Making the wrong study choice can lead to dis-satisfaction, lack of engagement and ultimately withdrawal from university study. The research project entitled: "What should I study? Improving tertiary pathways by improving support for prospective students" has explored the ways in which Year 12 students decide what to study and how they are supported by universities and secondary schools as they make this decision. Findings suggest that they need to understand more about their curriculum choices during the application process in order to make more suitable enrolment choices. Examining this research in terms of how Year 12 students learn about higher education curriculum options will facilitate a discussion about how study choice research can inform curriculum transformation.

**Keywords:** Student Recruitment, Student Engagement, Higher Education

**Introduction**

Universities work hard to shepherd newly admitted students into their first year of studies with enrolment support, orientation, and other intentionally-designed student services. But what if the student has made the wrong choice of degree program? While uncertainty can be a critical part of a person's learning journey, an unsuitable choice can lead to dis-satisfaction, lack of engagement and ultimately withdrawal from university study (James, Krause & Jennings, 2010; Long, Ferrier & Heagney, 2006; Simpson, 2004). Notably, it is during Year 12 – prior to enrolment in university – that students “struggle to find out what they really want and what would be suitable for them” (Holmegaard, Ulriksen & Madsen, 2014, p. 36), and this struggle can extend into their first-year experience at university.

In a recent media release, Australian Education Minister Simon Birmingham responded to a new report that revealed disappointing attainment rates at many Australian universities: “We’ve heard too many stories about students who have changed courses, dropped out because
they made the wrong choices about what to study.” He further urged prospective students “to undertake careful research before accepting uni offers so they ‘make the right choice, first time’” (Government of Australia, 2017).

At present, universities and government work together to deliver outreach programs that support primary and secondary students to determine whether to study. University recruitment activities help students as they decide what and where to study, but are inherently competitive and these activities normally showcase where to study. Admissions centres function administratively to support the application process. Secondary schools are positioned to support this choice process as well as to provide career development support for a significant breadth of post-school options for Year 12 students. The missing link in this system is an understanding of how Year 12 students decide what to study at university, which is the focus of our research. Our initial findings suggest that Year 12 students need to understand more about their curriculum choices during the application process in order to make suitable enrolment choices.

Curriculum transformation aims to “optimise the curriculum as a framework for student learning and experience rather than as simply an organising framework for disciplinary knowledge” (“Curriculum Transformation@UOW,” 2017). An approach used by some universities to optimise curriculum and foster engagement is transition pedagogy (Nelson, Creagh, Kift & Clarke, 2014). The principles of this pedagogy have been used to expand curriculum, connecting students with both university culture and curriculum to “enable the smooth supported shift” (O'Donnell, Wallace, Melano, Lawson, & Leinonen, 2015, p. 76) from Year 12 to higher education. Similarly, purposeful learning designed for prospective students that relate to their curriculum options and choices could optimise engagement and improve the transition of university students as they enter their first year of studies. We contend that study choice is curriculum choice.

**College Choice, Enrolment Choice and Career Decision-making**

The model of the college choice process, refined by Hossler and Gallagher in 1987, offers a useful description of the decision-making behaviour of prospective university students. The model, which could more aptly be named Enrolment Choice to fit the Australian context, describes the process undertaken by high school students in three phases: Predisposition (Years 7-9), Search (Years 10-12), and Select (Years 11-12) (Hossler and Gallagher, 1987). Predisposition refers to the earliest phase when a student establishes whether to engage in further education after high school. The Search phase describes the stage during which a prospective student explores and seeks information about educational options, gathering and investigating information about tertiary institutions (Bergerson, 2009). It is believed that during this phase students decide upon a set of study options and institutions from which to refine their selection. The Select stage is essentially about deciding finally on a tertiary institution in which to enrol.

Student Enrolment Choice research seeks to understand the behaviours of prospective students and what influences these. However, studies are largely focussed on the consumer behaviour of students or aim to refine university strategy to positively influence student enrolment (Ali and Miller, 2007; Hossler, Schmit & Vesper, 1999). More recently, the process has been considered from a sociological standpoint to examine the impact of student characteristics on the process. It is well known, as Bergerson (2009) observes, that issues of access and equity complicate the student enrolment choice process. However, the existing body of research
reflects time and again a focus, not on program selection, but on the choice of university or the characteristics that students consider when making enrolment decisions (Ali and Miller, 2007; Chapman, 1986; Harden, Davis, & Mengerson, 2014; James, Baldwin & McInnes, 1999; Szekeres, 2010). Very few studies have addressed choice of program as distinct from choice of institution, although these are often closely linked (James et al., 1999).

In order to expand our understanding of the “Search” phase, we needed to delve more deeply into the actual study choice process. Most of the research related to this stage is bound within the field of career development and career decision making. A few studies have looked more closely at program selection but these are framed by career decision-making theory or psychology (Borg, Bright & Pryor, 2014, Holmegaard et al., 2014; Jung, 2013a, 2013b; Simpson, 2004). A divide in the research has thus far prevented a complete and practical understanding about how Year 12 students decide what to study within the university context.

Drawing from a solid research base and several accepted models of career exploration and decision making, a key Belgian study by Germeij and Verschueren (2006) designed and tested the Study Choice Task Inventory (SCTI). This inventory probes and distinguishes six central career decisional tasks, adapted to more closely represent the process of choosing a program of study at university: orientation to choice, self-exploratory behaviour, broad exploratory behaviour of the environment, in-depth exploratory behaviour of the environment, decisional status, and commitment (Germeij & Verschueren, 2006, p. 452). Figure 1 illustrates three core elements (Glorioso, 2011) and other related tasks that characterise the Study Choice Process.

**Figure 1: Study Choice Tasks**

Our research purports that Study Choice is a distinct process that intersects with both career decision-making and enrolment choice in very significant ways. It also critically connects with Retention, Transition and Curriculum Transformation.

**Methodology**

The research was designed using a pragmatic approach, employing a multiple methods design, to examine the Year 12 Student Study Choice process within South Australia (SA). The SA context provides an efficient research setting as it involves a smaller populace, has limited
university participants and is largely concentrated within a single city. The setting therefore consists of public and private secondary schools in SA and the three Adelaide-based universities: University of South Australia, University of Adelaide and Flinders University. Figure 2 illustrates the research design, in answer to the following research questions:
1. How are Year 12 students supported by universities, secondary schools and government agencies?
2. How do Year 12 students decide what to study?
3. What do they need and want as they make decisions about what to study?
4. Based on the first three questions, what needs to change?

Study One and Two – Government Agencies and University Document Review
A qualitative descriptive study was conducted using document review of key websites/pages and critical publications from relevant agencies and from each university. Documents were selected based on what was publically visible and available to the public from the internet. Study One’s government agencies included the national Department of Education and Training, and the South Australian Certificate of Education (SACE) Board. The three publically-funded SA universities were the focus of Study Two. Data analysis was undertaken using a directed content analysis, and data was categorised according to elements of study choice, college choice and career development learning, derived from theory and current research in related fields.

Study Two – Interviews with University Staff
For Study Two, interviews were also conducted with 12 professional staff across the three universities using a purposive sample of university staff members. Participants were selected from those employee positions committed to providing services and support to Year 12 students prior to enrolment, during the recruitment/application period. Semi-structured interviews were conducted one-on-one at each interviewee's university, and seven questions were provided
prior to the interview. The interviews were audio recorded and the transcription was done verbatim. The data was analysed using directed and traditional content analysis.

**Study Three – Secondary School Survey and Interviews**
The secondary school sector was the subject of Study Three. A mixed methods convergent study design was employed. The 30 questions were designed to identify the ways that staff provided support for Year 12 students. Questions were about what resources they use and how they engage with students and universities respectively, with some qualitative questions about difficulties, challenges in supporting students, and asking their opinion of what students need and want. Of the 225 schools that were sent the survey, 28 schools participated, with 223 total respondents.

Following the survey, interviews were held with 12 secondary school staff and teachers, in order to further explore support services available to and engagement with Year 12 students at individual schools. The interviewees were volunteers who, at the end of the survey, responded positively to an invitation to contribute further to the research. Six questions were used to guide the semi-structured interviews that took place at each participant's respective school, face-to-face. The interviews were audio recorded and transcribed verbatim. Data analysis was done using the same method as the Study Two interviews.

**Study Four – Year 12 Student Survey**
The survey created for the Year 12 Student Study was initially structured around the Study Choice Task Inventory (SCTI) questionnaire (Germeij & Verschueren, 2006) but refined for the Australian context. A number of additional questions were generated to clarify some of the themes and ideas identified in the Review of Practice, such as When did you decide what to study? How difficult or easy is deciding what to study? How ready are you to make a decision? What type of support would you prefer? Do you think you have explored enough? and What would have helped you make a decision about what to study? A total of 54 questions made up the survey, including ten that covered demographic information and student background.

To distribute the survey, email invitations were sent directly to individual staff in career advisor-like positions, to all the schools in SA. Approximately 67 schools out of 210 agreed to participate, with a combined enrolment of approximately 7500 students in Year 12. The survey link was distributed to participating career advisors around the time of the early application deadline for submission to the state's admissions centre. Schools distributed the survey link to Year 12 students in a variety of ways, according to individual schools' resources and ethics protocols. Participation in the survey required the administration of a fairly cumbersome consent process on the part of both schools and students, and it was also a fairly lengthy survey. The resulting 21% response rate, with 1600 respondents, has provided us with some very rich data that is still being analysed but preliminary findings are discussed below. Phase two of this study – student interviews – is still underway at the time of writing.

**How do Year 12 Students learn about curriculum options at universities?**

**Government resources**
The two tasks outlined in the SCTI that respond most clearly to learning about higher education curriculum options are: broad exploration of environment and in-depth exploration of environment. At the national level, government does not generally provide specific resources that inform these two tasks in relation to deciding what program to study. At the broadest level, national government offers both policy, and research that informs policy, which indirectly
supports the study choice process, with the Australian Blueprint for Career Development (Government of Australia, 2017) as an important example. At the state level, government contributes similarly via curriculum and relevant policy but does not produce tools, information or support directly related to study choice tasks and learning about curriculum options.

The resources that are directly usable by Year 12 students include MySkills (Government of Australia, 2017) for vocational training options, and Job Outlook (Government of Australia, 2017) for labour market information. The Quality Indicators for Learning and Teaching website (QILT) provides information about study areas but is particularly oriented to selecting a university, and presents a format that allows for comparison between institutions. Perhaps the most directly supportive resource is via the myfuture website (Education Services Australia, 2017). This site is produced by an agency on behalf of the Australian government that provides extensive career information and career exploration resources. It is used by over 60% of the secondary staff we surveyed in their work with Year 12 students. This website also houses the Career Bullseye Poster series (Government of Australia, 2017), which features an interactive approach that links school subjects to career possibilities, covering most facets of career decision making but not specifically the study choice process.

**University engagement with schools and Year 12 students**

A key finding from the Review of Practice in our study is that it is the exclusive role of individual universities to provide and deliver detailed, explicit and accurate program information about their specific university's curriculum options, in support of the study choice exploration of environment tasks. Universities also govern the South Australian Tertiary Admissions Centre (SATAC) that publishes a broad non-partisan overview of curriculum options and information however it more specifically supports the application process.

Each university provides information about their facilities, services, faculties programs and curriculum. Information is most commonly produced by a central marketing unit in concert with content experts (i.e. academic staff) with a unified approach and message, and consistency of format. Resources in the form of readable information are delivered via websites and through materials that are available electronically and in hard copy. Videos are also used to convey information to prospective students such as testimonials and personal stories of the journey and of successful attainment. Information could be described as layered in that some informational products provide only a broad overview of the university's features and curriculum options. Some resources, including university websites, offer up the full curriculum for prospective students to review.

Branding/marketing is infused in the mix of products and services that are provided by universities to high schools, but a critical goal is to provide accurate information to Year 12 students and secondary schools about options and opportunities within higher education. However, each university is perceived as offering similar and overlapping information that is fundamentally driven by marketing and university enrolment strategy. This competitive standpoint, though subtle, can sometimes be less inviting to secondary schools and can make it more difficult for students to understand the information that is provided.

Another important finding from the Review of Practice is that the opportunity to create and build relationships with Year 12 students - and convey information to them about their university and its curriculum - depends upon the university's relationship with the individual school. University staff, most often through a business unit that is structured to manage recruitment and relationships with prospective students, take great pride in offering personal
support to Year 12 students. Most secondary school staff indicated that presentations at their school and visits to the university campus were the most common way that universities engaged with them.

Each university offers à la carte and a suite of prescribed services for high schools that can be delivered at the high school or at the respective university: presentations, one-on-one advising appointments, evening information sessions for parents and students, or custom services can be requested. Whilst universities supply accurate information about curriculum that is publicly accessible and available, universities are mainly only able to access Year 12 students via secondary schools and their staff. This was expressed in the university interviews and is also reflected in the way that universities present and organise their recruitment information.

Access to Year 12 students however is not always easy to gain. Individual secondary schools determine to what degree they interact and engage with each university and every school forges its own relationship with each recruitment team. 95% of respondents confirmed that they have a relationship with all three universities, and most schools will admit at least one university to present at the school, either during school hours or by organising a career evening each year. Findings from the survey and interviews with secondary school staff also suggest that each school, whether public, independent, catholic, rural, suburban or city, has their own approach and system for engaging with their Year 12 students and for supporting the study choice process.

Some schools' advisors consult individually with every student as a mandatory discussion, others invite students to consult as required. Information sessions for students are held at lunchtime in some cases, in others the advisors work with teachers to provide career sessions during pastoral care time slots. Most schools strongly encourage their students to attend the university Open Days. Many schools send out information about careers and universities by email or by a student portal. The approach varies according to the individual career advisor, other designated staff member, or staff team, and can also depend on resourcing, the school's timetable, and on the students' levels of engagement in the process.

What was clearly evident from data from both sets of interviews and through the relationships that we developed with schools and universities as researchers: the people who do this work in both sectors care about the students and want them to succeed. Study choice is indeed supported by both sectors but there is clearly room for a more systemic approach to providing support.

**Resourcing**

Few secondary schools are fully resourced with a full-time position devoted to career counselling or advising. Many others are dedicated but not full-time, split between positions, such as leadership/teaching combinations or in pastoral care roles with additional responsibility. For the question "What is your position?" the complicated assortment of 184 responses is indicative of how unique and varied the delivery of career decision making services is at each school. It was observed during Study Three that school staff in career counselling-like roles are normally responsible for several grade levels, not just Year 12s and are also responsible for providing support for the breadth of post-school options available to students.

Similarly, Study Two revealed that each university has a small team (5-8 full-time staff) dedicated to providing support and services to over 210 schools across South Australia. Each university is tasked with disseminating information to guide more than 15,000 Year 12 students
about the considerable number of curriculum options available at their respective university. The Higher Education Standards Panel (HESP) also suggests that this poses a challenge for prospective students:

While education admissions processes are becoming more complex, career education support in schools and within higher education providers appears to be decreasing. As a consequence, students (and their parents and teachers) find it harder to make fully informed decisions. (HESP, 2016, p. 14)

**In-depth Exploration**

In-depth exploration of environments is about understanding curriculum options, as it describes details about what a degree entails, the structure of the program from beginning to end by academic year, and the individual course descriptions that make up the core learning for the degree. Each university endeavours to provide these details in creative ways that are interesting, easy to read, accessible, and meaningful. This is evident in the presentation, layout, design and language used in the materials. The information is widely available but only 50% of secondary school staff agree that Year 12 students interpret information about educational options. 40% of staff sometimes provide support about the individual courses that make up a degree while 33% rarely or never do. At least 90% of Year 12 students who responded to the survey have browsed websites and publications about study choices. This measure of broad exploration of environment suggests that Year 12 students engage in this task.

In analysing the measures of in-depth exploration, 24% of Year 12 students who plan to apply to university have never examined a study plan for a preference and 37% did not attend an Open Day. It is possible that students do not have the capacity to make meaningful use of existing information. Year 12 students are overwhelmed by the vast number of options and feel pressure to make a decision, or perhaps they do not know exactly how to wade through the substantial volume of information that is available. Year 12 students identified “Personalized guidance/advice in person” as the support they would most prefer. The need for more individualised support has also been identified in recent literature (Diamond, Vorley, Roberts & Jones, 2012; Hossler et al., 1999; James et al. 1999; Scutter, Palmer, Luzeckyj, Burke da Silva, & Brinkworth, 2011).

Early analysis of the Year 12 Student Survey strongly suggests that more work needs to be done to encourage in-depth exploration. Approximately 20% of 1125 Year 12 respondents indicated “I am not certain about my preferences but I will apply [to SATAC] anyway and then sort it out later.” And another 5% are completely uncertain at the early application deadline. Nearly 51% of respondents found it difficult to decide what to study and 35% of the Year 12 students surveyed found it difficult to understand university program options as well as information about university programs. Although focused on admissions processes, the final report for Improving the Transparency of Higher Education Admissions, agrees that prospective students “need to understand clearly…how to compare alternative providers and choose between different fields of study” (Higher Education Standards Panel, 2016, p. 14). A clear set of instructions about how to unpack the process of making a decision about what to study, as well as how to find and interpret curriculum details is not systemically present in the resources that are currently available to Year 12 students.

Of the Year 12 students surveyed, only 60% were certain or very certain, about their first preference. Of these 44% read or looked at a website or brochure only once or twice. 25% of these students had never been to an Open Day to find out more about a preference. And from
this same set of 663 students, 24% are uncertain about what courses they will study in first year. Year 12 students do need to engage more intentionally in in-depth exploration tasks in order to develop a solid understanding of the degree program in which they want to enrol. If in-depth exploration tasks involved an earlier and more definite connection with the curriculum, it could better prepare students for the first weeks of learning: “Engagement is a binding of students to each other, to meaningful learning activities, and to the institution” (Krause, 2007, p.14).

Next Steps

The findings from this research are being used to develop a learning framework for tertiary institutions from which to design future recruitment activities that will better align current practice with pedagogies associated with student development, retention and transition. This research stems from a belief that helping to answer the question of What to study? is critically important for the future success of prospective students. It is also held that there is value in the early delivery of curriculum to prospective students – at the “Search” stage – as a learning opportunity for students and as a retention strategy for universities to foster engagement.

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