Integrating Industry Professional Program into ICT Education Curriculum

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Abstract

The current crisis in Information Communications Technology (ICT) skills shortage is generally attributed to falling enrolments since 2001. The number of student enrolments in ICT degrees offered by universities has been decreasing globally over the last few years. Whilst the industry and government stakeholders play a vital role in addressing the ICT skills shortage, universities play an equally important role in ensuring the alignment of ICT course curriculum with the industry. This paper describes the development of an industry professional or practicum program with a two-fold aim: (i) to attract students and to de-mystify that IT is not an interesting career and (ii) to prepare and train students to be multi-disciplinary (ie Business and IT) ready graduates to meet the employability needs of industry. This paper recounts the experiences of four students who undertook a 16 week industry placement in an IS/IT organisation. This practice based paper also reports on the experiences of the program from its inception using different perspectives: student, language skills specialist, course coordinator, lecturer, the Administrative Manager and industry. The paper concludes with eight lessons learned for institutions considering offering such program.

Keywords

Professional Practice, Work Integrated Learning, Industry Practicum, Learning Outcomes, Graduate Employability

INTRODUCTION

The current project is motivated by two key issues. First, the low availability of labour in the Australian workforce with ICT skills; and second, the need to attract new students into ICT courses. The involvement of industry is always seen as an important factor in students' learning development. Students, on the other hand, would also like to study in a course with a high level of engagement through industry collaboration and involvement. In many universities, industry is involved through student placements, student projects, research projects and advisory boards. The industry placements and projects are seen by students to provide them with realistic and 'on-the-job' practical experiences. Given the shortage of skills and low student enrolments in ICT courses, industry engagements with universities have become even more important in the last 2 to 3 years.

National crisis: ICT skills shortage

According to the Australian Bureau of Statistics (2008), the unemployment rate in Australia as at April 2008 was at a low of 4.1 percent and the number of job vacancies in ICT has continued to climb. As reported in various media outlets many jobs related to ICT are experiencing acute skills shortages. Despite the increase in job vacancies in ICT, the number of students enrolled in ICT degrees has fallen sharply by about 45 percent in four years (Australian Government Information Management Office 2007). Also reported in the Australian Government Information Management report (2007), the proportion of women to men in the ICT industry has fallen steadily in the past five years, from 26.6 percent in 2001 to 20 percent in 2005.

To address the national ICT skills shortage crises, a number of strategies have been set in place. The National ICT Industry Leadership Group, state-wide ICT Working Group, Australian Computer Society, Australian Information and Industry Association, tertiary institutions, TAFEs and others have joined forces to increase the profile and prospects of ICT careers. Universities were asked to address the decline in

enrolments in ICT courses. At the same time, universities were also tasked with the job to help turn around negative perceptions among secondary students about ICT career prospects.

Graduate Employability

In Australia, graduate employability and employment levels are pivotal interests to governments, universities, employers and students. Employability has flow on outcomes for university reputations, retention rates and for course demand. For universities to prosper in a competitive education market, it is necessary that their students are equipped with relevant discipline knowledge and skills as well as generic, professional and transferable skills. University needs to produce graduates who are work ready and who have had 'hands on' industry and personal experience and confidence. The increasing costs associated with gaining a higher education have also reinforced the importance of developing graduates' employability. Higher education is called to account for success in the employment of its graduates (Eraut, 1994). From a theoretical point of view, it was generally agreed that graduates are adequately prepared for industry because of the comprehensive curriculum; however, from a practical point of view, it was acknowledged that graduates needed further 'on-the-job' training once they are working in the industry.

At the end of a course at university, students would have built up a set of employability skills that they have learned through different teaching and learning strategies throughout their course. DEST (2002, 2006) lists communication, teamwork, problem solving, initiative and enterprise, planning and organisation, self-management, learning, and technology as skills that the students would gained at the conclusion of a university education.

To address both the ICT skills shortage and graduate employability issues, the School of Information Systems at <<*deleted for blind review* >> introduced a professional practice program as part of its Bachelor of Commerce course. Although work-based training or work-integrated learning programs are not new, programs such as this may help restore students', teachers' and parents' confidence in ICT courses and careers, and also provide students with an opportunity to practice and develop employability skills in professional settings.

PROFESSIONAL PRACTICE PROGRAM

The professional practice program which is also known as work-integrated learning (WIL), industry based learning (IBL), cooperative education, internship, student placement and work practicum, is a collaborative effort between educators and industry to improve student transition from education to work and to improve the employability of graduates. Work-Integrated Learning or Professional Practice is also a terminology that is used to describe educational activities that integrate theoretical learning with its practical application in the workplace. The benefits of WIL or Professional Practice `are numerous and well-documented (Harvey *et al*, 1997), and research has identified a shift in the objectives of higher education to now embrace learning in a practice based environment (Cagle & Kilbourne 2000). Learning does not only take place in academic settings; through work placement students can benefit from experience in a workplace environment.

A professional practice program needs to be relevant primarily to the student's area of academic study and the student's career aspirations. The associated activities involved in professional practice need to have definable academic underpinnings with the knowledge and skill base of the education program that is being pursued. Professional practice program provides students with opportunities for the application of theoretical knowledge in an industry setting and professional environment. As students are placed in a professional environment, they must exercise soft-skills such as interpersonal and communication skills, teamwork skills, organisation skills, research skills; and other work-related skills such as project design and meeting agreed timelines (DEST 2007).

Professional Practice Program Benefits

Professional Practice programs provide a range of benefits to students, academic institutions and industry partners. From a student's point of view, this program is an integrated approach of transforming theory into practice and at the same time addresses employability skills. This program allows students to work in a setting in which their theoretical knowledge is put into practice, and develop an awareness of workplace culture and workplace networks. It provides an opportunity to develop a range of personal attributes, include enhanced employment prospects. The students can gain confidence and are able to develop and improve "soft" skills such as communication, human relations, email and writing skills, punctuality and

attendance, team work, leadership and career development. They also further develop a wide network of professional contacts. The students can also gain an appreciation of the fluid and rapidly changing world of work and further assists in developing career strategies, an awareness of opportunities, and a portfolio of work experiences.

The benefits for academics include the opportunity to see their students working in their subject area of practice, providing the satisfaction of seeing students mature and develop their skills. Academics also benefit from the establishment of links with a wide range of employers, who have the potential to bring a fresh approach to higher education institutions and to ensure that commercial or industry-related course content is relevant. Such links can even extend to encourage employers to participate in course validation and in the development of subject areas and presentation of guest lectures. Collaboration with past employers of placement students may also provide an opportunity to create and tailor innovative or more applicable work experiences. Academics may also develop their expertise in assessment methods by working with employers who have experience in assessing 'employability'.

Industry partners benefit in the area of recruitment, as they are able to access the most able students prior to their graduation. There are corporate social responsibility benefits as they are supporting the students in the area of professional development. This can also lead to a feeling of personal satisfaction as employers are able to assist students' by relating their own personal achievements. The industry partners play a vital role in that they will not only boost the confidence of students but also allow them the opportunity to experience the reality of working as an IT professional.

However, while the programs may deliver a wide range of benefits, organising such programs is time consuming for universities and employers. In order to provide an effective practicum program, the program needs to provide a meaningful experience (Harvey *et al*, 1997), and the activities should provide an experience of the workplace application that is intentional, organised and is recognised by the organisation to ensure meaningful learning outcomes for the students. These learning outcomes need to be both transferable and applied. The practicum should be productive, where the student does real work encompassing a social and economic value or a definable benefit to the employer. The placement can be measured by either outcomes or assessment. Furthermore, the program should be structured, with formal monitoring, supervision, direction and assessment. One of the challenges of implementing this program is to ensure that the industry partners are willing to meet the universities' requirements of supervising and assessing the students in their workplace.

A key notion about learning at work is that it is closely related to "individuals (subjects) apprehending experience, reasoning, or logically thinking through their work experience and giving that experience 'meaning'" (Garrick, 1999:226). A well conducted program will involve supervision by both the academic institution and the workplace. Feedback and assessments by the workplace supervisors would give a good account of a student's employability skills. This would give students valuable and constructive feedback about areas for development. According to Forbes (2003:2), "successful work-based learning is directly related to the educational management" and "allows the student to develop knowledge, skills and attitudes that enhance their employability profile".

THE PROGRAM

<<*deleted for blind review*>> University's teaching and learning programs seek to create opportunities for students to acquire knowledge and skills that can be applied in the community. The community expects that university graduates are people who "can do"' as well as "'know how" (Stephenson & Weil, 1992). <<*deleted for blind review*>> University recently endorsed the adoption of the "Triple-I" curriculum model. This means that, in addition to student achievement of <<*deleted for blind review*>> University's nine graduate attributes, there are three main aspects of the curriculum which includes (1) Industry, (2) International or Intercultural, and (3) Interdisciplinary. With this, <<*deleted for blind review*>> University values the inclusion of work-integrated learning components in its degree programs and is working towards facilitating its graduates' transition into the workforce. Table 1 gives a description of the Triple-I curriculum.

Triple-I	Description
Industry (Graduate Employability)	Achievement of all <<*deleted for blind review*>>'s graduate attributes, provide students with comprehensive and coordinated opportunities for work-integrated and career development

	learning, scenario-based problem-solving, and critical reflection on real or simulated work-based experiences related to their course and aspirations.
International (Global Citizenship) or Intercultural	Achievement of <<*deleted for blind review*>>'s graduate attributes of international perspective and intercultural understanding throughout the course and provide students with opportunities to demonstrate cultural competence and consider issues from a global perspective, and respect and value diversity and social justice.
Interdisciplinary	Provide students with rich educational choices beyond the narrow confines of a single discipline, including opportunities such as achieving interdisciplinary majors, working in cross-disciplinary or inter-professional teams to solve complex problems.

Table 1: Triple-I Curriculum (<<*deleted for blind review*>>, n.d.)

The objectives of the Triple-I curriculum are addressed by the professional practice program implemented during Semester One, 2008 at the School of Information Systems within the Business faculty at <<*deleted for blind review*>> University. This program offers a multi-disciplinary learning experience by providing students with identifiable practised-based learning and work-integrated learning opportunities in a unit called IS Professional Practice 300. This unit earns credit points towards the Bachelor of Commerce (Business Information Systems) and the Bachelor of Commerce (Business Information Technology) single majors and the Bachelor of Commerce (Business Information Technology and Systems) double major. High achieving students are invited to apply for admission to the program, as places are limited and competitive. The students are selected after a rigorous interview process with the institution's academics. The program is supported by the Australian Computer Society Foundation (ACSF). The ACSF agreed to offer assistance and designed a model where industry sponsors commit to a minimum of $10,000 to support a 16 week practicum. In addition, the student receives student memberships of the Australian Computer Society and YoungIT, and their associated benefits.

Unit Aims

The Professional Practice unit aims to provide students with practical experience in the work force, and in doing so to prepare them for future full-time employment. The unit aims to provide students with an understanding of the IS/IT industry by combining practical experience with academic investigation. This unit also aims to provide a solid foundation for the student's career.

The Professional Practice unit enables the students to access the wealth of knowledge and experience that industry partners can provide. It further gives the students different perspectives to which they may not have already been exposed to and enables them to develop professional relationships through industry partners; it also enables exposure to different industries and levels of experience. Participating students also get a taste of the "real world" by practicing their skills in a real organisation rather than just working theoretically in the classroom.

On completion of this unit the students have completed a minimum of 480 hours work experience with an employer in an IS/IT related capacity and gained an insight into the application of IS/IT in the workplace. The students spend four days per week at the workplace and one day per week with the unit coordinator. Due to the unique nature of each work placement it is impossible to provide a canonical list of industry-specific skills developed by each student; however, typical skills include systems analysis and development, ICT infrastructure design and maintenance and user service and support. Students also develop professional employability skills such as teamwork, self-organising and management skills, interpersonal and communication skills, and reliability. Another outcome of this unit is that students prepare a portfolio of professional work and a curriculum vitae for presentation to future prospective employers.

PROFESSIONAL PRACTICE EXPERIENCES

The students who were selected to participate in the program attended an induction workshop with the unit coordinator and their host company. Discussions were held between the unit coordinator and the host company to ensure that tasks provided to the students will result in meaningful learning outcomes. Besides the induction workshop, the students were asked to attend a Professional Skills Workshop that covers topic

areas such as interviewing skills, communication skills, and Australian workplace culture and business etiquette.

At the completion of the 16 week program the students were given time for reflection and then participated in debriefing and monitoring to ensure they had achieve a suitable and quality outcome for their endeavours. This highlights work conducted by Harvey, Moon and Geal (1997) on practicum reflection and debriefing.

In order to collate and learn from the experience of the program, semi-structured interviews were conducted with the four participating students, the lecturer, the course coordinator, the language specialist, the administration manager and the industry partners. The data collected was primarily qualitative in nature.

Student Experiences

Four participating students were interviewed separately at the end of their placement to ascertain their thoughts on the program's strengths and weaknesses. Email is also used as follow-ups. The students were asked to assess their experiences with the program, and to elucidate any problems, achievements, positives and suggestions that they may have. They were asked to evaluate the program critically and to make suggestions for positive improvements and to ascertain if they had achieved their desired learning outcomes. Three out of the four students were international students, with two female and two male students.

The first student, an International student, indicated that she had learned a lot from the experience, specifically she had been taught to use new software programs and hone her technical skills. This assertion confirms that industry requires that most graduates needed further training once they are working in the industry. This student's confidence had been built particularly when communicating with people. She also found that she had the opportunity to meet a network of contacts which she felt would be of benefit in her on-going learning of the work culture and environment. She found the experience gave her the opportunity to consider other career paths that she had not previously considered. She was surprised by the way in which Australian born workers relate in the workplace, finding that the workplace was relaxed and that this enabled her to feel at ease when speaking to those in more senior positions. She also stated that she was surprised by the lack of females working in the ICT industry. She has also found interesting job prospects in this industry and this experience had certainly given her a new focus and had certainly de-mystified the careers in IT. At the end of this program, this student was offered employment at another organisation.

A second participant, also an International student found the experience valuable. He was placed with a large company and found his experience varied and enjoyable. His technincal skills have improved and he has found that he has learned a lot about business practice in the Australian work place. He commented that in his home country he finds that there is not as much emphasis on prioritising tasks as he found in the Australian workplace. He acknowledged that through prioritising work tasks, he had time to reflect and utilised his organisation skills carefully. He found that he was dealing with important work tasks and issues rather than being busy with mundane and less than important tasks. He suggested that he would like to see a longer lead-in to the placement with the communication workshop being extended from its current two days to approximately two weeks with a greater emphasis on cultural difference. He further suggested that he would have liked to have a workplace mentor and regular discussions with academics and fellow practicum students. This student was offered employment at the same organisation at the conclusion of the program.

A third student, an Australian born participant stated that he felt it "was the best way to wrap up a degree" and he enjoyed the experience greatly. He believed the theoretical principles and applications of those principles taught in class had become clearer as a result of this program. He felt that he would have liked a mid–semester assessment process however rather than having to wait till the end of semester for a final assessment. He also stated that he would have liked the placement to have been longer, however he learnt a lot from the experience and found it useful to his career goals. As a result of this work placement, he was offered a job with the same organisation.

The final participant, an International student, found the experience enjoyable and challenging. She would have liked to have had longer communication workshop before commencing her placement as she found the workplace environment and practices a bit of a culture shock. Interactions with older and more senior staff she found to be very relaxed in comparison with her country's workplace where a more formal attitude

to senior persons is noted. She learnt a lot about business processes and practices and worked in her favourite area of web design and this reaffirmed her career goals. She also noted that she is now a lot more confident and willing to explore new ventures. This student was offered a short-term employment to finish off the project on hand. While working, she has also enrolled in a Masters program in Information Systems.

The above experiences are aligned with <<*deleted for blind review*>>'s Triple-I curriculum model of (1) Industry, (2) International or Intercultural and (3) Inter-disciplinary. All four students experienced work-integrated and developmental learning, they had the opportunity to demonstrate and practise intercultural awareness in the work place, and the students worked in a multi-disciplinary setting which enabled them to work in professional teams solving business and IT problems.

Language Study Skills Specialist Experiences

As part of this program, a two day preparatory workshop was developed which included activities to develop students' spoken, written and intercultural communication skills. The two day program was divided into a series of sessions, each focused on a specific aspect. The atmosphere was relaxed and informal, so that students were not inhibited in any way. A pre- and- post survey of students showed that they thought the preparatory workshop had been useful in making them aware of (i) the importance of communication skills in the workplace; (ii) the need for communication in workplace social interaction; and (iii) the need to improve their fluency in English.

They also indicated that there had been a series of benefits to them personally from the workshop. The students indicated that the workshop had increased their fluency and confidence, particularly with interpersonal communication. Moreover, they had gained a better understanding of Australian English and Australian cultural aspects. The workshops had enabled them to experience unfamiliar situations in a non-threatening context and they felt this had helped them to develop without a great deal of anxiety.

In their final presentation at the end of their professional practice program, all students spoke in very positive terms about their experience. Five months after their induction workshop they all looked much more confident and pleased that they had managed so well; their communication skills were also much improved. Their placement in a real-life work environment, with some of the concomitant 'fear of the unknown', had proved invaluable for them.

Course Coordinator Experiences

The professional practice program enhances the student's employability, communications, problem solving, teamwork, and interpersonal skills. This program has received strong support from the industry and it is also aligned with the <<*deleted for blind review*>>'s Triple-I curriculum. In its short life cycle this program has provided positive impacts for students, staff and industry partners. Specifically for Australian students, this program gives them the opportunity to gain practical knowledge and the work experience which ultimately leads them to better job prospects locally and globally. This program gives the university an edge to attract Australian students to enrol in an ICT course. This will transpire into recruitment of local students and thus decreasing skills shortage of local ICT students. On the other hand for International students, not only will they enhance their practical work experience, they will also gain new knowledge of the Australian culture, increase confidence and their ability to interact with students and workers from other cultures. This program undoubtedly offer the students an opportunity to experience and realise the university's Triple-I curriculum.

Lecturer - IS Discipline Specialist Experiences

Although this program was supported by the ACS Foundation and the industry, the lecturer who was involved in the implementation of this program found it challenging to convince industry partners to participate in supporting the students in the professional practice placement. Due to the fact that there was a financial commitment involved, some of the organisations approached appeared to have a negative attitude. There also appeared to be little interest in some organisations in nurturing students or graduates, despite acknowledging the shortage of people with ICT skills in WA. The lecturer commented that "even when prospective partners were interested, the program often ended up in the 'too hard basket', so it was a real relief when the last student was placed".

The lecturer noted that he wanted the students to be as well-prepared as possible, so a training workshop was arranged to cover topics such as interview skills, communication and cultural issues before the placement started. Even with this preparation, he noted that there were some initial problems with the way some students interviewed with prospective industry partners. It is fairly unrealistic to expect a short training course to make much difference to a student's English language skills or to change the way they interact, so there are two things that can be done and learned from this. First, for these skills to be more closely monitored throughout the degree, and second, for industry to know what they expect from students.

However, despite these initial obstacles, the students blossomed during the program. The lecturer noted a major change in the students' confidence; all developed from students who were not really sure of themselves to professionals who are willing to take on a wide range of tasks.

Each of them was required to keep a learning journal and report to the lecturer on a weekly basis and during these contacts he noticed that all of them matured during the 16 weeks. The weekly meetings with the students were conducted either in groups or individually. This flexibility allowed the students to share experiences and advice, and the group sessions were generally more beneficial for students than one-on-one meetings. In future the lecturer intends to formalise this aspect of the program.

Another observation was that the placement program really helped demonstrate "life-long learning" skills. All of the students were forced to learn new things in each of the placements, and without coursework to scaffold this they were forced to figure it out themselves. They all coped very well; however, the lecturer felt that some weaker students may have encountered more difficulties.

As is the case at a number of other institutions that offer WIL programs, the students who participated in this program were high-achievers. The question remains whether it is the less-able students who would most need the developmental opportunities offered by a WIL placement. However, the lecturer, who followed the development of these four students closely, felt that programs like this need to enforce entry requirements, otherwise there is a real risk that students will not be able to cope with the requirements of industry partners.

Administration Manager Experiences

The Administration Manager observed that the students benefited from their experience in working as a team member and have developed excellent analytical and problem solving skills and like the lecturer, noted that they have developed increased self-confidence. The students have developed further interest regarding other job possibilities in the ICT industry.

A major challenge appeared when searching for suitable workplaces to host the students. The workplaces are required to have relevant work to ensure the students receive appropriate experience and as an inappropriate organisation can turn the student off. Similarly, an inappropriate student placement could deter host organisations from supporting future student placements, so to ensure ongoing industry partner support, the host organisation must be supported to achieve a satisfactory placement standard and to ensure that the outcomes will benefit both the organisation and the student.

In order to find suitable placements the Administration Manager liaised with the university careers counsellors to identify suitable host organisations. After these organisations had been identified it was then necessary to phone or email stakeholders individually to try to arrange student placement. The Administration Manager reported that although three of the four students in the program were on student visas, many organisations indicated a preference to place domestic rather than international students. The student's visa status was a major concern in that the employers were concerned that the prospect of on-going employment of these students may be difficult. While all of the international students expressed a clear intention to stay in Australia after completing their studies, considerable time was spent reassuring the host organisations that they were very unlikely to be "left in the lurch" at the conclusion of the program.

The 16-week period involved in placing the students was also a matter of concern to all of the industry partners involved. They would prefer a longer placement that would give a more favourable outcome to them. One organisation indicated that they would like to work with the student more closely before the start of the placement as this would give the employer an opportunity to match the student's strengths and the area of work, while others suggested a preparatory or induction session of one to two weeks at the workplace to give the student an opportunity to be familiar with the other employees and the professional surroundings.

Given the shortage of ICT skills, some industry partners were interested in recruiting these students and felt that 16 weeks was not long enough to fully induct students into the organisation. It appears that the industry partners expected students to be "job-ready" – despite their student status.

In response to these concerns, arrangements are currently being made to have future students undertake a course in addressing professional and office skills, and the possibility of extending the duration of the program is being investigated. However, it is noted that constraints imposed by the university with respect to enrolment periods and deadlines for results submission may limit the ability to do so.

Industry Challenges & Achievements

Industry challenges include an uncertainty in taking on students for short term placement as they were unsure of associated benefits to them and they were concerned about having to make a financial outlay. This concern was short-lived and the participating industry partners' attitudes changed after working with the students.

All employers commented on the students' ability to adapt to the workplace environment, and on the students' agility and adaptability in learning a new IT tasks in a very short timeframe. Throughout the 16 week placement the organisations encouraged a culture of learning through explicitly valuing lifelong, independent education and providing support for learners. They gave the students real and authentic projects to work on and treated them as another employee. This culture or ethos permits organisations to act on opportunities and challenges in a coherent, consistent and unified fashion and is a critical link between the articulated strategy of higher education institutions and the actuality of assisting the students in achieving those goals (Harvey and Knight, 1996).

LESSONS LEARNED

The paper addresses the introduction and implementation of a professional practice or work-integrated learning program in a degree course. To run a successful and effective program, the experiences and the lessons learned from the program were valuable and should be shared with the education community. Based on the experiences of the program, the following findings emerge with regard to the introduction and implementation of a professional practice program at <<*deleted for blind review*>> School of Information Systems:

(i) As students were given the opportunity to practise theories and skills learned from their degree in the workplaces, they should attend a preparatory workshop that covers topics such as interviewing, communication, time management and organisational skills. It is also important that relevant workplace culture be included as part of the workshop.

(ii) Industry partners require students that are as "work-ready" as possible, and therefore the university must either have work ready courses as part of the curriculum or work closely with the industry to help measure and assess their expectations of students.

(iii) The university must establish strong relationships with professional bodies in order to facilitate finding placements. The university must also build on its relationship with internal areas such as language and careers centres.

(iv) The students who participated in the program were able to develop their employability skills. In order for this program to be sustainable and successful, employers, professions and professional bodies must take an increased and shared responsibility to work with universities to provide work-based training.

(v) As a result of the program, the participating students may want to be involved in the mentoring programs provided by the School. These students may increase and strengthen the understanding of their intended profession and build relationships with fellow students.

(vi) The program engages both university staff and industry partners in developing students, and therefore students should receive direct feedback about their performance from both the university and the industry partner.

(vii) The time costs for both the students and the lecturer involved were considerable. This required a commitment from both parties to ensure good time management practices.

(viii) Finding time for employer to supervise students adequately is also a concern. Even the most capable and confident student must have some degree of supervision in the workplace. Work-integrated learning programs are often difficult to supervise and therefore it is necessary to limit the number of student participants sent to each organisation.

CONCLUSION

The acute skills shortages in ICT and the low enrolment of ICT students have led the School of Information Systems at <<*deleted for blind review*>> University to introduce and implement a Professional Practice unit into its bachelor degree courses. This program is beneficial at providing students a practical environment to enhance their theoretical knowledge, thus enhancing their overall course experience. The students who participated in the program at <<*deleted for blind review*>> University reported that they have increased their confidence and the program had enhanced their ability to interact in both the workplace and in their personal lives.

This paper reports the student, industry, language skills specialist, course coordinator, lecturer, industry, and administration manager perspectives of the program. One of the main drawbacks of the program is that it requires dedicated university academic and administrative staff and resources. However, the benefits of the program surpass all drawbacks but there remain various challenges associated with the program. These challenges were highlighted and addressed in the paper. The program has a direct impact in enhancing a graduate's employability skills. In this regard, for this program to work effectively, there must exist a shared and co-responsibility amongst universities, industry partners and professional bodies.

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