Enhancing graduate employability: An authentic work-integrated learning approach

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Introduction

How to produce employable graduates has become one of the most important parts of higher education. Thus, it is of great importance to understand what employability is and how to improve students' employability. Employability is defined as a set of achievements in skills, attributes, and other measures such as networks, professional-identity and active citizenship, which has become a key driver of higher education policy with increasing focus (Hinchcliffe and Jolly 2011; Holmes, 2013; Hill et al., 2016; Rowe and Zegwaard, 2017). Employability on the rate of return from investing in a degree with post-graduation job attainment, a contested yet widely established measure of success (Bridgstock, 2009). No doubts that employability can make the graduates more likely gain employment, and be successful in their chosen occupations. Thus, it is essential to consider and design employability learning and teaching components into various higher education programs.

To improve students' employability, authentic learning approach has been regarded as an effective candidate and widely adopted in higher education (Keppell et al., 2002; Rule, 2006). The authentic learning is defined as an authentic context that reflects the way the knowledge will be used in real life to minimize the gap between theory and reality (Keppell et al., 2002; Gulikers et al., 2004; Renzulli, et al., 2004; Rule, 2006). It provides more opportunities to students to develop competencies connect with real work problem related to their future world of work (Weliwita and Witharana, 2019). In addition, Work-Integrated Learning (WIL) is another approach which has been approved as a key strategy for promoting graduate employability (Hall, Pascoe & Charity, 2017; Messum et al., 2017; Reddan, 2017). According to the previous research (Jackson, 2013&2015; Chillas et al., 2015), WIL can enhance students' professional skills and attributes, provide them smooth transition to workforce, and promote their career development. Nowadays, the students prefer to view themselves as participants during the process of learning and teaching (Leadbeater and Wong, 2010), rather than listening to the teachers. Students become enjoying more on gaining skills and knowledge through participating into different activities than passive learning in traditional learning approaches. Thus, an authentic work-integrated learning approach becomes essential to better feed the needs of students.

6008ENG Industry Affiliated Project (IAP) Professional Practice is a core course for all undergraduate engineering programs at School of Engineering and Built Environment at Griffith University. This course encourages students to critically reflect on the way in which they have met Engineers Australia's competencies while undertaking professional engineering practice activities in their degree programs. The students are given the opportunity to critically review and effectively communicate their own professional experiences through a series of workshops and assessment items. Further, this course incorporates the principles of work integrated learning through exposure to professional engineering practice. It allows students to further develop advanced skills in the theory and application of professional aspects of modern engineering practice, integrating the professional practice learnings embedded within the engineering degree program. This course was offered in 3 trimesters at Gold Coast and Nathan Campuses respectively before 2019.

Job application skills used to be one of the teaching components and assessment items in 6008ENG in the previous course deliveries before 2018. Students were required to prepare resume, cover letter and selection criteria statement for the junior engineer jobs listed. A large

number of feedbacks were received on the particular assessment during the Trimester 2 (T2) and Trimester 3 (T3) in 2017. Some students thought this component should be taught in their early years of degree study rather than the last trimester since it was too late. "*What's the use of teaching us how to apply for jobs when it's already too late*?" (SEC, 2017-2). "*I believe the job application assessment in this course should be done in a different course earlier in the degree as the applications for most graduate engineering positions close in the first few months of the year*." (SEC, 2017-2). It was suggested to have job application training before they applied for the external IAP project offered in their fourth year by the industry partners. "*This course should have been taught last semester when we were looking for industry IAP projects*." (SEC, 2017-2). Further, some students suggested changing the assessment items of report writing to a more engaging and interesting way. "*Suggest changing the assessment items of report writing and instead present this through submission of a PowerPoint slide or YouTube video on the work placement undertaken such that it is more engaging and interesting to present*." (SEC, 2017-3). By considering those feedbacks, the authors decided to move the job application component from the fourth year to third year in their curriculum. Therefore, students can get their employability skills developed earlier before they attempt for job application. In consequence, the job application training was offered to the third-year students in the course 3004ENG Project Management Principle. Instead, the job application was replaced by a new learning and teaching component of Informational Interview in 6008ENG from 2018.

An informational interview is a key networking and career exploration tool available to help students gain a better understanding of their future occupation and industry (Kim, 2011; Plakhotnik, 2017). Through informational interviews, students can get clear insights into the types of skills they will need, tips for the recruitment process and ideas about how to attain volunteer work, from real professionals (Lun, 2019). Information interview is an effective approach helping students better adapt themselves to industry quickly. According to student survey, many students who have conducted these types of interviews rated them as one of the most useful learning activities they did to help them understand their industry, their future career options and the links between their university learning and future career. For final year students, it is very important to understand what skills and attributes the employers are looking for. It gives the students an opportunity to understand the different career paths available in different professional fields. It is an authentic and WIL assessment which can definitely better encourage students to participate in the activities deemed to enhance their personal capabilities, confidence, and professional identity.

This research is to investigate the positive effects of an authentic Work-Integrated Learning (WIL) assessment on enhancing students' employability skills and engagement to industry. To this end, a comparative study is to be conducted based on the Student Experience of Course (SEC) before and after the assessment of informational interview implemented. Further, a survey was carried out to better understand how students can benefit from this assessment at their point of view. The results show that students were better engaged in this course with employability enhanced through participating in the informational interview. The SEC was slightly improved after the informational interview component was implemented. The survey results show that students feel their professional skills and attributes enhanced through this task.

Approach

To better develop students' employability in 6008ENG, the curriculum was changed by replacing the job application assessment as informational interview.

Table 1: Comparison of course assessments in 6008ENG in 2017 and 2018

	Assessment 1	**Assessment 2**	**Assessment 3**
2017	Job application (30%)	Online quiz (20%)	Professional practice (50%)
2018	Informational Interview (25%)	Online quiz (25%)	Professional practice (50%)

Table 1 shows the assessment plans in the course deliveries in 2017 and 2018. As illustrated in Table 1, the job application assessment was replaced by the informational interview in 2018 with slightly changed assessment weight, while the assessment items 2 and 3 remained largely no change.

In the assessment of informational interview, students are required to organize their informational interviews by identifying the goals of interview, identifying and contacting their interviewees, and preparing their interview questions before week 7. Further, they must conduct informational interview and provide reflection report before week 10. In this assessment, students learn how to positively interact with professionals, network with others, demonstrate their interpersonal skills, prepare and control an informational interview. In addition, the conduct of informational interview is a compulsory task to pass this assessment. Students must present a consent form signed by their interviewees as the evidence document to prove they've completed the interview. After the first implementation of this new assessment, a large number of positive feedbacks have been received by the course convenor.

To investigate the impacts of the new assessment item of informational interview, a statistical comparative analysis was conducted based on both the quantitative and qualitative results of student evaluation of course (SEC) between 2017 and 2018.

Table 2: Comparison of student number, cohort and response rate involved in this research in four course deliveries.

	2017-T2	**2018-T2**	**2017-T3**	**2018-T3**
No. of student enrolled	143	141	21	34
No. of student responded	45	43	6	6
Response rate	31.5%	31%	28.6%	18.6%
Main student cohort	Civil and Elec. and Electronics	Civil and Elec. and Electronics	Civil and Mechatronic	Civil and Mechatronic

Since this course was convened and taught by the same lecturer from 2017 T2, totally 4 trimesters course deliveries shown in Table 2 are available to inspect in this research. As displayed in Table 2, the number and cohort of students enrolled were similar for both 2017 and 2018, in T2 and T3 respectively. Majority of students were from Civil Engineering and Electrical and Electronics Engineering in T2, and from Civil Engineering and Mechatronic Engineering in T3, for both years. The response rates were maintained as approximate 30% in T2 and 20% in T3 for both years. Therefore, the comparison of SECs is fair and able to reflect the impacts of the change of assessment plan between 2017 and 2018.

6008ENG Informational Interview Survey

Please rank the following questions by using the number from 1 to 5

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. This assessment was designed in an interesting way. ( )
2. This assessment engaged me in learning this course. ( )
3. This assessment helped me to build my confidence. ( )
4. This assessment helped me to enhance my personal attributes. ( )
5. This assessment is helpful on broadening my professional network. ( )
6. This assessment helped me to clarify my career plan. ( )
7. This assessment helped me better understand industry market. ( )
8. This assessment helped me to improve my employability overall. ( )

Figure 1: Survey questions for informational interview assessment in T2 and T3 of 2018.

To better understand the benefits of this assessment brought to students at their view of point, a survey was conducted in T2 and T3 in 2018. As shown in Figure 1, the survey questions are basically designed to better understand the level of improvements this assessment brought to students, for example engagement in the course, confidence, personal attributes, networking, employability, clarification of career plan and industry market requirement. Students were required to take the survey in week 11's lecture session after they completed all tasks required in the assessment of informational interview. In this survey, students can rank a total of 8 criteria regarding the informational interview by using numbers from 1 to 5, which is very similar with SEC survey they have done before in each trimester.

Findings

The six qualitative questions of SEC in T2 of 2017 and 2018 are compared and summarized in Figure 2. As demonstrated in the figure, the SEC distributions in both years are nearly same with average and overall SEC around 4 in both 2017 and 2018. However, the score of engagement question (Q4) has been improved from 3.8 in 2017 to 4 in 2018. This clearly indicates that this course has been better engaging students in learning in 2018 after the inclusion of the assessment item of informational interview. The improved student engagement can also be evidenced by the student's comments: *"The assessment piece to interview someone from within the industry about career related topic was helpful in providing direction for my own career."; "The informational interview is great for networking and confidence building."; "Informational interview was a valuable piece of assessment."; "This course gives me a great opportunity to learn and plan my future career path."; "The informational interview was very helpful, it forces you to become engaged with work. Assessment was well laid out and appropriate to graduation."* (SEC, 2018-T2)

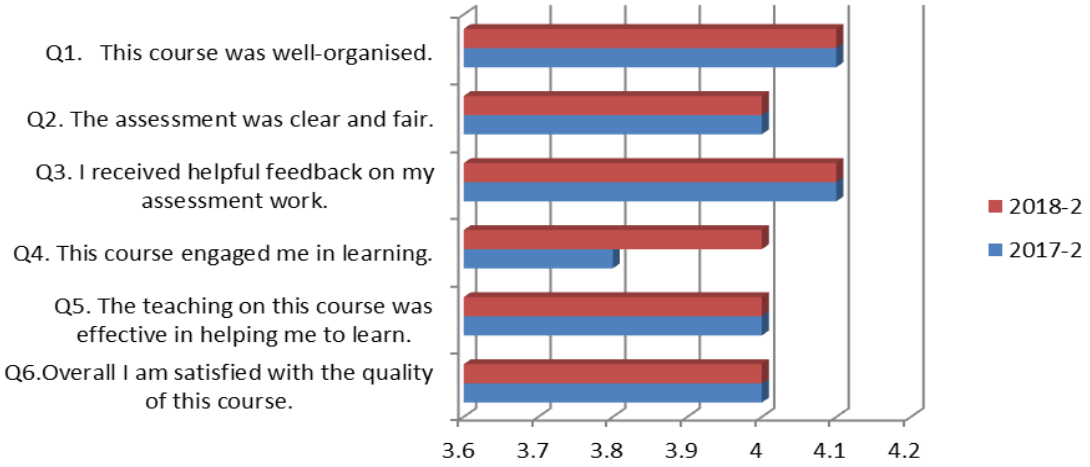

Figure 2: Comparison of SEC scores for six survey questions between 2017 T2 and 2018 T2.

Figure 3 shows the SECs in the T3 of 2017 and 2018. As depicted in Figure 3, all six qualitative questions except Q5 were improved by 0.1 or 0.2. The average and overall SEC scores were improved in 2018 compared to those in 2017. The improvements can also be evidenced by the student's comments: *"I find my future path through informational interview."; "This course provides me a way to professional engineers."; "In my point of view, this course is a truly significant course for every student with perfect organisation and guideline. This class is very good, the school can add more similar courses?"* (SEC, 2018-T3)

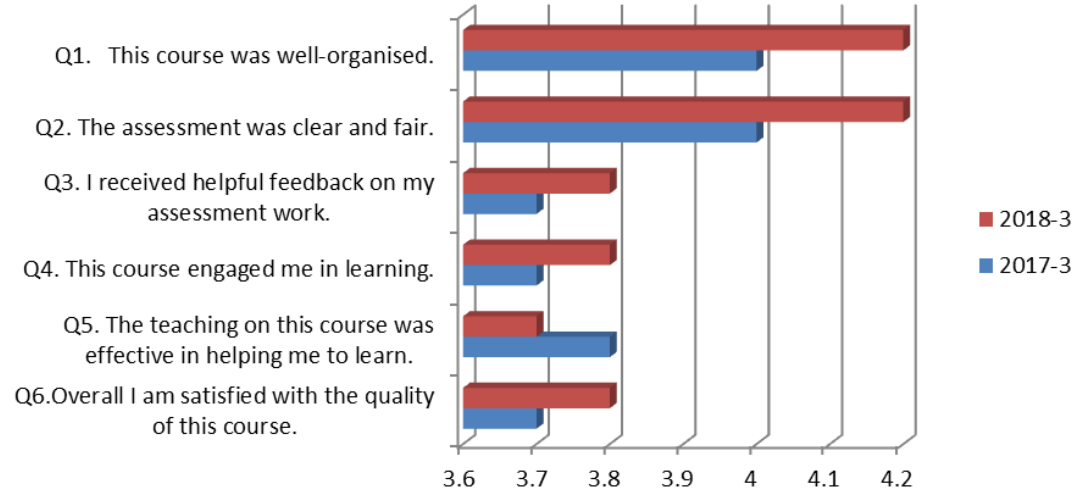

Figure 3: Comparison of SEC scores for six survey questions between 2017 T3 and 2018 T3.

The authors further compared the results between Figure 2 and Figure 3, and found that SEC scores of T3 are comparatively lower than those of T2. This might be due to the different cohorts of students enrolled and the number of students participated. In addition, students in T3 are generally harder to be engaged due to Christmas and New Year holidays in the middle of the trimester. Students were greatly distracted by the various events during Christmas and New Year holidays, which can also be evidenced from the low attendance rate after holidays recorded every year.

There are a total of 59 students in T2 and 10 students in T3 took the survey in 2018 with results recorded in Table 3. As demonstrated in Table 3, students had very positive feedbacks on the informational interview. Obviously, this assessment can better engage students' learning since it is an interesting, authentic and work-integrated task. Students can benefit from this assessment with their confidence, personal attributes, networking and employability improved. Most importantly, students can better understand the selection criteria of industry and further design their career path before graduation. Definitely, this piece of assessment can provide a

great opportunity and transition to students to better adapt themselves to their ideal industry field. Further, this assessment allows students to gain learning experience and generic skills through building relationships and connections to industry. More importantly, some students have successfully received a job offer from the interviewees after they had information interview.

Table 3: Survey results for informational interview

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
2018-2	4.32	4.23	3.92	4.42	4.51	4.35	4.22	4.53
2018-3	4.40	4.10	4.10	4.30	4.60	4.20	4.10	4.60

Conclusions

In this research, a career exploration activity has been designed and implemented in an industry affiliated project course. Students are required to gather valuable information from professions through informational interviews. Through this assessment, students can broaden their networks, understand industry market, exercise their personal attributes and improve their employability package. To investigate the benefits of this assessment brought to students, this research compared the SEC scores before and after this assessment was implemented for T2 and T3 respectively. Further, a survey was designed and conducted to investigate how students can benefit from this task. The results show that this assessment can 1) better engage students to learn in this course; 2) better motivate students to develop their employability skills; 3) better understand industry market and design their career plan before graduation. On count of its authentic and work-integrated characteristics, this assessment can provide students a bridge to connect themselves to industry.

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