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The value of employability-focused assessment: Student perceptions of career readiness

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Abstract

Post-graduation employment outcomes remain a central focus for students, tertiary institutions, and governments. This interest has seen universities now aiming to provide students with a wide variety of authentic employability or career readiness opportunities to support each student's work-ready preparedness, in a scalable and transferrable manner. This study explored the extent to which students perceive and value career readiness opportunities undertaken within their undergraduate degrees. Scaffolded opportunities and assessments were undertaken by students enrolled in professional and generic degrees within a Health Faculty. The activities and their assessment design aimed to support student career planning and readiness for future employment. This research affirmed the importance of embedding employability-focused curriculum throughout the degree, especially in first-year subjects within both professional and generic degrees. Whether the employability activity was a stand-alone assessment task, or intentionally designed to explicitly address employability and career readiness over the entire semester, students appreciated it. They recognised the value of these initiatives in enhancing their career readiness and facilitating their transition to employment. Multiple employability assessments scaffolded within subjects and throughout degrees can effectively cater to diverse student groups, providing opportunities to enhance their skills and confidence as they navigate the path to employment.

Keywords
employability, career readiness, assessment, professional identity

Introduction

Graduate employment is a key metric for successful degrees, institutions, governments, economies, and communities but most importantly, the graduates themselves. Countries including Australia aim to improve graduate employment outcomes through a range of projects and funding initiatives to recognise and promote the importance of more diverse graduate skills and experience, for example, the 'Job-ready Graduates Package' legislation (Australian Government Department of Education, 2020). The primary goal of the legislations is to enhance future employment prospects by emphasising adaptability and lifelong learning, in conjunction with appropriate qualifications. This approach seeks to ensure ongoing support for evolving employer requirements, ultimately optimising opportunities for professional growth.

This approach is consistent with the premise that the academic-focused approach to employment has been surpassed by employer recruitment needs for graduates who can evidence a wider skill set (Østergaard & Nordlund, 2019), with employers seeking graduates who can extend themselves beyond core technical knowledge and continue to learn and apply new skills to adapt to rapid workplace change (Bennett, 2019; Bridgstock, 2009; Hagel et al., 2019). It is well acknowledged that future workforce needs are rapidly evolving with ongoing change predicted (Brown et al., 2017; World Economic Forum (WEF), 2023). The changing world and employers require enduring work-related skills that span a range of disciplines, such as critical/creative thinking, people-orientated, work-related skills and agility and capacity to adapt to the changing world of work (Bridgstock et al., 2019; WEF, 2023, p. 38).

As such, it is critical that industry experiences are integrated into the tertiary education experience to develop strong employability related competencies and aid student transition to the workplace (Maslen, 2019). Within this context, graduate employability attributes are complex and include qualifications, social connectedness, and social competencies (Bridgstock, 2009; Bennett, 2018, 2020). These factors are not only influenced by the quality of the educational experience, but also affected by labour market disruption (Tomlinson, 2012; WEF, 2023), the emergence of artificial intelligence (McKendrick, 2018 WEF, 2023) and changing managerial expectations (Steurer et al. 2022).

The term 'Employability', as defined and explored by Bennett (2018, 2020), encompasses this 'career readiness', using a strength-based metacognitive approach to prompt and provoke consideration beyond attaining skills and experiences to obtain employment. It inspires and encourages all stakeholders to deliberately and creatively support students to recognise and develop their ability and confidence to 'find, create and sustain meaningful work across the career lifespan and in multiple contexts' (Bennett, 2020, p1).

Employability-based learning is increasingly embedded within the academic curriculum (Kinash, 2015; Graham, 2017; Bennett, 2020) and is more likely to be effective if it is assessed and degree-wide (Bridgstock et al., 2019; Tomasson Goodwin et al., 2019), or institution-wide (Bennett, 2020). Importantly, regardless of the model and strategies used, every student requires experiences that help them to recognise their contribution to developing their employability and 'the importance of self-management and career building skills to [their] lifelong career management and enhanced employability' (Bridgstock, 2009, p31).

This study investigated student perceptions of employability-focused assessments undertaken during enrolment in Health degrees, either in professional degrees which have a professional graduate orientation, or generic degrees which do not lead to a particular career pathway (Sornapooman & Fyfe, 2015). Generic degree curricula often lack consistent, scaffolded approaches to employability skills development, which is compounded by more flexible subject selections aimed at broadening graduate career options. This flexibility may lead to reduced requirements for work-placement experiences, a key component routinely included in industry-accredited professional degree programs (Sornapooman & Fyfe, 2015). Scaffolded assessment, within the context of employability skills development, entails systematically building upon prior knowledge and skills to progressively deepen students' understanding and proficiency. Given these degree differences, it is unclear if students within professional and generic degrees have similar perspectives on their experience of employability-focused assessments/activities and the impact on their career readiness development and planning for employment.

This study surveyed students from a range of degrees to explore their perceived value of employability-focused assessments/activities integrated within their required degree of study. The research sought to inform the future development of faculty or university-wide approaches to employability. The objectives of this study were to:

- Explore student perceptions of the importance of specific employability-focused assessments toward their career readiness;

- Investigate whether the perceived impact of the Career Plan, ePortfolio and LinkedIn assessments, undertaken by all students, differed between students enrolled in generic or professional degrees; and
- Explore students' perspectives on the development of their future selves concerning their professional identity, career planning, and the correlation between their chosen degree and career path in both generic and professional degrees.

Method

Student Perceptions of the Value of Employability-Based Assessment Survey

A survey was created specifically for this study to evaluate students' perceptions of employability-based assessment. It aimed to gauge perceptions regarding the potential impact of individual assessment items on future employment prospects. Depending on the employability assessment activities that students completed, the survey consisted of up to 38 items, including up to 30 quantitative questions that investigated student perceptions of various employability-based experiences/assessment items. Students were only surveyed on the assessments they had undertaken and their perception of the relative impact of those activities on their career development and/or future employment. In addition, each survey included 6 demographic questions and two open-ended qualitative questions that explored which activities were considered most useful for each student (Question 37) and student suggestions for improving the activities (Question 38, see Appendix 1 for Survey).

Survey Question Completion

The survey was conducted from 2015-2022 during weeks 11-13 of trimester two. Each student was invited to complete the survey and was fully informed that it aimed to explore their perceptions about their engagement in, and experience with assessments designed to support their employability after graduation.

To permit the matching and tracking of each student's perceptions over several employability-based assessments undertaken progressively throughout their degree, student identification numbers were collected on each assessment's survey. Matched, de-identified student survey responses were analysed after subject completion and grade publication. These requirements ensured compliance with the Griffith University Human Research Ethics Committee approval for the project (Ethics no. 2015/734).

Degree and the assessments completed

Students enrolled in various degrees, including both professional and generic undergraduate degrees (refer to Table 1), participated in a range of employability activities and assessments. The employability activities or assessments varied based on whether the student took Subject A, B, or C as part of their degree requirements (Table 1), but all students in these subjects completed an ePortfolio and LinkedIn profile.

Specifically, students undertaking the Sport Development degree completed Subject A, which included a fully scaffolded series of employability-focused assessments whereas students in other professional and generic Health degrees completed Subject B or Subject C. Table 1 shows the employability activities/assessments undertaken within Subjects A, B and C and the undergraduate Health degrees requiring each Subject. Subjects A and B are both Year 1 subjects and Subject C is a Year 2 subject that requires completion of Subject B as a pre-requisite. Degree structures determined the subjects that each student completed.

Student perceptions of their professional identity development (Questions 24-30) were surveyed for all students in Subjects A, B and C, in addition to their perceived value of specific employability assessment tasks.

Table 1: Subjects, Employability Activities, and Degree Details

	Subject A	Subject B	Subject C
Employability activities	ePortfolio LinkedIn profile Career plan Work placement Informational interview	ePortfolio LinkedIn profile	ePortfolio LinkedIn profile Career Plan
Degree studied: Bachelor of	Sport Development	Generic: Biomedical Science Exercise Science Health Science Science Professional: Dental Science Environmental Health Exercise Science Pre-Physiotherapy Medical Laboratory Science Medical Science Nutrition and Dietetics Pharmacy	Biomedical Science Health Science Medical Science Nutrition and Dietetics

Data Analysis

For each assessment task, Likert scores from the relevant survey questions were descriptively analysed and compared between subject cohorts using mean and standard deviation (See Figures 1-6). Differences between the means of the 3 subjects were analysed using One-Way ANOVA with Least Significant Difference (LSD) to determine the significant difference and comparisons between two subjects used Student's *t*-tests (Prism Version 18.0). Probability values <0.05 (p<0.05) were considered significant.

Professional and Generic degrees

Data from the student survey responses to questions exploring professional persona/identity development and implied confidence (Q24-Q30) were then grouped using the student's degree of enrolment into either professional or generic degrees (as detailed in Table 1) and analysed. Specifically, in this study, professional degrees had clearly aligned professional pathways and included: Bachelor of Dental Science, Bachelor of Environmental Health, Bachelor of Exercise Science Pre-Physiotherapy, Bachelor of Medical Science, Bachelor of Medical Laboratory Science, Bachelor of Nutrition and Dietetics, and Bachelor of Pharmacy. The data from these degrees were grouped and compared to data grouped from generic degrees which included: Bachelor of Biomedical Science, Bachelor of Exercise Science, Bachelor of Health Science, and Bachelor of Science. Bachelor of Sport Development was excluded from the professional/generic analysis due to the extensive employability activities undertaken by students in this degree making it an unfair comparison given the curriculum's heavy emphasis on practical skills and work-related tasks.

Analysis of Qualitative Responses

Qualitative survey data from student responses to open questions was initially analysed utilising a grounded theory methodology, following the steps outlined by Braun and Clarke (2006). This process requires; familiarisation with data; generation of initial codes; searching for themes; reviewing themes; defining and naming themes; and producing the paper, allowing the data to 'speak for themselves' rather than using a pre-existing theoretical framework. Integral to the grounded theory process, analysis of the text is constantly occurring to acquire theoretical saturation, that is, 'the point in category development at which no new properties, dimensions, or relationships emerge' (Strauss & Corbin, 1998, p. 143).

In this study, manual generation of initial code sets was undertaken by one primary coder, whilst the other generated the codes using MAXQDA (v. 18.2.0) Qualitative Software, which is 'methodologically multi-faceted' and designed for 'hermeneutic text studies, grounded theory method and various mixed methods procedures' (MAXQDA, 2018). Identification and comparison of preliminary themes were compared and discussed by the two primary coders and a reference member of the research team. Codes were then grouped into themes, reviewed, and defined, progressing the development of broader analytic themes until theoretical saturation. Leximancer software was then independently used to provide a comparative quantifying and conceptual structural analysis of the same data set, building it from the occurrence of related iterations and concepts that identifies a centrality of similar contexts to construct the resulting themes (Gapp & Merrilees, 2006).

Employability Activities and Assessments

In this study, all students were required to complete two employability tasks, an ePortfolio and a LinkedIn profile.

ePortfolio

The ePortfolio was a mandatory employability assessment task aimed at developing students' digital literacy and reflective writing skills. The survey investigated each student's perceived value of this task, toward developing their future career (Q11), and the importance of career planning (Q13). The ePortfolio was a common assessment task for all subjects, with students in Subjects A and C also required to outline and communicate their career aspirations and identify key skills relevant to their future. Importantly, Subject A students completed the tasks and survey in the first year of their degree, students in Subject B completed their ePortfolio during their first year, then revisited and expanded their ePortfolio in Year 2, when completing Subject C. In Subject C, students strengthened and updated their LinkedIn profile, developed, and uploaded their Curriculum Vitae, including an aspirations statement and career plan as detailed below. Questions 6-10 were only answered by students in Subjects A and C.

LinkedIn Profile

Every student was required to create a LinkedIn portfolio, where they were expected to articulate their employability skills and experiences. The LinkedIn profile developed by students in Subjects A and B included a professional photograph, customised URL, headline, a clear summary, their education and employment history, interests and groups, volunteer experience, skills, and network connections. All students in Subject C were required to review and expand their initial LinkedIn profile developed within Subject B. Students from all degrees were encouraged to continuously strengthen their LinkedIn profiles throughout their study and post-graduation.

Career Plan

Students in Subject A developed a career plan by sourcing two different sport sector job advertisements and then identifying the employability skills sought by employers. Students then reflected on their current skills and evaluated whether the skills sought would be either gained or 'missing' after completion of their degree. A timeline was then developed to indicate specific skills and

the co-curricular activity goals that will help them achieve all the identified employability skills needed for their future career.

In Subject C, students networked with a range of health professionals to expand their exploration and vision of career opportunities available after graduation. The assessment task required students to reflect on their personal career aspirations, plan the pathways they needed to undertake to achieve their goals, and upload their career plan into their e-Portfolio.

Work Placement and Informational Interview

Subject A students completed a 10-hour work placement in an industry-relevant organisation to develop their understanding of the routine workplace duties undertaken by industry professionals. The post-placement informational interview conducted with the professional observed during the work placement served to enhance each student's comprehension of the observed role and its associated expectations. The assessment task required completion of the work placement and informational interview to then develop a resource that provided insights into their future profession.

Results

Demographic data

Participants were undergraduate Health degree students enrolled in one of three subjects – Subject A, Subject B, or Subject C, at Griffith University, Australia. Subject enrolments and demographic data for each Subject are shown in Table 2. Most students in each subject were 23 years old or younger and had enrolled in their degree within two years after completing high school. Subjects B and C had higher enrolments of women, in contrast to the predominantly male cohort within Subject A. Survey response rates were 74%, 42%, and 27% for Subjects A, B and C, respectively.

Table 2: Demographic data for Students Enrolled in Subjects A, B and C, in Addition to Sorting by Their Enrolment into Either Recognised Professional or Generic Degrees

		Overall	Subject A	Subject B	Subject C	Professional	Generic
Overall (N)		801	72	655	74	271	458
Gender	F	58.4%	33.3%	59.4%	74.3%	69.7%	55.7%
	M	41.6%	66.7%	40.6%	25.7%	30.3%	44.3%
Age	17-19	68.2%	72.2%	69.6%	51.4%	65.0%	69.4%
	20-23	21.9%	26.4%	19.5%	38.9%	21.4%	21.5%
	24-30	6.7%	1.4%	7.3%	6.9%	8.6%	6.4%
	31-40	2.4%	0.0%	2.9%	0.0%	3.4%	2.2%
	41+	0.8%	0.0%	0.6%	2.8%	1.5%	0.4%
Status	Domestic	93.6%	94.3%	93.6%	93.4%	91.4%	94.8%
	International	5.2%	1.4%	5.5%	6.6%	7.5%	4.1%
	Indigenous	1.1%	4.3%	0.9%	0.0%	1.1%	1.2%
Years since high school	<1	41.9%	35.2%	47.2%	2.6%	42.3%	41.8%
	1	10.7%	16.9%	10.7%	5.3%	9.2%	11.5%
	2	21.5%	28.2%	16.2%	60.5%	19.1%	22.7%
	>2	25.8%	19.7%	25.8%	31.6%	29.4%	24.0%

Thematic Analysis of Qualitative Data

Overall, two broad themes emerged from the qualitative analyses of student responses using a grounded theory approach, validated by independent coders, in addition to MAXQDA and Leximancer software programs. Firstly, students believed that the creation of a 'product' helped them establish their professional profile, and secondly, students believed that some assessment activities helped connect them to their respective industries, providing networking opportunities. Clearly, these themes overlap, as the creation of a 'product' can help better connect an individual to an industry. Feedback on the individual employability activities and assessments are reported within each activity below.

ePortfolio and LinkedIn Profile data

In this study, all participants completed an ePortfolio, with students in Subject C, a second-year subject, further developing their initial ePortfolio which was developed within Subject B in their first year.

Questions (Q6-10), exploring the task's impact on future career and planning were completed by students in Subjects A and C, with only Q10 (the ePortfolio 'helped me to understand my profession ') rated significantly higher by students in Subject A compared to those in Subject C (p<0.01, t-test) (Figure 1).

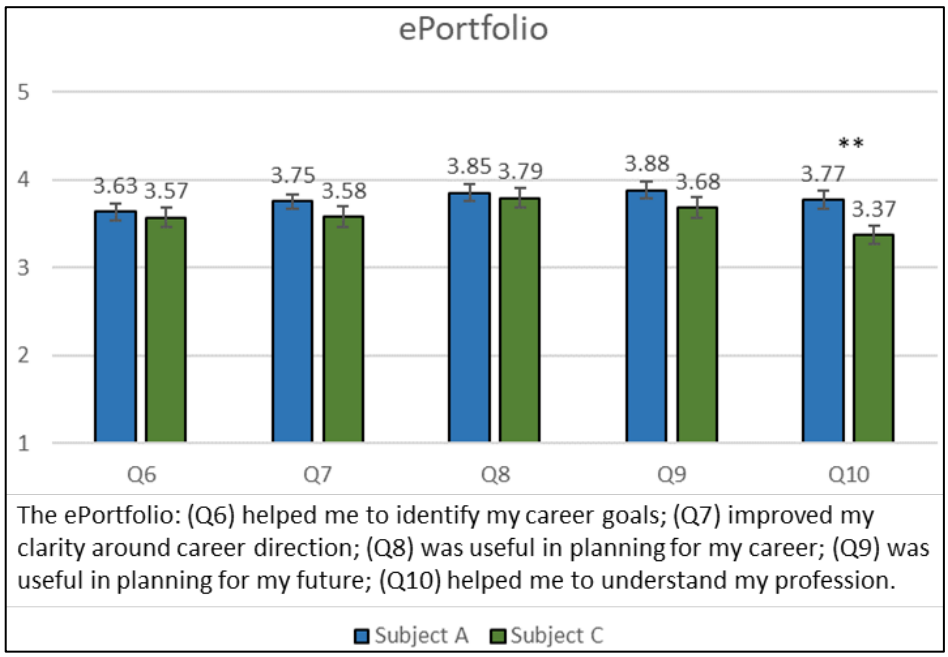

Figure 1: Comparison of Student Ratings on the Impact of Developing an ePortfolio (questions 6-10)

Figure 2 shows that overall, students perceived the importance of the ePortfolio for developing their future careers positively in all three subjects (see Figure 2, Q11), ranging between 3.55 and 4.13 (3.0 is neutral). The ePortfolio was perceived as more important for future career development by students in Subjects A (p<0.001, LSD) and C (p<0.05, LSD) compared to those in Subject B (Figure 2, Q11). Interestingly, Subject A students' perception of the importance of the ePortfolio compared to their LinkedIn profile (Q11 vs Q12) did not differ significantly whilst students in Subjects B and C reported significantly higher responses to the importance of the LinkedIn profile (Q12) compared to the ePortfolio (Q11), p<0.001 and p<0.05, respectively (unpaired t-test). The perceived value of the ePortfolio in usefulness for planning their career (Q8) compared to its value in increasing student awareness of the importance of career planning was significantly higher for students in Subjects A and C, p<0.01 for both (unpaired t-test).

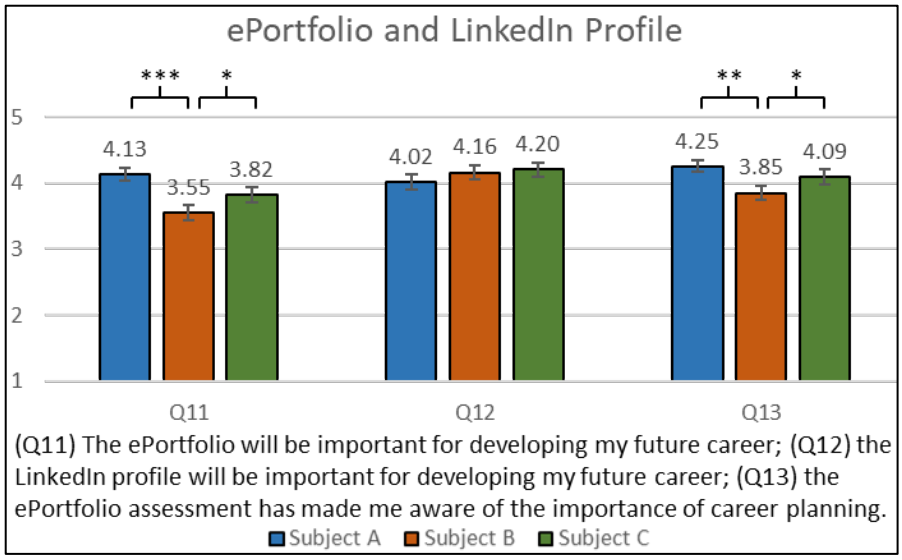

Figure 2: Comparison of Student Ratings on the Impact of Developing an ePortfolio and LinkedIn Profile (Questions 11-13)

Further analyses of these data after grouping them into professional and generic degrees showed no significant difference regarding their rating of the importance of the ePortfolio for developing their future career (see Figure 3).

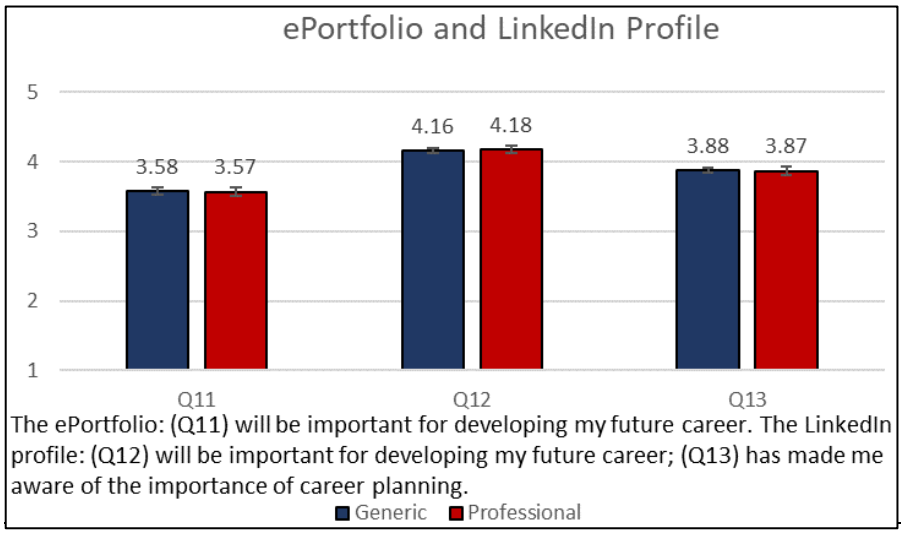

Figure 3*: Comparison of *Student Ratings on the Impact of Developing an ePortfolio and LinkedIn Profile (Questions 11-13)

Evidence that students also valued the ePortfolio for the opportunity it provided them to reflect on their abilities and its relevance for their career planning and future, was identified from open-ended responses for the task. For example, 'I found that the ePortfolio really challenged me to think about skills I already hold and what I will need to do to further my career' (Professional Degree Student, 2022) and '… ePortfolio helped me develop my skills in computer software and understand the importance of professional promoting' (Generic Degree Student, 2017).

Overall, students perceived that their development of a LinkedIn profile was 'important for developing my future career' (Q12), rating this highly (>4) by students in all Subjects A, B and C. The LinkedIn profile (Q12) was rated higher by students in Subjects B ($p<0.001$) and C ($p<0.05$) compared to the importance of the ePortfolio for their future career (Q11) as evidenced by higher average values. Students in Subject A rated both tasks very highly (>4).

As for the value of the ePortfolio in career planning, students in Subjects A and C reported significantly higher (both $p<0.01$) scores for Q13 (it made them aware of the importance of career planning) than for Q8 (it was useful for career planning).

Students in Subjects A ($p<0.01$, LSD) and C ($p<0.05$, LSD) recognised the value of the ePortfolio profile for career planning (Q13) more than students in Subject B (see Figure 2). These same students reported increased perceived value of the LinkedIn profile task, as the LinkedIn profile was rated higher. Qualitative comments from Subject B and C students also confirmed the perceived importance of the creation of a LinkedIn profile for students in generic degrees. For example, the LinkedIn Profile 'provides an opportunity to display my skills and information in a concise, professional manner via a professional profile' (Generic Degree Student, 2017); 'being able to make connections with colleagues and future employers' (Generic Degree Student, 2022) and 'LinkedIn profile is useful to increase employability' (Generic Degree Student, 2016). Overall, there were no significant differences between generic and professional degree students on their perception of the importance of the ePortfolio or LinkedIn Profile for developing their future career or the importance of career planning (See Figure 3).

Career Plan

Students enrolled in Subject A or Subject C each completed their own Career Plan and the survey ratings for this task are shown in Figure 4 (Q1-5). This task was valued by students for its positive influence on their career planning and direction. Students identified an enhanced understanding of their profession and the support for their future employment success (average values >3.5 for Q1-5) across both subjects.

Students in Subject A reported consistently higher values for Q1-5, recognising the personal career value and impact of the Career plan than was reported for students in Subject C (*t*-test $p<0.05$ Q1,2,3; $p<0.01$ Q4 and $p<0.001$, Q5). As shown in Figure 4, Subject A students rated the perceived value of their career plan for supporting their understanding of the diverse Sport Development profession (Q5, 4.27) far more than the students of Subject C, which included both generic and professional degree students.

This result was also reflected in open-ended comments: 'The career plan has helped me understand more about the profession I am studying and what are the career options after I graduate' (Professional Degree Student, 2018); and 'The career plan gave me a clear direction of what I want to achieve and how to achieve it' (Generic Degree Student, 2022).

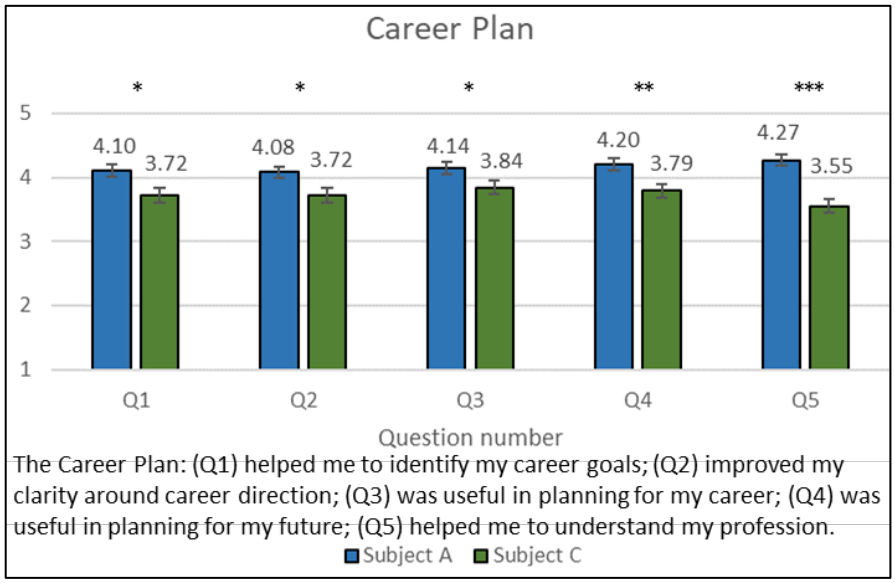

Figure 4: Comparison of Student Ratings to the Impact of Developing a Career Plan (questions 1-5)

Additional analyses of Subject C data were conducted by grouping them into professional and generic degrees. This analysis showed no significant difference regarding their rating of the importance of the Career Plan for career clarity and future planning (see Figure 3).

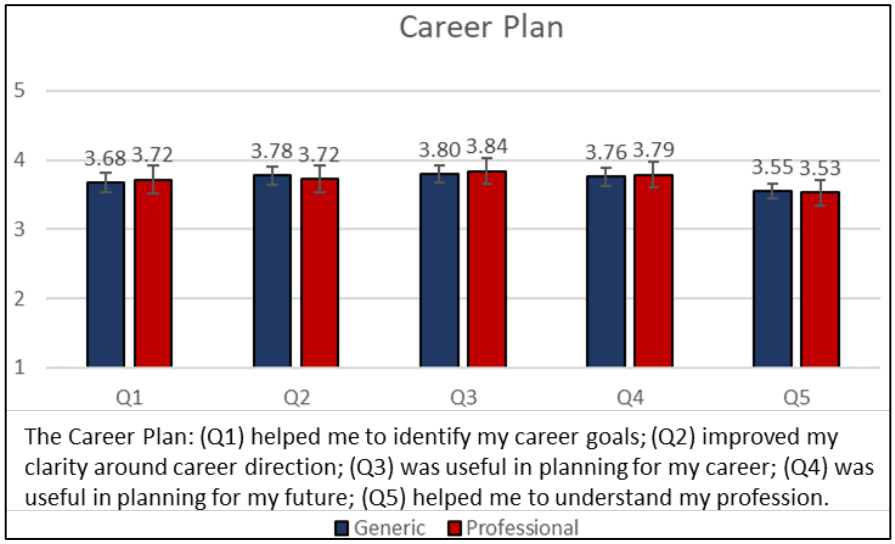

Figure 5: Comparison of Student Ratings to the Impact of Developing a Career Plan (questions 1-5)

Observational Work Placement and Informational Interview

The Observational Work Placement and Informational Interview tasks were only undertaken by students in Subject A. These students identified these tasks as highly relevant to their future (average survey ratings >4.15, maximum of 5, see Figure 6). More specifically, the average rating values for the Observational Work placement for usefulness for career planning (4.15) are consistent with ePortfolio (4.13), LinkedIn (4.02) and Career Plan (4.14) averages for the same cohort. Qualitative comments highlighted that this task 'helped me to understand my profession', which is consistent with it achieving the highest rating recorded by this task, over any of the employability tasks surveyed (4.36, Q23). Further comments identified that the Observational Work Placement also opened their eyes to future possibilities: 'Work placement highlighted the good aspects and inspired me to go down that path' (Generic Degree Student, 2017); and 'I found the work placement most useful as it allowed for a brief insight into the realities of the industry' (Generic Degree Student, 2016).

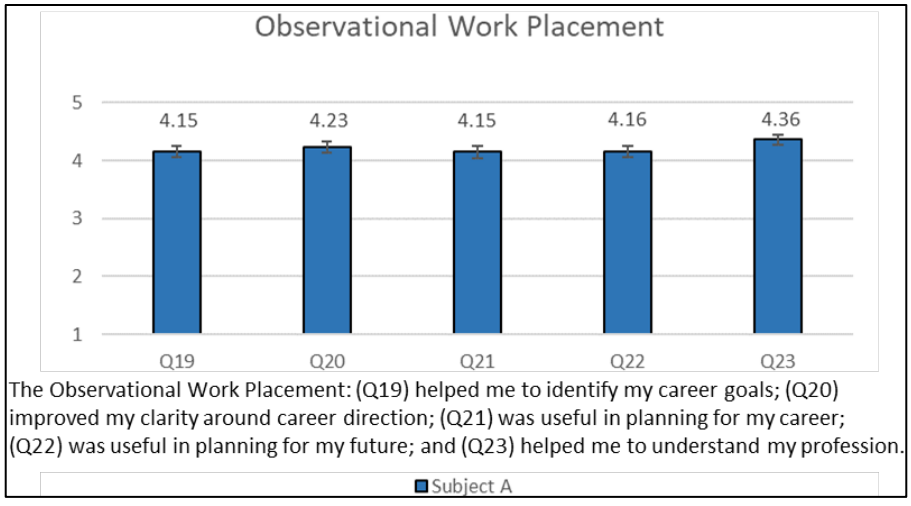

Figure 6: Student Ratings on the Perceived Impact of the Observational Work Placement Undertaken by Subject A Students (Questions 19-23)

The Informational Interview, was not as highly valued by students, compared to the Observational Work Placement task, with average ratings ranging from 3.82 (Q14, 15) to 4.22 (Q18, see Figure 7). Although both tasks were positively rated for supporting their future and career development. The Informational Interview, performed after the Observational Work Placement, helped students to gain a deeper insight into the industry as demonstrated through their comments: 'Informational interview was great … we were able to talk about positives and negatives of the person's role' (Generic Degree Student, 2017); '…informational interview supported what area I thought I wanted to enter and now I know it's the right direction (Generic Degree Student, 2018); and, 'the informational interview was the best as you got to learn and hear a lot about the field' (Generic Degree Student, 2019).

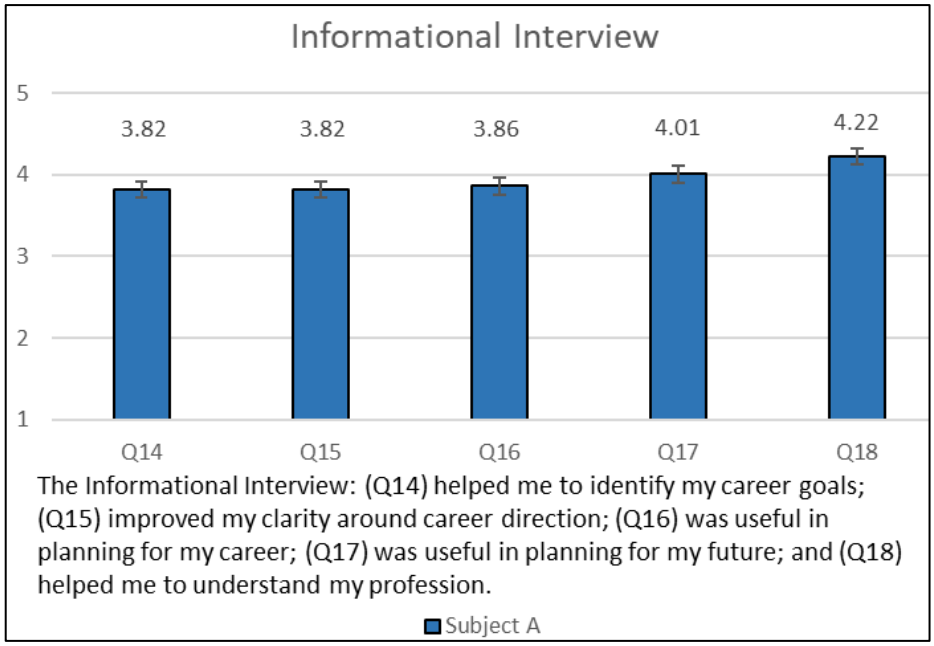

Figure 7: Student Ratings to the Impact of the Informational Interview (Questions 14-18)

Professional Identity and Career Confidence

All students in this study were surveyed on their perceptions regarding their developing professional identity, after completion of their subject and irrespective of their subject enrolment or the career-readiness activities undertaken (see Figure *8*8). Student ratings were compared from Subjects A, B, and C for each question (ANOVA). For Q25, 26, and 28-30, student ratings were compared from Subjects A, B, and C (LSD); * = p<0.05, *** = p<0.001. Overall, Subject A (Sport Development) students reported more positive ratings for their perceptions of their professional identity than students in Subjects B and C (Q24), despite Subject C students being second-year students. Specifically, Subject A ratings were statistically higher (p<0.0001) compared to the means in both Subjects B and C, for five questions: 'I feel confident in my ability to secure employment after my degree' (Q25, p<0.001, LSD), 'I know what resources I need to find a job after graduation' (Q26, p=<0.001, LSD), 'I feel a strong connection to my future professional industry' (Q28, p<0.05, LSD), 'I understand how extracurricular activities will impact my future employment' (Q29, p<0.001 for Subject B, p<0.05 for Subject C, LSD), and 'I feel confident I can find extracurricular activities to undertake that will increase future employability' (Q30, p<0.001, LSD).

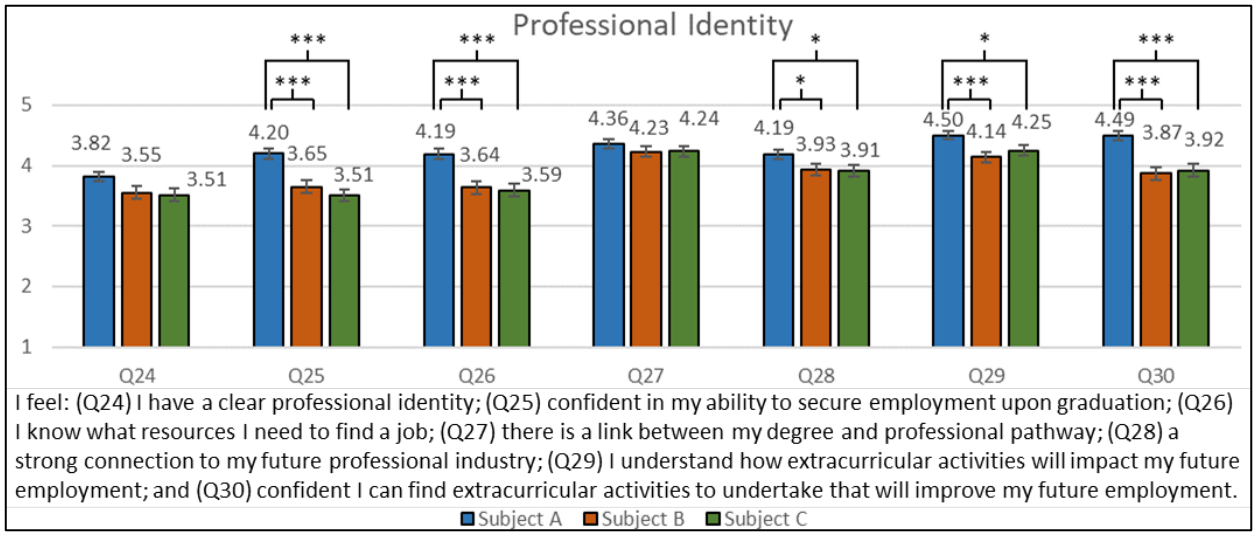

Figure 8: Comparison of Student Ratings to Professional Identity Development (Questions 24-30)

Students in all subjects (A, B and C) highly valued the link between their degree and professional pathway with average ratings of 4.36, 4.23 and 4.24, respectively. Furthermore, in comparison to Subject A students (Sport Development), students in Subjects B and C reported less-positive ratings to the value of extracurricular activities for their future employment and their confidence to find extracurricular activities to improve future employment.

Student professional identity development was not explicitly prompted within the qualitative questions (see Q37 and Q38, Appendix 1) however student qualitative responses included links to their professional identity development. For example, 'Understanding what the industry is about and creating links with people in positions I'd like to be in' (Generic Degree Student, 2017); and, 'Connecting with other individuals both in my degree and in the professional environment I wish to enter. Creating a professional network for myself which will showcase my educational/professional abilities' (Professional Degree Student, 2016).

Generic and Professional Degrees

Student responses to questions on their developing professional identity were re-analysed using one-way ANOVA and LSD (* = p<0.05, ** = p<0.01, *** = p<0.001), after grouping the data into professional and generic degrees (see Figure 9). Students enrolled into professional degrees perceived significantly greater clarity of their professional identity (Q24, p<0.01), confidence to secure employment (Q25, p<0.001), linkage between their degree and profession (Q27, p<0.001) and strength of connection with their future professional industry (Q28, p<0.01). Generic degree students reported slightly but not significantly higher confidence in their ability to find extracurricular activities to improve their employability (Q30, see

Figure ***9***).

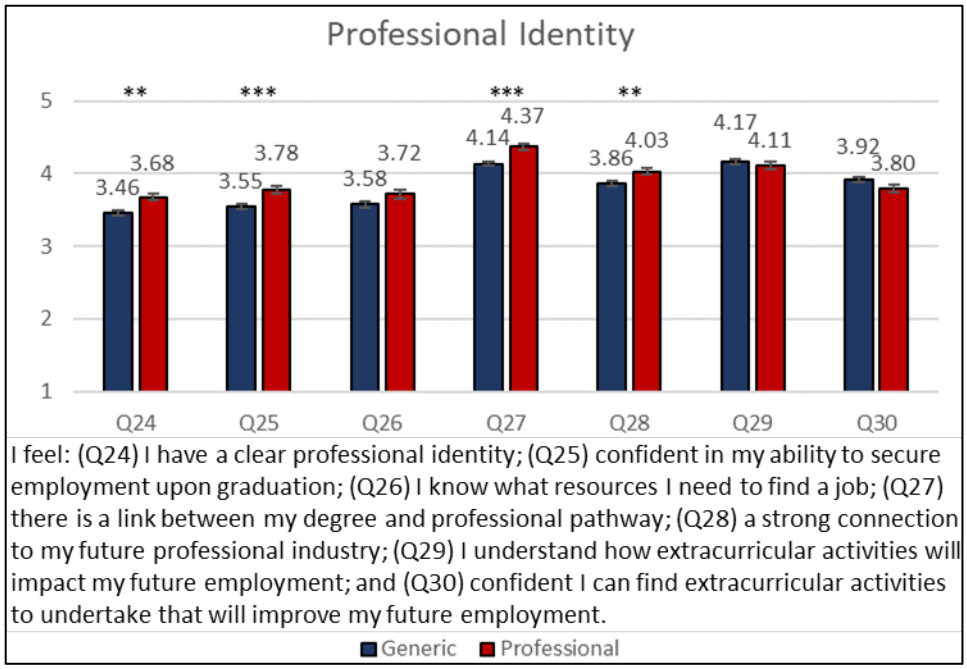

Figure 9. Comparison of Student Ratings to Professional Identity Development (Questions 24-30)

Discussion

The future workforce requirements are evolving (PwC, 2023) and higher education optimisation of graduate employment requires skills and experiences beyond degree qualifications, ideally with opportunities created through assessed employability thinking activities, including digital approaches (Vanderlelie et al., 2018) embedded within the curriculum (Kinash, 2015; Bennett, 2021), scaffolded within subjects throughout the degree (Bridgstock et al., 2019; Tomasson Goodwin et al., 2019). Explicit extraction of employability learning already embedded within curricula and incorporating value-adding opportunities and tasks may enhance student employability understanding and preparedness for future workforce needs (Daubney, 2022; Harris-Reeves, 2023).

This comprehensive cross-sectional study was conducted from 2015 to 2022, representing a significant research undertaking. Remarkably, the empirical data gathered during this extended timeframe displayed a temporal stability, with no statistically significant differences observed between the datasets collected before and after the onset of the COVID-19 pandemic. This consistent trend in findings underscores that students' perceptions and the perceived value of employability-focused assessments remained unaltered, despite the challenges posed by the pandemic and the evolving post-pandemic employment landscape.

In this study, employability-focused activities and assessments were integrated into subjects in two ways. The first approach involved subjects intentionally designed with curricula aimed at enhancing employability and fostering career readiness throughout the entire semester (Subject A). The second approach involved incorporating employability-focused assessments within subjects that had discipline-specific curricula, such as Chemistry (Subject B) and Metabolism (Subject C). In Subjects B and C, there was minimal extraction of embedded employability learning to aid student recognition through explicit explanation. The tasks in this study were embedded in first year subjects in both generic and professional degrees (with the exception of Subject C, in second year) and aimed to engage students in activities to build student confidence in their future employability.

Two employability-focused activities were undertaken by all students, the development of an individual ePortfolio and a LinkedIn profile. This study found, that on average, regardless of degree, students positively valued these two core employability tasks, undertaken during their first year. This

confirms previous reports that ePortfolios (Coleman et al., 2012; Harris-Reeves et al., 2018) and LinkedIn profiles (Amoroso & Burke, 2018) support student engagement in career readiness and planning. Even during the transition into university, students within Subjects A and B completed these tasks in their first semester, these assessments were perceived as important for their future and its planning, with their average perceptions above the neutral response. This finding is consistent with previous reports that employability-focused learning experiences and assessments are best introduced early in the university degree to promote career ambition and demonstrate pathways from university into professional settings (Harris-Reeves et al., 2022; Harris-Reeves & Mahoney, 2017; Trede & McEwen, 2015).

More specifically, the development of their individual LinkedIn profile was rated highest for its impact on future careers (4.13) compared to the ePortfolio (3.83), when results were averaged across all three subjects. The perceived impact on the importance of the LinkedIn profile was high among both generic and professional degree students, averaging 4.14 and 4.18, respectively. The enhanced value of LinkedIn profiles for their future was further confirmed by Subject C results from second-year students, despite the significant improvement in the perceived value of ePortfolios from Year 1 (Subject B). Overall, in these Health subjects, students rated the ePortfolio well below that reported for the LinkedIn profile. After further development of the student's LinkedIn profile and ePortfolio in Subject C (Year 2), the average student rating for the task, for its perceived importance for their future career did not increase.

Students who are exposed to a powerful message about the importance of developing their employability skills during their first year of university are likely to continue thinking about their career development throughout their academic journey (Bridgstock & Hearn, 2012). In the current study, there is evidence from Subject A, to suggest that a comprehensive employability-focused curriculum within a single first-year subject can support students to engage in career-readiness development, recognising the value proposition for their future. The design of Subject A included five employability-focused activities and assessments including the ePortfolio, LinkedIn profile to explore individual strengths and experiences; Career plan to identify gaps and opportunities to address them, thereby strengthening each individual's career readiness (Harris-Reeves, 2023). Finally, the inclusion of authentic workplace learning through the observational work placement and informational interview were recognised as the reality of workplace expectations and roles. Better understanding job roles and workplaces through these 'job shadowing' activities improve employability outcomes for students over a range of ages (Organisation for Economic Co-operation and Development (OECD), 2022). By integrating a variety of scaffolded activities students are supported to develop their individualised career readiness planning. This personalisation resonated with individual students as they see themselves as unique individuals despite being part of a larger group or degree. For example, 'the employability activities have provided me with many thoughts towards my career path, the most useful being the work placement as it helped solidify the type of work I want to pursue' (Generic Degree Student, 2017).

Highlighting, establishing, and maintaining the importance of employability skills embedded throughout each student's academic journey can better support their strategic decisions about their academic and professional pursuits (Bates et al., 2019). Thus, although Subject A enrolment is restricted to a generic degree that has diverse future employment pathways and opportunities, students perceived and valued the tasks and assessments undertaken, rating both the 2 core activities more highly than students in both professional and other generic degrees. Furthermore, the number of additional scaffolded tasks in Subject A were also rated highly, confirming that the perceived value of numerous tasks was maintained throughout the subject. In contrast, further development of the ePortfolio and LinkedIn profile by students in their second year (Subject C) was not valued as highly by students and the impact of the development of a career plan was significantly less (Figure 3). This result may reflect the difference between a subject with an employability-focused curriculum and the inclusion of employability-focused assessment tasks in unrelated discipline-specific subject curricula

emphasising the importance of a scaffolded curriculum dedicated to employability skill development. This finding suggests that whether enrolled in a professional or a generic degree program, students value the integration of employability-focused tasks. This observation highlights the significance of incorporating structured curricular frameworks dedicated to enhancing employability skills, regardless of the professional pathway.

This study confirmed that enrolment within generic and professional degrees significantly impacted students' perception of their developing identity as future professionals, consistent with previous reports (Cornett et al., 2023). This difference was apparent even within the first semester of enrolment.

In this study we conducted a preliminary investigation into how students perceive their confidence levels regarding their chosen degree, their professional identity, and their preparedness for future employment. The extent of changes in student employability engagement and confidence from prior to enrolment were also not measured however, significant differences were still identified between students enrolled in either different subjects or grouped into professional and generic degrees by the end of each subject. The impact on students within specific professional degrees was not investigated due to the number of surveyed students within individual degrees. That said, generic degree students clearly perceived their own professional identity, not influenced by a specific profession from their degree or degree-specific employment opportunities after their future graduation.

Conclusion

In conclusion, even during their first semester at university, students recognised that authentic career development opportunities embedded within the curriculum have clear benefits for them. This finding is consistent with previous reports that this approach benefited both students and tertiary institutions, via increased retention, improved student satisfaction, and improved graduate transition to employment (Miller & Konstantinou, 2022; Trede & McEwen, 2015). Tertiary educators are encouraged to explicitly extract and amplify employability learning from academic curricula and wider life experiences to support students to develop and inform their career readiness (Daubney, 2022). Tertiary educators are encouraged to recognise the significance of employability assessments in both general and professional degree programs, as these evaluations serve as a key connection between theoretical knowledge and practical skill acquisition (Daubney, 2022). To foster the development of competencies critical for workforce success, educators should systematically integrate employability assessments into their curricula. This recommendation extends to both generic and professional programs, emphasising the need for a comprehensive approach to education that avoids the assumption that employability skills are automatically addressed within professional degree pathways.

Importantly, this study demonstrated that even the inclusion of employability-focused assessments, as standalone assessment tasks within unrelated discipline-based subjects were perceived by students to positively support their career planning and future employment, within both generic and professionally accredited degrees. Enabling students to guide and navigate their own career journeys by helping them extract and connect employability from their academic and wider experiences is critical to support their lifelong and life-wide employability.

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Appendix 1: Survey instrument

Student Perceptions of the Value of Employability Based Assessment

Your perceptions of university life and study will have a huge impact on the success of your future career. This survey has been designed to gain a greater understanding of your perception of employability-based assessment and how it will influence your future employment prospects. The personal information you provide will remain confidential and no report will be produced that identifies you individually. The survey should take about 5 minutes to complete.

Please indicate how much you agree with each statement by circling the number corresponding to your response.

1 = Strongly disagree 2= Disagree 3 = Neutral 4 – Agree 5 = Strongly agree

	Career Plan	
1	The *Career Plan* helped me to identify my career goals	1 2 3 4 5
2	The *Career Plan* improved my clarity around career direction	1 2 3 4 5
3	The *Career Plan* was useful in planning for my career	1 2 3 4 5
4	The *Career Plan* was useful in planning for my future	1 2 3 4 5
5	The *Career Plan* helped me to understand my profession	1 2 3 4 5
	ePortfolio and LinkedIn Profile	
6	The *ePortfolio* helped me to identify my career goals	1 2 3 4 5
7	The *ePortfolio* improved my clarity around career direction	1 2 3 4 5
8	The *ePortfolio* was useful in planning for my career	1 2 3 4 5
9	The *ePortfolio* was useful in planning for my future	1 2 3 4 5
10	The *ePortfolio* was helpful to understand my profession	1 2 3 4 5
11	The *ePortfolio* will be important for my developing future career	1 2 3 4 5
12	The *LinkedIn profile* will be important for developing my future career	1 2 3 4 5
13	The *ePortfolio assessment* has made me aware of the importance of career planning	1 2 3 4 5
	Informational Interview	
14	The *Informational Interview* helped me to identify my career goals	1 2 3 4 5
15	The *Informational Interview* improved my clarity around career direction	1 2 3 4 5
16	The *Informational Interview* was useful in planning for my career	1 2 3 4 5
17	The *Informational Interview* was useful in planning for my future	1 2 3 4 5
18	The *Informational Interview* was helpful to understand my profession	1 2 3 4 5
	Work Placement	
19	*Work Placement* helped me to identify my career goals	1 2 3 4 5
20	*Work Placement* improved my clarity around career direction	1 2 3 4 5
21	*Work Placement* was useful in planning for my career	1 2 3 4 5
22	*Work Placement* was useful in planning for my future	1 2 3 4 5
23	*Work Placement* was helpful to understand my profession	1 2 3 4 5
	Other	
24	I feel as though I have a clear professional identity	1 2 3 4 5
25	I feel confident in my ability to secure employment after my degree	1 2 3 4 5
26	I know what resources I need to find a job after graduation	1 2 3 4 5
27	I believe there is a link between my degree and a professional pathway	1 2 3 4 5
28	I feel a strong connection to my future professional industry	1 2 3 4 5
29	I understand how extracurricular activities will impact my future employment	1 2 3 4 5
30	I feel confident I can find extracurricular activities to undertake that will increase future employability	1 2 3 4 5

31. Student number: _____

32. Age:_____

33. Gender: ☐ Male ☐ Female

34. Degree of study: _____

35. Status:

☐ International student ☐ Domestic (Australian) student ☐ Indigenous student

36. Years since high school graduation:

☐ less than 1 year ☐ 1 year ☐ 2 years ☐ more than 2 years

37. Please comment on what you found to be most useful from the employability activities (Career Plan, ePortfolio and LinkedIn profile, Informational Interview, or Work Placement) you have undertaken.

38. If these activities were to continue, what suggestions would you make for improvement?