xenos, S., & Burton, L. (2012, July). Peer mentoring to increase psychological literacies for new and graduating students. Paper presented at the International Conference on Teaching Psychology, Cape Town, South Africa.
- Chester, A., Xenos, S., Burton, L., & Elgar, K. (2012, September). Transition in, transition out: embedding peer mentoring in the undergraduate program to support students. Paper presented at the Conference of the Australian Psychological Society, Perth, Australia.
- Chester, A., Xenos, S., Burton, L., & Elgar, K. (2013, June). Empowering students in transition: Peer mentoring to support first year students. Full paper presented at the Enhancement and Innovation in Higher Education conference, Glasgow: UK.
- Chester, A., Burton, L., Xenos, S., Elgar, K., & Denny, B. (2013, July). Transition in, transition out: a sustainable model to engage first year students in learning. Paper presented at the First Year in Higher Education Conference, Wellington, New Zealand.
- Xenos, S., Chester, A., & Burton, L. (2012, September). Life beyond third year: Using peer mentoring to assist graduating students transition out of university. Paper presented at the Conference of the Australian Psychological Society, Perth, Australia.
- Xenos, S., Chester, A., Burton, L., & Elgar, K. (2013, May). Transition in, Transition out (TiTo): Connecting students to enhance engagement and support transition into and beyond university. Paper presented at the International Psychological Applications Conference and Trends, Madrid: Spain.

Linkages

The need for a project addressing the transition of undergraduate psychology students both into and out of university has been identified by Associate Professor Jacquelyn Cranney in her 2011 ALTC National Teaching Fellowship *National standards for psychological literacy and global citizenship* and in two earlier ALTC projects: *Designing a diverse, future-oriented vision for undergraduate psychology* (Cranney, Provost, Katsikitis, Martin, White, & Cohen, 2008) and *Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum* (Cranney, 2008).

The issues characteristic of the first year experience have been well documented by previous ALTC projects, including Kethia Wilson and Alf Lizzio's (2008) project *Enabling commencing students* and Sally Kift's (2009) Senior Fellowship *Articulating a transition pedagogy to scaffold and to enhance the first year student learning experience in Australian higher education*

Conclusions and Recommendations

The TiTo model, developed and evaluated in this project, has proved effective in supporting the transition into and out of undergraduate study for psychology students. Both the first year students and their final year mentors in the face-to-face classes and the blended learning context indicated positive attitudes towards their experience of mentoring. TiTo was further associated with changes on the five senses of success, learning approaches and psychological literacies. Evidence suggests the TiTo model, designed for implementation in face-to-face classes can be adapted for delivery in blended and online learning contexts.

On the basis of our own observations and data provided by the staff and students involved in the implementation of TiTo, a series of recommendations are outlined below:

- As a starting point it will be important to replicate the positive outcomes reported in this project in psychology disciplines at other universities. In particular, evaluation is required to assess the effectiveness of TiTo in large student cohorts. Some Australian universities have first year psychology intakes of up to 1000 students. TiTo offers a potentially sustainable solution to the challenge of building connection in these large cohorts, but more research is needed to determine its effectiveness with such large groups.
- Further, the adaptation of the TiTo model in other disciplines and contexts is also recommended. Although developed for the undergraduate population, TiTo could be applied to post-graduate education and be used as a framework for mentoring schemes that use alumni.
- Further clarification of the role of the first year tutor in supporting TiTo is required. Initial work already published by the project team in this area has suggested that tutors play a crucial role in the implementation of mentoring (Outhred & Chester, 2010). In the present project, tutors assessed mentors' skills and provided ongoing feedback to mentors. Tutors also provided a reference for mentors at the completion of the program. Ongoing work will focus on clarifying and strengthening the relationships between tutors and the mentors they work with. Tutor training will be refined to emphasise ways to work effectively with mentors in the classroom.
- The pairing of mentors in the online mentoring program provided valuable ongoing support to the third year students. This 'buddy system' helped the third year students to work in teams, share ideas and complement each other's strengths. This pairing is recommended in future rollouts of the mentoring program, where numbers permit.
- The adaption of TiTo implemented in the online context at USQ provided tentative support for the model in blended learning environments. In contrast to the inclusive approach used at RMIT where all first year students received mentoring in their face-to-face tutorials, the adaptation at USQ involved a voluntary, opt-in approach. Further analysis needs to occur around the facilitation of the uptake and impact of voluntary adaptations of TiTo.
- Despite the positive changes noted for first year students at both RMIT and USQ, a capacity to influence completion rates was not evidenced. Using archival RMIT data, it was possible to compare grades for TiTo students with those who completed first year prior to any mentoring. The introduction of TiTo was associated with an upward

trend in the grades, however, no change in the fail category was noted. Despite our hopes that TiTo would address this problem, the fail rate continues to hover persistently around 12-15%. Further inspection of this group reveals a large number of students who did not complete all assessment tasks; students who appear to disengage with the course. Early intervention is required to support students at risk. Helping students make decisions regarding their continued enrolment could be a future direction for TiTo.

- TiTo has demonstrated a theoretically grounded and evidence based approach to first and third year student transition. Furthermore colleagues have expressed interest in adapting the TiTo model for application in their psychology programs. The project team is pleased to be involved in the OLT Seed Funding application by Flinders University to address completion in the first year psychology cohort through an enhanced TiTo framework.

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