
Connecting embedded and stand-alone peer mentoring models to enhance student engagement. A Practice Report

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Abstract

This paper outlines the Trident Student Mentoring Program that runs in the College of Engineering at Victoria University, Melbourne, Australia. The program offers both embedded and stand-alone models of peer mentoring services to the same cohort of first-year students. It shows that by forming strong links between these two types of peer mentoring models, the inherent challenges of both, such as low attendance rates in stand-alone models and short periods of peer to peer time in embedded models, are mitigated.

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Introduction

One of the biggest challenges that peer mentoring programs face, and higher education more broadly, is that of student participation and engagement. Gilmore Gilmour (2014) reported that 20 per cent of Australian students leave university in their first year. It is widely argued that such attrition rates are primarily the result of student disengagement with their studies, peers and institutions (Barron & D'Annunzio-Green, 2009; Cornelius, Wood, & Lai, 2016; Nelson, Quinn, Marrington, & Clarke, 2012). Peer mentoring programs have attempted to reverse this attrition rate and increase student engagement by providing programs that offer strong interpersonal and academic support. Indeed, after years of collecting and analysing data there is now a strong consensus that peer mentoring is effective in helping students' learning, sense of belonging, and general transition into the university environment (Dawson, van der Meer, Skalicky, & Cowley, 2014; Falchikov & Blythman, 2002; Topping, 1996; Topping, 2005; Zamberlan & Wilson, 2015).

Peer mentoring programs are broadly based around the learning theories of Vygotsky (1980) and Bloom, Furst, Hill, & Krathwohl (1956). Vygotsky proposed the socio-constructivist argument that knowledge and skills were best developed through social engagement and interaction, while Bloom provided an outline of practice for effective peer interaction and imitation. Both theories underpin broad practices of peer mentoring; in which high-achieving students are recruited, trained and connected with first-year students. As experienced students, peer mentors share their knowledge and skills through casual social interactions to help new students develop academic abilities, better understand university

life, and engage with their institution and student cohort (Dawson et al., 2014, p. 610). Yet while there is a strong body of evidence to suggest that peer mentoring benefits students, engagement with such programs can often be low.

In order to circumvent low attendance and engagement in traditional, stand-alone peer mentoring programs, a number of programs that embed peer mentors into university classes and tutorials have been implemented in recent years. While stand-alone (also described in the literature as 'add-on') models of peer mentoring offer learning support to students outside of, and in addition to, university classes, embedded models situate peer mentors in the classroom where they can interact with and assist students in their work.¹ The greatest asset of embedded models is that they do not rely on students volunteering to participate but instead operate in spaces that students are required to attend.

This study identifies the strengths and benefits of embedded and stand-alone models of peer mentoring while analysing the challenges that have been encountered by institutions when implementing them. The importance of engaging students in peer mentoring programs is also examined in the context of Victoria University's student body. The policies and practices of the *Trident* program will be outlined, along with specific details of the types of changes that were implemented in order to better link *Trident's* embedded Peer Assisted Tutorial sessions (PATs) with the voluntary mentor service, the *Study Space*. A comparison of the *Study Space's* attendance figures between Semester 1 2016 and Semester 1 2017 will also show that the focus on connecting our embedded and stand-alone peer mentoring programs has led to a rise in voluntary attendance. This paper concludes that connecting embedded and stand-alone models

¹ Embedded models of peer mentoring can sometimes be labelled as "peer tutoring". Peer tutoring is used to describe a range of different models in which an experienced student assists a less experienced student in their work. This can be in one-on-one or group engagements, as well as embedded in a classroom.

of peer mentoring into an all-encompassing program encourages and improves student engagement among targeted student bodies.

Literature Review

An analysis of the relevant literature reveals that stand-alone, voluntary models of peer mentoring are the most established and widely used programs in Australian universities (Chester, Burton, Xenos, Elgar, & Denny, 2013; Outhred & Chester, 2010). Much of the research about such programs has focused on measuring their efficacy. Dawson et al. (2014) undertook an analysis of studies that evaluated the effectiveness of Supplemental Instruction (SI) and Peer Assisted Study Sessions (PASS) published between 2001 and 2010, which has subsequently become the seminal text in the field. The study indicated that “participation in SI or similar peer-learning programs can enhance students’ opportunity to meet other students and develop new friendships” (Dawson et al., 2014, p. 631). Thus, after an exhaustive examination of a decade’s worth of studies about peer mentoring, Dawson and colleagues offered an endorsement of SI and PASS’s effectiveness in helping students through a range of issues.

Yet while there is evidence to suggest that students who attend stand-alone programs benefit from them, strong attendance rates are uncommon. As a result of their voluntary nature, stand-alone peer mentoring programs can register low and inconsistent attendance rates (Hill & Reddy, 2007; Longfellow, May, Burke, & Marks-Maran, 2008). Murray (2006) has argued that 30 per cent of students in a PASS-supported unit will attend the voluntary sessions and that is often a best-case scenario.

A recent study examines approaches to boosting students from low socioeconomic status (SES) backgrounds’ retention and achievement figures at Western Sydney University. Reading (2016) argues that

embedding support into classes is the “most effective strategy for reaching and supporting struggling students”, and could do so without “stigmatising students experiencing difficulty” (p. 700). Similarly, Kift (2009) has suggested that academic support programs such as peer mentoring should be targeted at all first-year students, and has stated that the most efficient and inclusive way to create an engaged learning community is “through the embedding in the first year curriculum of active and interactive learning opportunities and other opportunities for peer-to-peer collaboration” (p. 41). Outhred and Chester (2013) also see the classroom as being the best means of delivering broad, fair, and effective support to university students. In another study on the effectiveness of peer mentoring in the classroom, Henry and colleagues (2011) hoped to connect the benefits of social university spheres—areas that many students do not frequent—with the academic sphere, and hence link two important facets of university life rather than allowing them to run parallel and, for many, disconnectedly.

This study presents the practices and results of a peer mentoring model that has yet to be discussed in the literature in this field. Combining stand-alone and embedded peer mentoring models and offering the services to the same student body, utilises the knowledge and practices of past peer mentoring theory in a new way, and offers the opportunity to find solutions to challenges that effect both types of individual models.

Methodology

The measure of success within the *Trident* program has been based on the attendance rates of the voluntary, stand-alone space (known as the *Study Space*) compared between two semesters, and against Murray’s (2006) average peer mentor attendance rate of 30 per cent. This measure of success was used because the primary aim of the program redesign was to improve *Study Space* attendance rates and first-

year engineering students' help-seeking behaviours. Measuring attendance alone does not offer a comprehensive outline of the program's efficacy in regards to the help it provided students who attended the space. Student surveys from the program have strongly suggested that the program improved academic results and social interactions, yet such surveys were not preapproved by the University's ethics board before being distributed, and therefore it is anticipated that these markers of efficacy will be discussed in future papers. The purpose of this paper is, therefore, to identify the effect that such a program can have on student attendance rates and help-seeking behaviours.

Each student who enters the *Study Space* is required to fill in an online attendance form provided to him or her by a peer mentor. In 2016 and early in the first semester of 2017, these forms asked students for basic information: their student number, the subject they required assistance with, and demographic data. These forms were entered online and automatically generated excel spreadsheet reports. As such, we were able to gauge the number of contacts between students and peer mentors in the voluntary space, as well as what proportion of those students were studying first-year units, and how often they returned to the *Study Space* throughout the semester. The form students were required to complete was unchanged between 2016 and 2017. Thus, it was possible to directly compare the data compiled from *Study Space* interactions between semester 1 2016 and semester 1 2017.

The Trident Student Mentoring Program

The *Trident* program consists of three parts: the *Study Space*, PATs, and the Online Study Space.² These three arms work together to provide a

holistic approach to student support and peer learning for first-year engineering students. Since its inception, *Trident* has made both stand-alone (the *Study Space*) and embedded (PATs) models of peer mentoring available to first-year engineering students. In semester 1 2017, a concerted effort was made to develop stronger connections between these two arms of the program. In this semester student use of the *Study Space* was far higher than any previous semester, and it is believed that by forming stronger connections between the two models, students felt more comfortable and confident to engage peer mentors in the stand-alone space.

Trident peer mentors are carefully selected through a rigorous recruitment and training program. Successful applicants must not only be high-achieving students but also demonstrate strong interpersonal skills. Through weekly development workshops and biannual training days, *Trident* peer mentors are taught specific practices that adhere to a broader philosophy of peer mentoring. It is made explicit that peer mentors are not expected to be experts, and as such should not be called upon to teach. Instead, they are trained to share their own student experiences with their peers, model good student behaviour, make meaningful connections, and offer pathways towards learning. Direct content assistance is avoided wherever possible, and instead peer mentors are trained in strategies that help to guide students towards creating their own study habits and developing their own content knowledge. While peer mentors must adjust their mentoring styles to best suit a PATs or *Study Space* session, the core philosophy of attaining knowledge through social interaction remains.

² VU's PATs model should not to be confused with the PATs program at University College Dublin where experienced students run voluntary tutorials, based on work set by an absent lecturer, for first-year students.

The *Study Space* operates out of two designated rooms in the College of Engineering building. There is one peer mentor allocated to each room, which means that two peer mentors are made available for drop-in consultations between 25 to 30 hours per week.³ Students may enter these spaces without a booking and ask for help with any type of student-based problems they are experiencing. Often those entering the space have specific study issues that they would like help with. Groups of students who are working together often enter the spaces, and peer mentors have also been trained to encourage collaboration between students who may not know each other but are working on the same type of project.

These same peer mentors also operate within PATs. PATs are one-hour sessions in which a peer mentor is embedded in a core first-year unit classroom and interacts with students and tutors. Their task is to help students to better understand content, explain activities, encourage student participation and active work groups, and to serve as conduits between the students and tutors. Peer mentors in the classroom offer students a less official avenue of support (compared to the tutor) and are able to interact with students as students. It is hoped, and often reported, that this relationship allows students within such classes to be more forthcoming about their progress and difficulties than they would with a tutor or lecturer.

While PATs and the *Study Space* were always designed to provide first-year engineering students with holistic peer mentor support, the two arms of *Trident* have acted independently of each other. In 2017 increased effort was made to build a stronger connection between these two areas of *Trident*. The first step in building such a connection was through creating a more integrated timetable for peer mentors. Fortunately, peer mentor availability

made it possible to directly connect their PATs and *Study Space* sessions. When designing the semester timetable, it was confirmed that peer mentors were available in the *Study Space* either prior to or after their PATs session. This allowed peer mentors to encourage students to either meet with them in the *Study Space* prior to the weekly PATs class, or to walk with them to the *Study Space* after class had finished.

Crucial among the strategies employed to better connect our embedded and stand-alone programs was the building of in-class rapport between peer mentors and students. The aim to build in-class rapport in order to encourage students to seek the assistance of peer mentors outside of class hours was based on Frisby and Martin's (2010) study that identified links between rapport-building and stronger student participatory behaviours. Other studies have also supported this connection between learner-mentor rapport and improved learning habits and help-seeking behaviours (Rodríguez, Plax, & Kearney, 1996; Worley, Titsworth, Worley, & Cornett-DeVito, 2007). Rapport-building strategies, such as finding common ground and asking open questions, were discussed, modelled and practiced in peer mentor development workshops. Such training meant that peer mentors entered the classroom with three core aims: to interact and build relationships with students; to help students understand unit-related concepts; and to encourage students to seek help and company in the *Study Space* outside of class hours.

Results

The attendance rate between semester 1 2016 and semester 2 2017 was positively measured against both enrolment numbers and against Murray's average peer mentor attendance rate of 30 per cent.

³ The hours of operation vary each semester and are dependent on peer mentor availability.

In semester 1 2016, just 18 first-year students entered the *Study Space*. Comparatively, in semester 1 2017, 83 first-year students sought assistance in the *Study Space*. This increase is particularly significant when mapped against enrolments. First-year student enrolments in 2016 numbered 199, compared with 126 students in semester 1 2017.

The 2016 first-year attendance total of 18 students constituted nine per cent of the overall first-year cohort for that semester. The 2017 total of 83 first-year students to enter the *Study Space* represented 66 per cent of the first-year student body. Therefore, we measured both a net increase of 65 attendances and a proportional increase of 57 per cent.

Murray (2006) has shown that the average attendance rate in Australian peer mentoring programs is 30 per cent of the targeted student body. With only nine per cent of the first-year engineering students attending in 2016, the *Study Space* was well below the national average. The focus on connecting the *Study Space* with the PATs program, saw 66 per cent of first-year engineering students attending the *Study Space* in semester 1 2017, more than doubling the national average. Such figures show that the efforts taken to connect PATs with the *Study Space* were effective in increasing voluntary attendance rates.

Conclusion

This recent trial at VU shows that through connecting embedded and stand-alone peer mentoring models and making them available to the same student body, students are afforded the opportunity to become more familiar with peer mentors in the classroom, and are subsequently more likely to seek those peer mentors outside of class time. This is clearly shown in the tripling of attendance rates in the stand-alone *Study Space* in 2017, with a very high proportion of that data coming from students who attended one or more PATs-

supported classes. With no other obvious causes for such a rise in attendance, it appears very likely that the connections made between *Trident's* embedded and stand-alone programs is the primary reason behind such figures.

We will be improving our data retention practices so that more qualitative information can be collected to identify the effects of PATs/*Study Space* connections and compare them to the data of previous years. The primary goal of building connections between these two peer mentoring models has been to improve voluntary attendance rates in the program, and therefore to enhance first-year engineering students' engagement with the subject, university and student body. While it is far from certain that we achieved this aim through strengthening the ties between our embedded and stand-alone peer mentoring programs, the data does suggest this focus on connection had, at the very least, some influence on the targeted students' help-seeking behaviours.

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