



## RESEARCH ARTICLE

### Understanding the Learner: Effective course design in the changing higher education space

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Due to the 'Bradley' review of Higher Education in 2008, there has been a shift in demographics of students entering universities in Australia (Bradley, Noonan, Nugent & Scales, 2008). Moreover, the uncertainty around university funding has created additional challenges for many universities. However, as Jobs once stated "innovation is the ability to see change as an opportunity, not a threat" (2011), and emerging from this space arose an opportunity at Murdoch University to create *OnTrack Sprint*, which specifically aimed to capture school-leavers aspiring to university but achieving an ATAR just below the cut-off for direct entrance (i.e. between 60 - 69.95). This four-week intensive program was offered for the first time pre-semester one, 2015. Of those who started the course, 92% were retained and 96% of retained students progressed to enrolling in an undergraduate course at Murdoch University. The effectiveness of this enabling program stemmed from a curriculum that was informed by the learning needs (Kift, 2009) of this targeted demographic. This paper dances with the idea that a successful student-teacher relationship is reliant on 'knowing' your learner (Hattie, 2009) and refers to the program *OnTrack Sprint* to demonstrate how an effective transition pedagogy that is cognisant of the learner can be intentionally constructed and delivered to effectively engage and transition enabling students.

*Keywords:* transition pedagogy; engagement zone; enabling education; alternate pathways; academic skills

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#### Introduction

In recent years, the popularity of pre-university enabling programs, sometimes referred to as "bridging courses, university preparation courses, foundation courses and pathway courses" (Hodges et al., 2013), has risen in Australia and the United Kingdom (Clark & Gzella, 2013; Bookallil & Rolfe, 2016) as an alternative pathway to university. In Australia, this rise was precipitated by an injection of government funding into these programs from 2008 onwards as a way to achieve their 'widening participation' agenda that aimed to increase the enrolment of individuals from typically under-represented groups, such as those from low socioeconomic backgrounds (Bradley, Noonan, Nugent & Scales, 2008). Consequently, a need also grew for universities to develop enabling and transition pedagogies (Kift, Nelson & Clarke, 2010; Nelson & Kift, 2005) that embedded the development of specific skills into the curricula of these programs in order to address the challenges of culturally distinct enabling and bridging cohorts. At Murdoch University, a suite of 'access' programs have been developed to aid students in their transition to undergraduate studies. The aim of these programs is to acculturate these students into the university environment and assist them to develop generic interdisciplinary university skills, not dissimilar to those pursued at other universities such as 'critical thinking, reflective writing, reasoned analysis, problem solving and information literacy' (Gunn, Hearne & Sibthorpe, 2011).

*OnTrack* is the university's primary fourteen-week enabling program designed to transition non-traditional students from a diverse range of backgrounds into university (Lisciandro & Gibbs, In-press). An intensive version of this program *OnTrack Sprint* (which from this point will be referred to as *Sprint*) was also developed to target a particular group of enabling students: specifically, those who narrowly missed out on entry to university due to achieving an Australian Tertiary Admissions Rank (ATAR) score just below the cut-off of 70 (but above that of 60). The idea was to action an opportunity for these narrow-miss university aspirers to enter university in the same year as their peer group who had already gained direct entry.

This paper demonstrates how understanding and engaging the learner as an active partner in the learning experience, is a significant principle in developing an effective transition pedagogy for enabling students. The case study of *Sprint*<sup>1</sup> illustrates how the principles and strategies of Nelson, Creagh, Kift and Clarke's (2014) third generation transition pedagogy model for first year students can be modified and applied in the enabling space to transition students into university. We discuss how *Sprint* was intentionally constructed using a transition pedagogy that was supported by an "understanding by design" method (Wiggins & McTighe, 2004) for curriculum design and implemented using a "model, coach, fly" approach - a contemporary adaptation of Collins, Brown and Newman's (1989) cognitive apprenticeship framework of: modeling, coaching, scaffolding, and fading. Further, in this case study we demonstrate how the presence of the academics' authentic self, recognised through the use of relatable humour, storytelling and popular cultural texts to teach skills was aligned with Tinto's (2011) elements for success in creating a learning community in a classroom. Examples are provided of how these teaching techniques and activities were carefully chosen and applied to address the challenges of the learners, stimulate learning and build a community of engaged students, who were university ready. Lastly, we evaluate the effectiveness of our approach for enabling these students to access and participate in university.

### **Background and Literature Review**

Within research into the success of enabling programs in higher education, there are several key themes that emerge from the literature. In a review of the field of successful "enabling pedagogies", Lane and Sharp identify three important areas: understanding the challenges of the cohort, building aspiration through learning communities of practice, and the presence of an enabling pedagogy (EP) (2014, p. 66-67). Cohort challenges can be further categorized as those extrinsic to the student such as stress from family commitments and economic pressures, as well as those intrinsic academic anxieties that come with transitioning into the university culture (Cullity, 2006; Lane & Sharp, 2014; Tinto, 2011).

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<sup>1</sup> The use of student data for this research project has been approved by the Murdoch University Human Research Ethics Committee (Approval No. 2014/112). The unit coordinators who also formed the research team for this paper have given consent for their names to be used.

Tinto (2011) has written extensively on the challenges faced by non-traditional students and how maximising classroom time in moments of teaching and learning can help to address these challenges. He notes four elements for a creating a classroom that drives success: (1) providing clarity around expectations and creating levels that the students can rise to; (2) providing and aligning academic support with “the demands of the classroom”; (3) providing frequent feedback on their progress, and finally (4) stimulating engagement with the class (Tinto, 2011, p. 3). Collectively, this allows the student to understand expectations, gain an awareness of their own progress in relation to expectations, adjust their behaviours and move from being a cultural outsider to cultural insider (Bizzell, 1986; Northedge, 2003). Tinto’s four elements create the foundation for a learning community and form part of an overall enabling transition pedagogy. In addition, Tinto emphasises that learning communities “begin with a kind of co-registration or block scheduling that enables students to take courses together, rather than apart” (2003, p. 1). The intensive nature of *Sprint* (five full days per week for four weeks) combined with the same tutors, lecturers and tutorial group aided this togetherness. The students actively co-owned and co-created the *Sprint* culture, a culture which aimed to reduce “feelings of vulnerability” and to encourage “the development of learner identities” (Cocks & Stokes, 2013, p. 27-28).

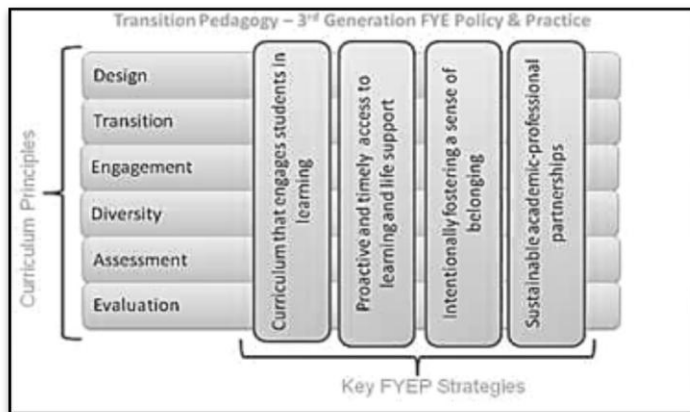
Learning communities are of significant importance for enabling students who are often dislocated not just from university culture but the wider culture of education. As Vygotsky’s (1978) notes “culture” plays a significant role in a student’s engagement with the learning process. While Vygotsky’s notion refers largely to the culture that students come from, it is recognised that this is also true regarding the understanding of the culture that they are entering. It is in these learning communities or communities of practice where the university culture is demystified, but also where students learn *how* to learn and build aspiration i.e. learn that they *can* learn. A successful learning community is informed by and informs enabling pedagogy. It often does not simply acculturate the student but also cause a cultural shift regarding feelings towards education and a reshaping of their “identity” (Lane & Sharp, 2014). As Lane and Sharp (2014, p. 67) acknowledge “students” inclusion in a supportive community can improve both self-esteem and self-efficacy which can result in higher achievements leading to student satisfaction and retention”. The extensive research into learning communities supports this notion, and suggests that the connectedness found within these spaces correlates with retention in first year of university (Kift et al., 2010; Krause, 2005; Tinto, 1997). While the intensive nature and structure of the *Sprint* timetable enabled an ‘in it together’ attitude, it was also through the intentional construction and delivery of a transition pedagogy that fostered connectedness with peers and academics, as well as the development of passionate learner identities.

### **Engaging Students: Creating an Enabling Transition Pedagogy**

Kift and Nelson have written extensively on the importance of an institution-wide “transition pedagogy” for first year university students and the links between effective transition pedagogy and retention (Kift & Nelson, 2005). They suggest that it is the responsibility of the institution and staff to create the conditions for ‘engagement’ to occur (Kift, Nelson & Clarke, 2010, p. 2). Their belief is that a transition pedagogy ‘has the optimal capacity to

deliver an integrated and holistic first year experience (FYE), when intentionally designed first year curriculum is harnessed to mediate the learning experiences of diverse commencing cohorts' (2010, p. 2). We recognise that one of the roles of enabling programs is to acculturate students into the university community, so while they may not be as extensive or contain as much curriculum as first year, they would benefit from such an approach.

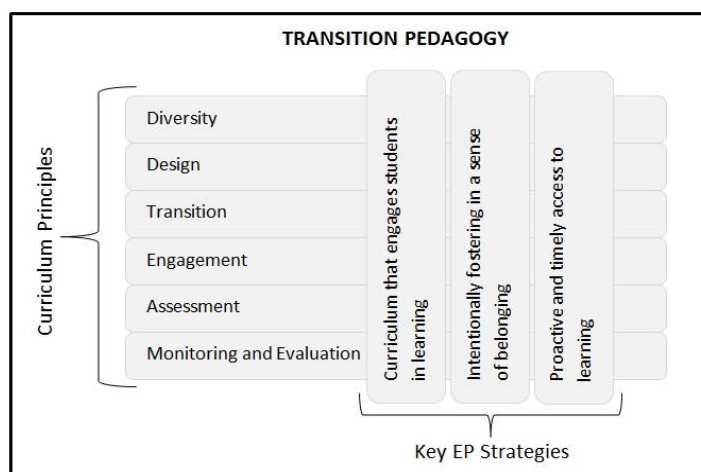
**Figure 1: Transition Pedagogy (Nelson, Creagh, Kift & Clarke, 2014, p. 10)**



For this reason we created an enabling transition pedagogy that is based around the Nelson, et al (2014) model (Figure 1). As shown in Figure 1.1, we have reordered and applied the same curriculum principles of: diversity, design, transition, engagement, assessment, and evaluation see Figure 1.1). However, the key FYE program (FYEP) strategies<sup>2</sup> have been modified to address the needs of an enabling cohort. Our enabling transition pedagogy strategies (which are informed by the principles) are:

- Curriculum that engages students in learning
- Intentionally fostering a sense of belonging
- Proactive and timely access to learning support

**Figure 1.1: Transition Pedagogy for enabling cohorts**



<sup>2</sup> This is with the view that students will receive a first year transition pedagogy, once they achieve university entrance, and commence their undergraduate program.

Given the heavy focus on engagement, learning and belonging, it was decided that Tinto’s (2011) four elements for success in creating a learning community would underpin our enabling transition pedagogical model. Below is a case study of how this enabling transition pedagogy was applied to the *Sprint* enabling program.

### ***OnTrack Sprint Case Study***

#### ***Diversity: Understanding the Cohort***

Recognising and fulfilling the diverse needs of enabling students can be difficult due to the vast differences in educational backgrounds, aspirations, interests and motivations of the learners, particularly in “open” entry enabling models (Hodges et al., 2013; Lisciandro & Gibbs, 2014). Moreover, this is further complicated by diverse demographic, personal and emotional factors which typically characterise enabling cohorts (Gale & Parker, 2013; Gale & Tranter, 2011). However, it has been noted that when entry criteria become increasingly exclusive in enabling programs, the degree of student homogeneity also increases (Hodges et al., 2013). *Sprint* can be recognised as a case study for successfully targeting a specific cohort, and constructing an enabling curriculum around their needs. Table 1 describes the demographic and academic characteristics of the *Sprint* cohort.

**Table 1: Demographic and academic characteristics of students that were enrolled on Day 1 of the *Sprint* pilot**

Mean age, years <sup>1</sup>	17.2 (0.4)
Gender, female	12/26 (46%)
Low socioeconomic standing (SES) postcode <sup>2</sup>	6/26 (23%)
Rural or remote area postcode <sup>3</sup>	4/26 (15%)
Aboriginal or Torres Strait Islander	1/26 (4%)
Non-English Speaking Background	1/26 (4%)
Humanitarian Entrance Background	0/26 (0%)
Mean ATAR score including RISE <sup>1</sup>	65.6 (4.1)
Mean ATAR score excluding RISE <sup>1</sup>	62.5 (5.2)
Received ATAR RISE	8/26 (31%)

<sup>1</sup> Continuous variables are expressed as mean with standard deviation shown in brackets

<sup>2</sup> Low SES measure is based on the postcodes in the lowest quartile of the population according to the 2011 SEIFA Education and Occupation Index (Australian Government, 2013)

<sup>3</sup> Residing postcode is categorised in accordance with the Australian Statistical Geography Standard (ASGS) Remoteness Areas classification 2011 (ABS, 2013)

Analysis of the cohort revealed a diverse range of backgrounds, for example, more than one-fifth of students were from low SES backgrounds, and 15% were from rural or remote areas (Table 1). However, all students were either Australian citizens or residents, aged between 17 and 18 years, with a fairly even gender balance (46% female). The mean ATAR score of students enrolling in *Sprint* was 65.6, with 31% of the cohort eligible for RISE (mean ATAR

score excluding RISE was 62.5). When discussing the principle of *diversity* Nelson et al. (2014) write “curriculum design should recognise that students have special learning needs by reason of their social, cultural and academic transition” (2014, p.11). Thus it was important to recognise that, the *Sprint* cohort was homogenous in age, educational attainment and prior academic achievement. They also shared the aspirational goal to gain access to university and this in turn manifested in a shared motivational spirit. Time spent understanding the cohort enabled the team to create an experience that targeted learner needs. It allowed for a “zone of proximal development” (Vygotsky, 1978) to be identified and this in turn set the boundaries for a curriculum to be developed that was “accessible” and “inclusive, of all students” (Nelson et al., 2014, p.11).

### ***Design***

“Intentional design” is also recognised as a core curriculum principle for a transitional pedagogy. Nelson et al. (2014) suggest that “curriculum design and delivery should be student- focused, explicit and relevant in providing the foundation and scaffolding necessary for first year learning success” (2014, p. 12). Due to the limited course length and homogenous nature of the cohort, curriculum design choices were made with the aim of delivering a highly structured program, unified by a single content theme, with skills developed through scaffolded assessments and timely feedback. Powter (2013) asserts the need for enabling courses to maximize the value of lectures and to build on the utility of tutorials. Bransford, Brown, and Cocking (2000) further suggests high quality learning provides structure, deep understanding, reasoning, feedback, time, repetition and multiple perspectives. Similarly Kift and Nelson suggest that this “intentional” (Kift et al., 2010) curriculum for first year students eases their transition into first year from a range of different environments. These ideas were applied to the *Sprint* curriculum; every point of the curriculum from tutorial activity to lecture to assessment and feedback was constructively aligned to ensure effective practice.

The curriculum-planning model *Understanding by Design* (McTighe & Wiggins, 2004; Wiggins & McTighe, 2004) was employed as it encourages the designer to consider multiple elements in a pressured learning environment. This model encourages the designer to consider a unifying concept or theme. The unifying theme “Positive Social Change” was chosen to engage students on multiple levels. The four-week focus on a single concept allowed for the lectures to build underpinning change theories and to explore the concept of change from multiple perspectives. This was invaluable for the development of higher order, critical thinking skills. Ramsden (2003, p. 128) states “if course objectives concentrate largely on procedures and facts, students inevitably receive the message that higher order outcomes are less important”. This approach was appreciated as indicated in student responses: “I found the best aspects of this unit to be the way skills were taught by the lecturers through the lectures and tutorials” (Respondent 18 EQU070 Student Survey, 2015).

### ***Transition***

The explicit aim of our enabling pedagogy was to transition students from feeling like a cultural outsider to a cultural insider within the university (Bizzell, 1986; Northedge, 2003). As Nelson et al. (2014) state, a transitional pedagogy should ‘transition [students] *from* their

previous educational experience *to* the nature of learning in higher education and learning in their discipline as part of their lifelong learning (2014, p. 12). The development of a community of learners in *Sprint* was viewed as crucial part of this transition. Tinto writes that learning communities not only ‘promote cognitive development’ but also give them ‘an appreciation for the many ways in which one’s knowing is enhanced when other voices are part of the learning experience (2011, p. 5). To commence the process of community building, the coordinators firstly acknowledged the shared experience of the cohort (missing out on the appropriate ATAR) and welcomed them into a space where they could achieve their common goal of accessing university. For example on day one of *Sprint* the lecturer showed a scene from *Monsters Inc.* to begin the first lecture, and then continued the lecture with the following.

Lecturer: ‘I know that most of you didn’t think that you would be sitting in a classroom in your school holidays. I imagine you are sitting there now with feelings of anger, frustration and trepidation about the weeks that will follow. So I’d like you to acknowledge this by everyone letting out a giant scream’

Student ‘You have to do it first’

Lecturer: ‘Sure....AAAAAAAAAAAAAGH...ok now everyone on the count of three. LET OUT YOUR SCARIES’

[Apprehensive giggles]

Lecturer: ‘...1...2...3’

Everyone ‘AAAAAAAAAAAAAGH’

Lecturer: ‘Excellent. Now that we’ve got that out... let’s get on with it...welcome to *Sprint*, welcome to university’.

The lecturer purposefully used humour in this example to humanise her position as an approachable academic, to address the inevitable anxiety of commencing university and to initiate the development of community connections. Research into the use of humour in lectures suggests that it has the ability to create “group cohesion and solidarity and heightens audience attentiveness” (Nesi, 2012, p. 81). Humour was a technique that was consciously and regularly used throughout the unit to build community, this was underpinned by research that shows humour has the potential to “enhance students’ affective learning, create an enjoyable classroom atmosphere, lessen students’ anxiety, increase affect and liking for the instructor and the course, and facilitate students’ willingness to participate in in-class and out- of-class communication with instructors” (Zhang, 2005, p. 113). One student noted that: “*On track sprint was probably one of the best experiences I have possibly had, Ange supported us through out and helped tremendously with my nerves*” (Respondent 12 EQU070 Student Survey, 2015).

Storytelling was used to share the academic’s “authentic self” which enabled academic barriers between the cohort and the academic (representative of “the university”) to dissolve and the community to grow. Woodhouse writes on the importance of storytelling in teaching in a higher education context. He notes,

The reasons for its importance, the ways in which it has developed, the questions it poses of reality and social relations, the problems it may help to resolve, and even our own struggles to learn and teach it. The purpose of both these aspects of storytelling is to "humanize" the process of learning by appealing to the students'

imagination, so that they can consider themselves active participants in the pursuit of knowledge and feel empowered to tell stories about their own experience and deepen their understanding of the subject (2011, p. 212).

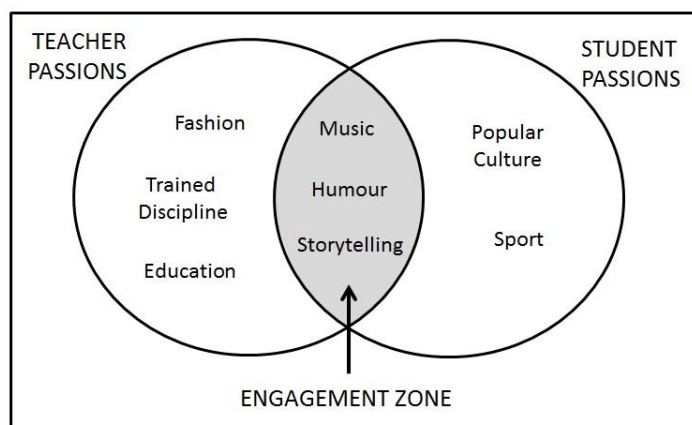
The academics also drew on their personal examples and anecdotes such as “I was slow to come out of the adolescent learner fog myself”, “I only got 60 for my classes”, “I started in a science degree no one wanted to do and had to work to get a 75% in statistics in order to be able to transfer to the degree that I wanted”. This form of storytelling is used to normalise different learning journeys and validate the student’s presence in the learning space. *Sprint* students commented on the “welcoming environment” (Respondent 12 EQU070 Student Survey, 2015) and “the relationships between the tutors [sic] and the students as well as the support given” (Respondent 14 EQU070 Student Surveys, SB7, 2015). Tinto writes that in a successful classroom that support is aligned with classroom demands (2011, p. 3). In *Sprint* a “model, coach, fly” was used to provide staged support, as the cohort transitioned through the program. For example *Sprint* students were “coached” through reflective practice in daily critical reading activities, reflecting on the feedback from activities or tasks, and asked how they were going to apply this. In the final week as students were focussing on their final large submission, “reflection” in their work became referred to, as a skill that they now understood and could apply. In an interview with Murdoch University’s media team one *Sprint* student stated: “the tutors have been an incredible support to all of us and have taught us how to embrace independent learning. We’ve learnt to look at different perspectives and arguments in a particular topic and how to present these in our academic writing” (Murdoch University, 2015). Academic writing was a key learning goal for *Sprint* and was taught through innovative and engaging learning activities consciously scaffolding students toward their learning goals. The “model, coach fly” approach was used to transition the students from learning partners to the independent learners ready to tackle university study.

### **Engagement**

Research notes the significance of student engagement in improving retention and academic success (Kift et al., 2010; Lisciandro & Gibbs, In-press; Tinto, 1997). Revell and Wainwright (2009) focus their attention on the role of active learning within the creation of “unmissable lectures” and suggest that student attention and comprehension is sustained if the lectures are broken up with activities, breaks and opportunities where the students are able to “participate in the learning process”. This is aligned with the social constructivist idea that “learning occurs by means of peer interaction (collaboration), student ownership of the curriculum and educational experiences that are authentic to the students” (Azzarito & Ennis, 2003; Bay, Bageci, & Cetin, 2012; Herrington & Oliver, 2000). By finding common interests a learning space can be built that is both engaging and safe. Nelson et al. (2014, p. 13) state that “first year curriculum should enact an engaging and involving curriculum pedagogy and should enable active and collaborative learning”. From this understanding emerged our theory of the engagement zone which is a learning tool and community building approach (see Figure 2).



**Figure 2: Engagement Zone**



The engagement zone (Figure 2) is a place of shared interest between the teacher and students; for this particular cohort this was music, humour and storytelling.

These elements were applied in different ways to different modes of teaching – lectures, tutorials and assignments. The engagement zone used the students’ current passions/knowledge to acculturate them into a space of the unknown. These students were potentially disenfranchised by previous learning experiences, and the zone empowered them, to be ‘involved’ (Tinto, 2011, p. 3). The engagement zone not only allows the “partners” to share their passions, but also allowed the academics to use these “passions” to create new cognitive pegs for the students to hang academic knowledge on. The *Sprint* engagement zone was built through constant dialogue and student interaction. Popular cultural texts and themes that resonated with the students’ lives outside of the classroom were embedded in lectures and tutorial activities to foster discussion, encourage critique and build skills. For example, the *Flight of the Conchords*’s “Hiphopotamus Vs Rhymenoceros” was used as a point of analysis at the beginning of a lecture on academic tone and writing. This lecture enabled students to become more conscious of their academic writing by analysing the language patterns of a popular written and spoken sub-language - rap - and then invited students to analyse academic language with the same techniques in order to borrow the phrasing and ‘pimp’ their language. This was then referred back to in writing activities in the tutorials where the academics could say, “you need to pimp it”. Activities such as these enabled us to build an engaged learning community, which is one of the principles of Nelson et al.’s transition pedagogy (2014) and also Tinto’s (2011) framework. The engagement zone worked to keep students motivated and engaged with discussions at the difficult times within the intensive program, when they were grappling with new ideas and skills.

### **Assessment**

In alignment with the Nelson et al. (2014) model, an enabling transition pedagogy “should assist students to make a successful transition to assessment in higher education, while assessment should increase in complexity from the first to later years of curriculum design” (2014, p. 13). For *Sprint* it was considered that assessments needed to be rich, with formative and summative tasks that invited the student to “rise” (Tinto, 2011). Nelson et al. (2014, p. 12) also write that curriculum should provide “formative evaluations of their work

early in their program of study to aid their learning and to provide feedback to both students and staff on student progress and achievement”. *Sprint* assessments were timed appropriately to provide feed forward growth and contain clear expectations linked to outcomes (Gibbs, 1999). Hattie (1999) advises that achievement is enhanced when teachers set and communicate appropriate, specific and challenging goals, and most vitally, provide effective feedback. Assessment and feedback is also one of Tinto’s four elements, where “frequent feedback” is recognised as aiding student success particularly in their first year of study (2001, p. 3).

Assessment rubrics were developed to not only act as clear models for feedback, but also work as an instructional teaching tool (Andrade, 2005). These were used to feed-forward and broken down in classes. Students were asked where they thought a 60% (the *Sprint* passing grade) was, which skills (as outlined in the rubric) were needed to achieve this and, using the feedback that they had already received, what skills they needed to develop.

### ***Monitoring and Evaluation***

Clarity around tasks is also noted by Tinto as one of the primary elements of success in the classroom (2011, p. 3). Research suggests that clarity around goals improves learning (Ramsden, 2003; Tinto, 2011). It is for this reason that it is important to monitor the students understanding of core learning goals, in order to allow opportunity for the students to “rise” (Tinto, 2011, p. 3) to the task. The *Sprint* goals were explicitly reiterated to students during learning activities and in the learning materials, and monitored for understanding. The team understood the importance of modelling good communication practice to support the students understanding of the course material. For the first week, the unit coordinators sent “how are you travelling?” emails after the students had left for the day. These check-ins and emails were used for monitoring and to proactively offer support, as well as providing a reflective tool to clarify that course objectives had been understood in a non-threatening manner. The modelling was explicitly demonstrated to the students, by starting each check-in with: “After reflecting on your feedback we’re going to spend a bit more time focussing on...” The time spent reflecting on the activities and ensuring that the learning objectives were clear was highlighted in the program survey, with students noting: “*Lecturers (tutors) were very clear, precise and emphasizes the main points of the unit*” (Respondent 1 EQU070 Student Surveys, SB7, 2015), and that there were “*comprehensive explanations of how we were expected to complete a task as well as the transition from cognitive to associative learning levels on a specific topic*” (Respondent 6 EQU070 Student Surveys, SB7, 2015). Nelson et al.’s (2014, p. 13) suggest that “curriculum should also have strategies embedded to monitor all students” engagement in their learning and to identify and intervene in a timely way with students at risk of not succeeding or fully achieving desired learning outcomes”. These check-ins not only served to provide clarity to ensure that the students were clear on objectives, but also to build the rapport with the students and to model the reflective process.

The program has also been evaluated by students, the course designers and tutors, to not only improve the program, but recognise the strengths and weaknesses of the transition pedagogy. The pedagogical model used in *Sprint* was also evaluated by Murdoch University itself resulting in a Vice Chancellor’s Citation For Excellence in Enhancing Learning 2016 award

for “innovative and authentic approaches to teaching that influences, motivates and inspires enabling students in their transition to university study” (Murdoch University, 2016).

### **Outcomes of *Sprint* pilot**

The outcomes achieved by students enrolled in the *Sprint* pilot pre-semester one, 2015 were analysed. Student retention, success and academic achievement in the *Sprint* course, as well as student progression to undergraduate course enrolment and academic achievement during the first semester of undergraduate study for *Sprint*-pathway students is described below. Lastly, student feedback was also considered as a measure of the success of the pilot. Analysis and use of student data was approved by the Murdoch University Human Research Ethics Committee (Approval no. 2014/112).

### ***Student retention, success and progression***

The student retention rate in the *Sprint* program, defined as the proportion of students who were still enrolled at the end of the course compared to those who started the program (i.e. enrolled on Day 1) was 92% (24/26). Those who exited the program early (2/26) did so due to an alternative opportunity arising for direct entrance to university (e.g. second round university offers or STAT test). Due to the timing of the *Sprint* course (directly after release of first round university offers), alternative opportunities for direct university entrance is likely to continue to be a primary factor influencing attrition in future.

For students who were retained until the end of the program, all (24/24) met the academic requirements of the *Sprint* course (a 60% overall pass rate), and were therefore successful in receiving an offer for undergraduate study at Murdoch University. 96% (23/24) of successful *Sprint* completers took up their offer by either actively enrolling (21/24) in undergraduate study in Semester 1, 2015, or accepting and deferring their offer (2/24). All of these students were still enrolled at Murdoch University in Semester 2, 2015. The Bachelor degree enrolments, as of the Semester 2, 2015 Higher Education Contribution Scheme (HECS) census date is shown in Table 2 below.

**Table 2: Bachelor degree enrolments– at Week 4, Semester 2, 2015**

<b>Undergraduate degree program</b>	<b>Proportion (%) of enrolled <i>Sprint</i>-pathway students</b>
Bachelor of Arts	8/23 (34.8%)
Bachelor of Science	12/23 (52.2%)
Bachelor of Business	2/23 (8.7%)
Bachelor of Education	1/23 (4.3%)

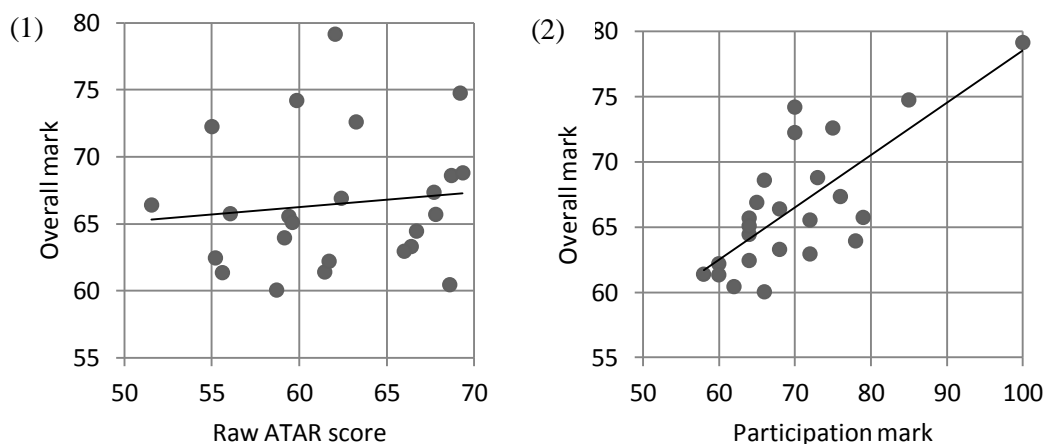
Notably, more than half of the cohort elected to study a Bachelor of Science degree, and approximately a third entered a Bachelor of Arts degree (Table 2).

### ***Academic Achievement in OnTrack Sprint program***

The average overall mark achieved in *Sprint* course assessment was 66.5% (SD = 5%; minimum mark = 60%, maximum mark = 79%). Notably, there was no correlation found between the student’s raw ATAR scores and their academic performance in *Sprint* (Figure 3; Spearman rho correlation coefficient = 0.242, p=0.255, n =24). There was however, a strong

correlation observed between participation mark awarded and overall level of academic achievement during the *Sprint* course (Figure 3; Spearman rho correlation coefficient = 0.679,  $p < 0.001$ ,  $n = 24$ ).

**Figure 3: Relationship between (1) raw ATAR score or (2) *Sprint* participation mark, and overall mark achieved in *Sprint* course**



Participation in the program is likely to be a surrogate marker of level of student engagement, both with the curriculum and the learning community. Overall, this data suggests that level of student engagement, but not prior academic achievement, is a strong predictor of student success in this enabling program.

#### ***Academic Achievement in first semester of undergraduate study***

All *Sprint* students that took up their offer by actively enrolling in an undergraduate course in Semester 1, 2015 ( $n=21$ ) enrolled on a full time basis (i.e. 3 or 4 units, equivalent to 9 or 12 credit points, respectively). Following the release of Semester 1, 2015 academic results, it was found that 90% (19/21) of *Sprint* students had passed at least half of the units that they had attempted in their first semester of undergraduate study; and 42% of these students (8/19) achieved a 100% success rate in the number of units passed versus attempted. Furthermore, the mean Grade Point Average (GPA) was 1.22 (SD = 0.57), corresponding to a mean Weighted Average Mark of 55.8 (SD = 7) across various first year units attempted. Therefore, *Sprint* students achieved pass grades, on average, in their first semester of study in their chosen undergraduate course.

Most students who started their degree in Semester 1, 2015 enrolled in a compulsory transition unit during their first semester of study ( $n = 16$ ). For students enrolled in a Bachelor of Arts, this unit was called “Academic Learning Skills” and for students enrolling in a Bachelor of Science, the unit was called “Building Blocks for Science Students”. The academic performance of *Sprint* students in these Transition units was studied (Table 3).

**Table 3: Comparison of academic achievement in Transition units between *Sprint*-pathway students and the wider cohort**

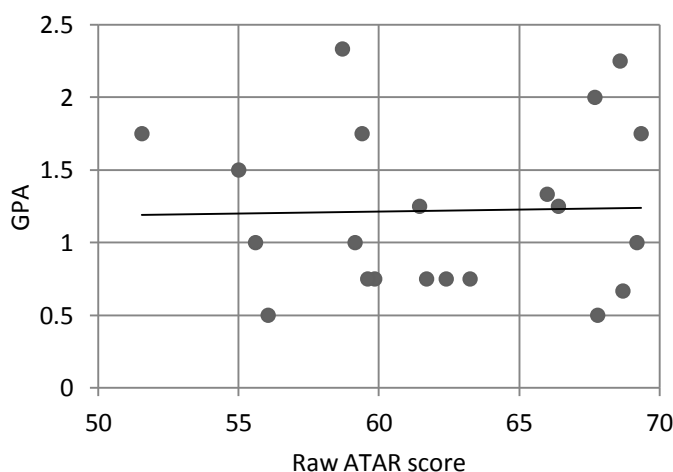
<i>Performance in Transition unit “Building Blocks for Science Students”</i>				
Cohort	N	Mean Mark achieved (%)	SD (%)	p-value*
<i>Sprint</i> -pathway students	9	58.9	6.4	0.102
All students	1059	61.5	19.0	
<i>Performance in Transition unit “Academic Learning Skills”</i>				
Cohort	N	Mean Mark achieved (%)	SD (%)	p-value*
<i>Sprint</i> -pathway students	7	57.6	14.2	0.810
All students	310	56.1	19.5	

\*Two-sided p-value derived from Mann-Whitney U test

There was no significant difference in the average mark achieved by *Sprint*-pathway students and the unit average for all enrolled students. Despite the small sample size, these findings suggest that *Sprint* students achieved on-par with the wider cohort in these first year Transition units. Further investigation using a larger sample size is needed in future.

Next, we set out to determine whether ATAR score was related to academic achievement (GPA) of *Sprint* students in their first semester of university (Figure 4).

**Figure 4: No relationship between raw ATAR score and GPA after first semester of university study for *Sprint*-pathway students**



Raw ATAR score was not correlated with GPA following the first semester of university for students who engaged with the *Sprint* program (Figure 4; Spearman rho correlation coefficient = -0.058,  $p=0.804$ ,  $n = 21$ ). This implies that prior educational achievement is not necessarily predictive of achievement at university for this cohort.

### ***Student Response to Sprint Course***

There was a 100% response rate ( $n=24$ ) to the anonymous student survey administered by the university’s online survey system at the conclusion of the *Sprint* course. Quantitative findings indicate 100% student satisfaction in all aspects of the program including “the level of support from staff”, “feedback on marked work”, assessment tasks that tested an “understanding of the subject area”, and “learning activities (that) aligned with learning objectives.” Moreover, the mean student rating for the level of satisfaction in the overall

quality of the program was 5.79 (SD = 0.41), considerably higher the university-wide average of 4.75 (SD=1.4) (OSQA, 2015).

Qualitative responses point towards a highly impactful learning experience for students. For example, one respondent commented: “*I learnt more in this [4-week] course than I did during my English sessions at highschool*” (Respondent 9 EQU070 Student Surveys, SB7, 2015), whilst another remarked “*Sprint was probably one of the best experiences I have possibly had*” (Respondent 22 EQU070 Student Surveys, SB7, 2015).

## **Conclusion**

Altogether, the data on retention, success, progression and academic achievement, as well as student feedback garnered from the *Sprint* pilot suggests that this program is an appropriate enabler of both access and participation for this learner alliance. However, as this was the first iteration of the program which involved a small cohort that could only be tracked as far as their first semester of undergraduate study, the limitations of this data should be acknowledged. The retention and conversion of larger cohorts of future *OnTrack Sprint* students, as well as degree progression of current and future *Sprint* alumni, will need to be monitored in order to more comprehensively explore the student and course outcomes described here.

Participation and engagement appeared to be key elements determining the success of this program, and this was developed through building a solid learning community and informed by the specific nature of the cohort. Notably, future growth in *Sprint* enrolments may bring challenges, for example limiting the possibility for as many “elevator” conversations between the lecturers and tutors for adaptive and quick changes to curriculum and learning activities in real-time. Additionally, if the cohort itself changes or becomes more heterogeneous in nature, this would require the unit designers to revisit the course design process to ensure it continues to meet the needs of the cohort. By applying the ethos (“understanding the learner”) and methodology (“understanding by design”) described here, the content can continue to be adapted based on learner needs.

The development of a transition pedagogy that understood the learner was central to curriculum design and the employment of appropriate pedagogies. This in turn led to the creation of a positive learning community, successful learning relationships and inspired learner identities. The result is both the development of a model for transition in the enabling space, as well as an emerging enabling program that rises to the challenge of preparing talented, aspiring students who would otherwise have missed the opportunity to gain access to university via traditional means.

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