

# TRANSFERABLE SKILLS AND GRADUATE ATTRIBUTES: ANALYSIS OF HEALTH SERVICES MANAGEMENT STUDENTS' REFLECTIONS ON AN INDUSTRY-BASED PLACEMENT

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## ABSTRACT

### PURPOSE

Work Integrated Learning (WIL) supports learners to acquire transferable skills and graduate attributes for employability through placements in settings aligned with their future profession. The purpose of this paper is to explore, student reflections on the attainment of transferable skills and university graduate attributes on health service management (HSM) work integrated learning placements in one Australian University.

### DESIGN/METHODOLOGY/APPROACH

The study used data collected from e-portfolios from two cohorts of students who completed placements in the health industry. Structured e-portfolios recorded student reflections, these were analysed both quantitatively and qualitatively. To analyse the reflections, content analysis and mapping of narratives to transferable skills and University graduate attributes was used to evidence their attainment by learners on placement.

### FINDINGS

The data demonstrated that students attained transferable skills and university attributes and reflected upon them in their e-portfolios. However, not all transferable skills and attributes were evidenced in student portfolios. Ethical thoughts and actions, respect and capability with First Peoples, citizenship and social responsibility, negotiation and conflict resolution, research and organizational membership were not comprehensively demonstrated. Reflective skills and learning how to reflect could be further emphasised and practiced within the curricula.

The outcomes of the study can be used to strengthen the focus of reflective e-portfolios, inform the development of HSM curricula and support academics teaching in WIL programs to further clarify expectations on reflection.

### ORIGINALITY

This paper is of interest to universities aiming to equip graduates with transferable skills and the attributes to thrive in complex and rapidly changing work environments. The study identified further research opportunities that could inform the design and content of e-portfolios to demonstrate the skills attained on placement.

### KEYWORDS

Reflective practice, transferable skills, graduate attributes

## INTRODUCTION

Employment after attaining university qualifications is the aspiration of every graduate. In Australia, the government funders of higher education institutions expect universities to produce work-ready graduates that satisfy the demands of employers and the expectations of the graduates themselves [1]. Graduates must be able to evidence the attainment of transferable skills and attributes acquired throughout their learning to be successful in gaining employment. Work Integrated Learning (WIL) aims to prepare graduates who are work-ready and equipped with transferable skills and graduate attributes by combining theoretical knowledge with the practice of professional work [2].

Many education providers now recognise the importance of WIL courses to support student employability and a university on the east coast of Australia (hereafter called 'the university') has offered courses to health service management (HSM) students since 2009 [3]. HSM students have completed placements in a broad range of settings and worked on diverse projects including workforce planning, strategy and policy development, consumer engagement, governance, electronic patient records, informatics and health service accreditation [3,4].

According to Cordier et al [5]. and Stoten [6], an e-portfolio can be used by educational institutions to assess students' reflections on their learning and experiences on placement. Using an e-portfolio to record reflections, thoughts and experiences enables students to more accurately document their employability and transferable skills [7]. An e-portfolio supports learners to record their professional and personal progress [6] and to provide an opportunity to highlight their transferable skills to prospective employers [8,9]. In the university studied, HSM students are assessed using a structured e-portfolio, deployed as a PebblePad™ Workbook. Pebblepad™ is a tool that can be used to document and substantiate skills, new knowledge and behaviours, personal reflections on competencies or capabilities relevant to the students' profession and achievement whilst on placement [10].

Employers are increasingly attracted to graduates with both technical as well as transferable skills [11,12]. Transferable skills are skills, values and characteristics that can be used beyond the context of academic study and

include critical thinking, leadership, communication, and cultural awareness [13].

## CONTEXT

At the university studied, graduate attributes form a foundation intended to produce 'remarkable graduates of influence' [14]. The graduate attributes that the University aims its graduates to attain are that they are knowledgeable and skilled with critical judgement, effective communicators and collaborators, innovative, creative and entrepreneurial, socially responsible and engaged in their communities, culturally capable when working with First Australians and effective in culturally diverse and international environments [15]. The graduate attributes at the university are underpinned by transferable skills and can be developed through assessment, extra-curricular activities and learning experiences including WIL [14]. The university defined transferable skills are: 1. Applied literacies, data literacy, digital and information literacy, 2. Career and self-management, 3. Communication and interpersonal skills, 4. Citizenship and social responsibility, 5. Ethical thought and actions, 6. Global and cross-cultural perspectives, 7. Leadership, continuous learning, and problem solving, 8. Negotiation and conflict resolution, 9. Organizational membership, 10. Research, 11. Respect and capability with First peoples and 12. Teamwork and collaboration [15]

The HSM program at this university, embeds transferrable skills acquisition into courses throughout the curriculum. One of the channels to further develop student employability skills is the WIL course where students can learn by completing projects of value for health industry partner organizations. Students complete a WIL to become more relevant in their chosen industries [16] and the placement assists students to reduce the differences encountered between educational and work settings [17]. Further WIL provides the opportunity to apply the theoretical knowledge learned at university in the workplace [18]. WIL is intended to provide students with an opportunity to foster mastery and employability and active engagement with industry [19]. The HSM WIL is a capstone course or courses, and students can complete one or two substantial industry-based WIL placements of 4 days a week for 13 weeks with attendance at a weekly academic workshop [3,4,20]. The WIL is compulsory in the Advanced Master's degree program and can be taken as an elective in the Master's degree program.

The Pebblepad™ workbook is introduced to students during orientation and a specific workshop is held on reflection, how to reflect and its importance. In the workshop learners are introduced to Rolfe's Reflective Model, characterised by its simplicity and focus on three key questions The What, So What and Now What of experiences [21]. The model was developed specifically for health professionals and is used while on placement to learn from positive and negative experiences during the WIL [21]. Workbooks are a multi-page electronic resource, designed by the academic and can incorporate skills templates, evidence professional competencies, reflections and activity logs [10]. The student workbooks form part of the assessment in the HSM WIL course. Students document reflections on their experiences as well as situations where they have exhibited, improved upon, or learned a skill on placement. In reflecting, students make sense of their chosen profession and can showcase their personal and professional development during WIL [22]. The e-portfolio includes evidence such as a resume, LinkedIn profile and reflections on the acquisition of skills attained, graduate attributes and student growth during WIL. The intention of the e-portfolio is that it is a tool that can be carried forward after graduation and inform graduate preparation for employability, plan future learning needs and allow potential employers and professional organizations to see the skills and competencies obtained [7, 23].

We found limited research in the literature that described the application of e-portfolios to document graduate attributes and transferable skills in the discipline of HSM. The aim of this study was to analyse the reflections documented in the student e-portfolio during their health industry placements to understand the acquisition of transferable skills and graduate attributes.

## RESEARCH QUESTIONS

1. What are the university defined transferable skills acquired by HSM students as a result of their WIL experience?
2. How do the reflections of the HSM students on work integrated learning portray the acquisition of the University graduate attributes?

## ETHICS

Ethical approval was obtained for the study from The University Human Research Ethics Committee (GU Ref No:

2018/931). Participation was voluntary, participant information provided, and consent obtained from all respondents. Students could withdraw their consent to participate in the study at any time.

## RESEARCH DESIGN AND METHODOLOGY

A structured workbook was designed by the WIL academic convenor and each student given access to their own e-portfolio. The e-portfolio workbook included instructions relating to the completion of questions and expectations for recording their reflections. Students were tasked to record their experiences whilst on placement, reflect on their acquisition of skills, personal growth and to submit the e-portfolio for assessment.

Students who had completed a WIL placement from the Trimesters 1 and 2 2019 were invited to join the study. Participants were informed about the study aims and objectives. A participant information sheet was provided, where the study methodology was clearly explained. We advised participants that the data collected would be de-identified prior to analysis. Further, analysis would not be commenced until after students had completed the course and grades finalised.

## DATA ANALYSIS

Each PebblePad™ e-portfolio workbook was downloaded in PDF format. The PDF files were given a unique identifier and names removed. To assist the analysis a database was created using a Microsoft Excel spreadsheet and included demographic details, placement locations and narratives from the PDF files. Each student portfolio was read in detail. The items in the portfolio were discussed by the research team. Coding was approached using the following steps:

1. Questions from the workbook were mapped to the Griffith graduate attributes that the research team identified the questions aligned with and identified in the spreadsheet. See Table 1.
2. Codes applied to narrative data in the spreadsheet were derived from the list of transferable skills that the University aligned to each graduate attribute. See Table 2.

**TABLE 1: WORKBOOK STRUCTURE, CODING OF ITEMS TO GRADUATE ATTRIBUTES FOR ANALYSIS**

Workbook section	University Graduate Attribute			Questions in the Workbook
Section 1. Instructions				
Section 2. My Placement	Socially responsible and engaged in their communities	Culturally capable when working with First Australians	Effective in culturally diverse and international environments	<ul style="list-style-type: none"> <li>Name of workplace, supervisor name, key facts or points of interest, title of project</li> <li>Dates student read Code of Conduct and completed orientation</li> <li>Overall summary of WIL placement</li> </ul>
Section 3. Navigating the world of work	Knowledgeable and skilled with critical judgement	Socially responsible and engaged in their communities		<ul style="list-style-type: none"> <li>Personal SWOT analysis for placement</li> <li>Plan for addressing weaknesses during placement</li> <li>Explain your understanding of ethical conduct in the workplace</li> <li>Professional competencies to be focussed on during placement</li> <li>Reflections on the challenges in managing yourself on placement.</li> </ul>
Section 4. Interacting with people in the work workplace	Effective communicators and collaborators	Culturally capable when working with First Australians	Effective in culturally diverse and international environments	<ul style="list-style-type: none"> <li>Reflections on your interactions with people on your WIL placement</li> <li>Describe an instance where you communicated well to get the work done.</li> <li>Thinking about your WIL - what are some of the ways you can improve communication to get the job done?</li> <li>Describe the team you have worked in. Explain your role in the team.</li> <li>Explain from what you have learnt in your degree how diversity is important in the workplace. Reflect on your placement experience.</li> </ul>
Section 5. Getting the work done on placement	Innovative, creative, and entrepreneurial			<ul style="list-style-type: none"> <li>Explain how you have used course work, skills, knowledge, or theories gained during your HSM studies.</li> <li>Initiative and enterprise that contributes to innovative outcomes.</li> <li>List the technologies used and explain how on placement you learned about new technologies during your placement.</li> </ul>

Workbook section	University Graduate Attribute	Questions in the Workbook
Section 6. Career and work development	Knowledgeable and skilled with critical judgement Innovative, creative and entrepreneurial	<ul style="list-style-type: none"> <li>Describe your professional development during WIL</li> <li>Reflect on your experience during your WIL and explain what future professional development is needed as an emerging health service manager.</li> <li>Load a new version of your resume based on WIL.</li> <li>Include a link to your LinkedIn profile in the workbook</li> <li>Make a list of the transferable skills gained on placement</li> </ul>

**TABLE 2: CODES APPLIED TO WORKBOOK NARRATIVES**

University Graduate Attribute	University Aligned Transferable Skills Codes applied to workbook narratives
Knowledgeable and skilled with critical judgement	Applied Literacies (data literacy, digital literacy, and information literacy) Leadership, continuous learning, and problem solving
Effective communicators and collaborators	Communication and interpersonal skills Teamwork and Collaboration
Effective in culturally diverse and international environments	Global and cross-cultural perspectives
Socially responsible and engaged in their communities	Ethical thought and action
Innovative creative and entrepreneurial	Innovative, creative, and entrepreneurial

## RESULTS

Our results are divided into three sections: 1. participant demographics, 2. the university defined transferable skills documented during WIL placement and 3. the acquisition of the university graduate attributes.

Nineteen of twenty-six HSM students (7 males, 12 females) consented to participate in the study. Table 3 shows the breakdown of participant placement locations.

**TABLE3: PARTICIPANT DEMOGRAPHICS**

Placement location	No. participants
Government (e.g. health department)	3
Primary care setting (e.g. general or allied health practice)	4
Private Hospital	3
Public Hospital	7
Not for profit	2
<b>Grand Total</b>	<b>19</b>

**TABLE 4: TOP 5 UNIVERSITY DEFINED TRANSFERABLE SKILLS OBTAINED DURING WIL.**

Transferable Skills	Number of students who reflected on the attainment of the transferable skills during WIL
Communication and interpersonal skills	15
Career and self-management	10
Leadership, continuous learning, and problem solving	8
Teamwork and collaboration	8
Applied literacies: data literacy, digital and information literacy	6

Rarely mentioned as a transferable skill obtained during the WIL placement were ethical thoughts and actions, global and cultural perspectives, respect and capability with First Peoples, citizenship and social responsibility, negotiation and conflict resolution, research, and organizational membership. While these skills were not directly recognized as being obtained by the students in response to the explicit question, their PebblePad™ reflections showed that global and cultural perspectives as well as citizenship and

## TRANSFERABLE SKILLS OBTAINED ON PLACEMENT

Students were asked to record in the e-portfolio the “transferable skills you have obtained or strengthened during your WIL and an example of how you obtained or strengthened this skill,” the most recorded skills were communication, collaboration and teamwork, and career and self-management skills. Table 4 presents the top 5 transferable skills obtained on placement.

social responsibility, were discussed and reflected upon by the students with statements such as “diversity is the most important part of any workplace. Diversity exists in all forms; Respect everyone irrespective of any diversity” (student 11) and “I see ethical conduct as guiding the performance of my team to provide and improve upon safe and quality healthcare whilst guarding the wellbeing of my peers” (student 7).

Negotiation and conflict resolution skills were demonstrated in the student reflections however perceived as a communication skill. Student 8 stated "Two members of the project team came to me to seek assistance in regards to a team member who they believed was not pulling their weight appropriately; I employed Active Listening Skills and enabled the two members to express their concerns; I communicated to both members the importance of team work, pros and cons of different members and it was up to them to help include all

members and be open to strengths and weaknesses of each member".

### UNIVERSITY GRADUATE ATTRIBUTES

Reflections from workbooks demonstrating the acquisition of graduate attributes were also analysed as we examined the narratives to identify the transferable skills that underpin them. Exemplar quotations from the reflections are shown in Table 5.

**TABLE 5 UNIVERSITY GRADUATE ATTRIBUTES AND TRANSFERABLE SKILLS**

Column 1 University Graduate Attribute	Column 2 Transferable Skills	Student reflections – exemplar quotations
Knowledgeable and skilled with critical judgement	Applied Literacies data literacy, digital literacy, and information literacy	I always tried utilizing the creative templates and designs for making reports, posters and documents that attract attention of readers. I always tried proposing more than one options for my supervisor so that she could select the most appropriate one. (Student 3) All the strategies proposed were formulated by me- based on literary evidence, my understanding of the Genomics project and regular inputs on Queensland Genomics' requirements. (student 15)
	Leadership, continuous learning, and problem solving	Working individually on the project and being given an opportunity in making important decisions and suggestions for the project. (student 2) I helped one of the new employees understanding the basic use of Nookal as I saw him struggling with the process. (student 5) As a leader I ensure my team know that our team make up a larger team that are all parts of driving towards a common goal. (student 8)
Effective communicators and collaborators	Communication and interpersonal skills	I discussed with my supervisor about the core needs of this task, what was he actually looking for and what should be done. (Student 4) When I did not understand something, I emailed supervisor and asked for an appointment. The supervisor talked with me and gave me some points. If I didn't understand, she gave me an example until I understood it. I have learned from this: ask questions; be more active. (student 6) Proper communication needs to be done before getting the help of others. If dealt with courtesy and with good oral communication, a lot can be accomplished. (Student 9)
	Teamwork and Collaboration	I believe I work quite effectively in a team - I respectfully listen to what others have to say, notice how they contribute and offer my contributions and ideas in a positive and considerate manner. (student 7)



Column 1 University Graduate Attribute	Column 2 Transferable Skills	Student reflections – exemplar quotations
		<p>I worked in a team of quite a few people. Everyone helped me with my project. I asked for help whenever, I needed. And I am happy to say that I received help, whenever I asked for it. (Student 11)</p> <p>My team was very supportive and the understanding between us was good, regularly we communicated through emails, message, or call. I used to discuss my ideas and take feedback on it. (student 14)</p>
Effective in culturally diverse and international environments	Global and cross-cultural perspectives	<p>Diversity in the workplace gives an opportunity to learn and understand different cultures and taught me how to deal with people from diverse groups. (student 2)</p> <p>Working in a group or team where there are people who belong to different cultures, backgrounds, and ethnicity, is a completely different and pleasant experience that help you learn about different cultures. Gaining new knowledge and interesting histories of different cultures. I have learned that respecting every person regardless of their background and culture is important. (student 4)</p>
Socially responsible and engaged in their communities	Ethical thought and action	<p>Before starting surveys in Metro North area, my supervisor and I checked the Code of Ethics to make sure that the vulnerable population groups are approached appropriately, and their rights and dignity are maintained during survey activities. (student 14)</p> <p>As maintaining confidentiality, I did not leave any information on the computer that I have been using at the library. I have always checked and deleted every information I have downloaded and used from the computer at the end of each day. (student 16)</p>
Innovative creative and entrepreneurial	Innovative, creative, and entrepreneurial	<p>I always tried utilizing the creative templates and designs for making reports, posters and documents that attract attention of readers. I always tried proposing more than one options for my supervisor so that she could select the most appropriate one. (Student 3)</p> <p>One of an amazing opportunity was encountered by me. After I completed my portal design, I needed someone to test it. During that period two new recruits were being hired so I took permission from my workplace supervisor to take their help to test my portal. (student 5)</p>

### TRANSFERABLE SKILLS DEMONSTRATED IN STUDENT REFLECTIONS

Students reflected that communication and interpersonal skills; career and self-management; leadership, continuous learning, and problem solving; teamwork and collaboration and applied literacies: data literacy, digital and information literacy were acquired on placement.

Some transferable skills were not widely recorded in student reflections. These were ethical thoughts and actions, respect and capability with First Peoples, citizenship and social responsibility, negotiation and conflict resolution, research and organizational membership.



## COMMUNICATION

Most students (15/19) talked about the benefits of acquiring both written and oral communication skills and becoming comfortable raising issues and ideas with their supervisor and communicating with colleagues to achieve outcomes. These future health service managers noted their weaknesses in communicating as part of their personality such as being reserved or shy with one student stating "Having an introvert (ed) personality makes me feel shy sometimes. I just want a quiet and safe corner where nobody could see me while working" (student 3). This can lead to "difficulty in asking questions" (student 17), "lack of confidence in presentation and public speaking" (student 16) and "difficulty in initiating conversations" (student 15). By attaining, practicing, and improving their communication skills through their WIL placements and being placed in certain situations improvement in communication skills was noted. Students stated that their WIL experience "helped in overcoming the fear of the audience" (student 2) and to "overcome weaknesses by stepping out of my comfort-zone" (student 10). Others expressed how their communication skills helped overcome weaknesses in other areas, "being an international student, there is an increased level of difficulty and effort to adapt to a new country and work culture. I was able to overcome this by displaying my interest in understanding and adapting to a new culture and striking (up) conversations with people to understand their likes and dislikes." (student 1).

## TEAMWORK AND COLLABORATION

The WIL placement further enhanced student understanding of teamwork and collaboration and how it can build new skills and impact outcomes. With students stating that during their WIL placement they experienced the "most inspiring thing of teamwork that I have witnessed" (student 3) and that "teamwork promotes ideas of shared vision and leadership attributes in all team members which I have actually (now) experienced" (student 4).

While most of the students (18/19) reflected upon teamwork and collaboration during WIL positively, one reflection stated, "I didn't consider myself as a team member during my WIL" and that "working together or in close proximity with others does not necessarily mean that you are in a team" (student 9).

## LEADERSHIP, CONTINUOUS LEARNING, AND PROBLEM SOLVING

Working in project management roles, students could demonstrate or develop their leadership and problem-solving skills and reflected that the placement had "changed my perception on preparation" (student 1). Others stated, "learning that I needed to be flexible and adaptable" and that "being over-prepared to take advantage of opportunities, these problems were (able to be) overcome".

## CAREER AND SELF-MANAGEMENT

The students who reflected on this skill in their e-portfolios focused primarily on project and time management. Punctuality was a common theme with multiple students considering it a challenge to overcome and a personal point for improvement. Exemplified in this quote "I was always punctual if due to some reason I was late I would always inform my supervisor. (and) being dependable I was asked to open the clinic" (student 5).

## GLOBAL AND CROSS-CULTURAL PERSPECTIVES

Many of the students (15/19) described their experience of diversity in the workplace as "working with people from different cultures" (student 3), "working with people from different countries" (student 6) or "interacting with people from different backgrounds" (student 12). Student 19 explains how his experience during WIL placement gave him a better appreciation of diversity "One scenario happened when I was practicing at the hospital is about language. There are many patients from many countries coming to the hospital. One patient who can only speak Spanish (was) admitted to the hospital, but there is no Spanish translator available at the hospital. Therefore, the administration manager sent emails to all staff to ask for help if anyone can speak Spanish. Luckily, one staff can speak Spanish and was able to help for translation. This shows that the diversity can help the hospital to increase the quality of care."

## CULTURALLY CAPABLE WHEN WORKING WITH FIRST AUSTRALIANS

This university attribute and associated skill of 'respect and capability with First People,' was a clear deficiency in student reflections. We observed that unless the student had direct engagement or attended a placement for an organization that worked with the Indigenous community, the PebblePad™ workbook reflections in this sample rarely mentioned how they embodied respect and capability for

First People during their placements. Despite the availability of a specific learning module available to students to prepare them and improve cultural competency students did not evidence this achievement in their reflections. The workbook asked students to reflect on diversity and cultural competence but did not contain a specific question regarding Indigenous people and this is a learning for future versions.

## ETHICAL THOUGHT AND ACTION

Students were asked in their Pebblepad™ Workbooks to explain their understanding of ethical conduct in the workplace and evidence their workplace Code of Conduct. Student reflections on ethics were generalised with reflections such as "it is important to be respectful" (student 1), "doing what is morally right" (student 8) or "adhering to professional standards and the code of conduct" (student 12). Most students (13/19) used confidentiality as an example to explain ethical conduct in the workplace but rarely explained how they have applied or practiced this or the complex issues that may arise in relation to confidentiality. Reflections painted the concept of confidentiality with descriptions such as the "ethical obligation to protect all private and confidential information of patients and staff and refrain from any data or information breach issues" (student 4) or related them to the legal implications of confidentiality "patients medical information should be kept confidential, disclosing the information without their permission is not only unethical but also a crime." (student 5) or "violating a patient's confidentiality can hurt the patient and have legal an ethical consequence" (student 6).

Some student reflections gave deeper understanding of ethical behaviour in the workplace by sharing individual experiences. Student 9 shares "my personal experience of an ethical issue carried out a study on the completion of orientation modules by locums. Apart from at work I met some of the locums at social occasions or at the student accommodation center. As a part of the study, I had to check whether they had undergone the orientation modules, as necessary. When I met some of the locums, I knew that they have not completed their orientation. But during interviews they were quite confident that they had completed their modules. In these instances, I often wondered should I tell them about it or not? If I tell them, they might go back and do some of the modules. But on the other hand, it can jeopardize my personal relationship with them. If I do not tell them, I would be risking the lives of patients. This always led to an ethical dilemma."

When reflecting on diversity and ethics, the experience of the students was generally positive and they explained how they adapted to the cultural and other differences in the Australian workplace and students described the practical methods they used for example, "being an international student, there is an increased level of difficulty and effort to adapt to a new country and work culture. I was able to overcome this by displaying my interest in understanding and adapting to the new culture and striking conversations to understand their likes and dislikes" (student 1).

## DISCUSSION

We applied a novel approach to utilize reflections collected in an e-portfolio to understand the transferable skills and university graduate attributes acquired by HSM students on WIL placements.

### LINKING GRADUATE ATTRIBUTES AND TRANSFERABLE SKILLS

The university aspires to produce graduates of influence with demonstrable attributes equipped with transferable skills for the 21st century [15]. We also know that graduates will have multiple careers and opportunities in the future and professionals will be lifelong learners, developing new skills and attributes in line with changing requirements in the labour market.

Transferable skills serve as the foundation for graduate attributes and orienting students to reflection, clearly representing its' benefits and explaining how skills and attributes are linked will enable the student to demonstrate their ability in the corresponding graduate attribute. Students' own self and professional management will lead to further growth and development.

### THE REFLECTIVE E-PORTFOLIO

Transformative learning on placement can occur when opportunities to learn, to apply learning to solve problems, authentic assessment and reflection, projects that develop student capabilities, supervisor and team support and an enabling environment are provided [24]. The benefits of WIL and experiences obtained during placement can depend on the ability and degree to which students reflect on them [25]. Reflection also takes 'time, effort and discipline' [26]. In our study there were two factors observed that constrained the quality and comprehensiveness of student reflections. Firstly, that the e-portfolio is used as a piece of assessment. The focus of students may not be on

reflection per se and learning from that reflective process but the application of their known techniques to obtain the highest grade possible [27]. This leads students to answer the question as opposed to reflecting on the question and restricts the student from obtaining the full benefits of the reflective process through the process of deeper insights and understanding [26]. The second limitation lies in the skills and understanding of the role of reflection as emerging health service management professionals. Despite, the e-portfolio being significantly weighted to encourage student effort and enthusiasm towards this assessment item, reflective practice can appear irrelevant to students when contrasted with other more typical academic items and consequently, not taken seriously [28]. This can lead to students treating the reflection as a "tick-box" exercise [29,30]. This "tick-box" approach was seen in at least one section of the workbooks studied, where students provided closed responses or objective answers to questions as opposed to personalized reflections.

Reflection is also an important skill for emerging professionals. The professional college for health service managers, the Australasian College of Health Service Managers articulates that its members demonstrate a 'commitment to self-development including continuing education, networking, reflection and personal improvement' as a core competency [31]. We have identified that the quality and depth of reflections limited our analysis.

## THE NON-LINEAR CURRICULUM

The 'University' as part of the Learning and Teaching Framework, organizes programs to optimize student access, flexibility, and choice [19]. For the students of HSM degrees this means that there is not a linear sequence of typical courses studied and no one graduate will follow the same structure or combination of courses. Core courses are specified, there are few courses with pre-requisites so that students can study courses in ways that reflect their interests, work, and other commitments. This flexible approach has many advantages however complicates the challenge of integrating and developing reflection skills. Spiral and traditional curriculums can support reflective skills development in a program [32,33]. We have learned from analysing reflections that building reflective skills and assessing these across the whole of curriculum is important. In the University's HSM non-linear curriculum innovative approaches to ensure that we can develop these skills is imperative, so when students reach the capstone WIL course, they have the requisite skills in, and

value reflection. Reflective skills can be developed by incorporating further structured reflective activities and assessments throughout the curriculum to embed continuous reflection in the learning process. Refinement of the wording for some questions and explanations in the Pebblepad™ workbook may also capture and promote deeper student reflections. Embedding in assessment an expectation that students attain and evidence a smaller prioritised set of skills and reflecting this in the marking criteria may drive greater compliance and focus [34].

## CONCLUSION

Our study has demonstrated an e-portfolio tool such as a structured Pebblepad™ workbook, can evidence the attainment of graduate attributes and transferable skills. While on placement HSM students demonstrated in their reflections that they have acquired or strengthened important transferable skills. This study also revealed that there were some key attributes and skills that were not documented in student workbooks. Some student reflections were incomplete and that they may have undervalued the importance of reflection and its role in learning, informing personal development and developing resilience. Understanding student reflective abilities can help to guide the further development of the curriculum and to reinforce the value of reflection and its application for future growth, personal and professional development [34].

## LIMITATIONS OF RESEARCH

The research is limited by factors such as the depth of student reflections, that reflection was linked to assessment, individual differences and the student learning experiences on placement. Closed responses to questions, rather than a more detailed account limited student reflections on key skills they attained. While we consider that the number of participants in this study allowed us to understand the skills acquisition for health service management students in the 2019 cohort, the experiences and reflections of students could be influenced by the project's students completed, opportunities provided to students by their supervisors and other factors.

## FURTHER RESEARCH

We have analysed student reflections focussing on transferable skills. Further research on the use of reflective e-portfolios to understand how student learning aligns to achievement of transferable skills is needed. Research that further informs the design and content of e-portfolios to

demonstrate the skills attained during placement will contribute to the body of knowledge and further substantiate the impact of WIL.

## CONFLICTS OF INTEREST

There are no known conflicts of interest associated with this publication. In conducting this study, we have not received any significant financial support that could have influenced the outcomes.

## AUTHORS CONTRIBUTION

SL was the Chief Investigator for the study. SL designed the study. Literature searches were conducted by SL, MV and JS. Analysis was conducted by JS, MV and SL. JS, SL and MV completed the first draft, edited by all. All authors contributed to the intellectual input and edited emerging drafts. All authors agree on the final version of the article.

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