Delivering a work-integrated learning postgraduate course during COVID-19: Experiences, challenges and strategies

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ABSTRACT: COVID-19 has had a significant impact on teaching and learning in postgraduate education. In particular, work integrated learning, in health care settings, has been disrupted in many ways negatively impacting student learning. Our Clinical Redesign courses are designed to deliver work-integrated learning in partnership with healthcare organisations to deliver workplace projects in real time, which has been complicated by COVID-19. This reflection examines the challenges that arose in the healthcare redesign teaching and learning space during the COVID-19 pandemic. We explore the experiences of our work-integrated learning students using Johns' reflection model.[1] Our students faced disruption to their education, workplaces and personal lives, and the experiences of our teaching team whose teaching philosophies were challenged. In response to the ongoing challenges, we developed strategies for supporting our students including the development of virtual projects for students who no longer had access to their workplaces or project appropriate resources.

KEYWORDS: Curriculum, e-learning, teaching and learning, problem based, education environment

Introduction

This reflective piece discusses the challenges we, as an academic teaching team, faced in delivering a postgraduate, work-integrated learning course during the COVID-19 pandemic and how we have responded to the specific needs of our students in this unprecedented time. This reflection is underpinned by Johns' model of reflection,[1] which describes 5 stages of reflection: description, reflection, influencing factors, alternative strategies and learning. We begin by providing some background information about our course, work-integrated learning as a pedagogical practice, its importance in healthcare and how our course contributes to health systems improvement in Australia. We explore a number of key issues that have emerged through our students' experiences during COVID-19 in relation to the course and discuss how we have responded to challenges to our teaching philosophy and pedagogical approach posed by COVID-19.

Graduate certificate and Professional Honours (Clinical redesign)

The University of Tasmania delivers 2 postgraduate healthcare redesign, work-integrated learning (WIL) courses (Graduate Certificate in Clinical Redesign and Professional Honours (Clinical Redesign)) in which students undertake a health service improvement project in their own workplace. The courses have a combined intake of 200 to 300 students a year. Our students are largely experienced healthcare professionals working across many disciplines in both major and regional hospitals and health services. In semester 1, 2020, our student cohort ($N = 101$) consisted of a large number of students with a nursing background (~65%) as well as students working in medicine, paramedicine, allied health services, pathology, administration and support services. Seventy-five percent of our students were aged over 35 years with 85% being female.

Workplace-based projects undertaken during the courses are fully supported by our healthcare redesign academic staff, whose experience in healthcare includes nursing, midwifery, pathology, quality improvement and quality and safety as well as academic and organisational research. WIL is an educational approach whereby students apply academic theory in the real world via an experiential learning model, which accurately reflects the learning outcomes and aims of our course.[2] The benefits of WIL have been demonstrated in many disciplines,[3] including health,[4] globally and within the Australian health system.[5] Graduates from our course have demonstrated this through the achievement of successful, sustainable changes to health service delivery.[6] For example, a medication management project for elective surgery patients in Victoria won a regional Quality and Safety Award. The graduates involved in this project improved accuracy and timeliness of charting regular medications, leading to a reduction of both repetitive tasks and adverse drug reactions. The graduates' reflection on this work highlighted that '*lessons learnt from this work provided. . . useful insight to promote redesign into practice and provides a backbone for proposing how change could be monitored*' (Student D).

The courses are designed around the expectation that our students will undertake a number of project activities within their workplace. In line with the views of Parmelee,[7] active learning strategies in health education enhance the learning environment

through more meaningful educational experiences. Our learning activities are often role-specific and require direct interaction with the student's organisation and colleagues in accordance with the theory of work-integrated learning.[2] For example, students are required to develop governance structures, engage with stakeholders, collect and analyse data and design health service interventions as part of their assessment tasks providing a foundation for sustainable change.[8] Our courses are designed to support these activities through partnerships with healthcare organisations, who provide organisational oversight of projects and support, such as access to service and administrative data sets, provides a constructive educational culture.[9,10] In addition, we deliver a number of face-to-face masterclass days which align with units around project planning and intervention design.

Description of the experience: COVID-19 disruption to learning and teaching

The COVID-19 pandemic first affected the way we deliver our courses in March 2020, when the number of new COVID-19 cases began to grow exponentially across Australia. Most of our students live and work in the states of Queensland, New South Wales, Victoria and Tasmania, where strict measures were rapidly implemented to reduce the spread of COVID-19 and increase capacity within the health system.[11] This meant that our students faced many changes to their workplaces, organisational structures and their own roles as well as major changes in their home and personal lives. It has been suggested in the literature that universities and higher education facilities should move to online learning throughout COVID-19 with students being encouraged to maintain social and professional connections fully online.[12] This approach, however, is not a practical solution for work integrated learning models, including our courses, where students undertake workplace projects in healthcare settings.

Student experience of clinical redesign WIL during COVID-19

Through a student focussed-lens we identified 5 key issues[1] through data derived from students' emails and formal assessment task extension requests, and phone calls from distressed students. Notes were kept from the conversations with students and there were several issues that repeated in these communications which highlighted the main concerns that our students faced as the broad impact of the COVID-19 pandemic grew.

Key issue 1: Workload and capacity: We anticipated that COVID-19 would have an impact on the workload of our students as they are predominantly working in senior clinical and middle management healthcare positions. However, we could not predict the impact that this would have on the overall learning experience. Students told us they really wanted to continue with their studies, that they were learning so much and it was relevant to their current roles, and that they did not want to 'start again'. However, they were also overwhelmed with demand for clinical work (overtime), strategy planning and development for COVID-19 and constant uncertainty.

"I'm a CNC [Clinical Nurse Consultant] in an Emergency Department and the current COVID-19 pandemic has required me to increase my hours and do overtime to keep up with the activity demand" (Student L).

"The content of this unit is so relevant to the work I do; I would really like to explore the content of each module rather than skimming to get through. At the moment I just cannot do that" (Student K).

Key issue 2: Role Changes: Many of our students were seconded to positions that were not consistent with their ongoing project work in the clinical redesign courses. This meant that students were unable to continue with their studies and were forced to defer. Aside from indicating a high level of stress due to the business of their new role, students also felt anxious about when they might be able to get back to their project as part of completing their studies. This included students who moved to a telehealth model of care, students who were asked to take on new clinical or managerial roles and students who were unsure of what they would be doing day-to-day.

"I have almost finished my project plan, but it's looking like I'm not going to be able to continue with this project until after the COVID-19 situation as our service is changing and we are moving towards telehealth and some staff working from home" (Student B).

"At this point, there is no way possible for me to do anything even remotely solutions or implementation with my project – everything that is not absolutely essential has been put on hold and there is a very good chance I will be seconded away from my primary work area for decent chunks of time, over the next few months (for example I am needed to leave old-age psychiatry to cover geriatrics so geriatrics can cover Gen-Med so Gen-Med can increase services in general and in ED)" (Student T).

Key issue 3: Changes in home life: The pandemic also meant that many students' home lives were changing. School-aged children were unable to attend their places of education, small children were often unable to attend day care facilities and other family members may have been working from home or not able to work at all. These changes were reflected in a number of comments from students who requested extra time to complete assessment tasks, catch up on reading material and course content or defer until the following semester.

"As you may be aware Qld (Queensland) schools went back this week with a 'learn from home' approach. While not directly teaching my children, time has been spent getting them organised, down loading and negotiating correct platforms etc. This is work that was difficult to undertake ahead of time as most of the information has only been supplied over the last couple of days. I suspect they will need ongoing support this week" (Student A).

"A change of work practice myself as I am having to work from home at times to support my 3 children with their school work (year 10, year 8 and year 4)" (Student G).

"Additionally, my partner has had a reduction in salary of 20% (however not hours), which has meant I have needed to pick up additional work (on top of my full-time job)" (Student R).

Key issue 4: Project-specific delays: The project work that students undertake in our courses requires support and commitment from organisations in the form of stakeholder engagement, governance and access to information such as organisational systems data. The disruption of this support due to COVID-19 resulted in significant delays for students' project deliverables. Some students were about to embark on their project in Semester 1 and some students were in the final stages of their project.

"I've been busy with COVID-19 planning and haven't had an opportunity to progress my project, in addition to the clinicians not having time or energy to contribute to the ongoing diagnostics" (Student J).

"I expect to complete the project however there will be difficulties with completing the diagnostics and communication as planned (i.e. unable to conduct focus groups but could undertake individual discussion, unable to feedback at staff meetings but could send email updates to relevant staff)" (Student F).

Reflection on supporting our students

With a focus on student experience, we share our reflections of teaching and learning in a WIL, healthcare space during Semester 1, 2020 in the midst of the COVID-19 pandemic and some strategies for overcoming challenges.

It became increasingly apparent that our teaching team needed strategies to assist students during this time to continue their studies while not adding further pressure to their work or personal lives. First, we reached out to our partner organisations and students, as well as internal channels, to develop and implement solutions to ensure that our students felt academically, and personally, supported throughout the COVID-19 pandemic. These strategies were in line with broader university support provided to students, including the provision of an automatic extra 5 working days from the due date to submit an assignment and extending the date for withdrawal without academic penalty until the end of Semester 1 where unit results are published before 8 July 2020. The university also introduced a procedure to ensure students maintain a strong Grade Point Average (GPA) (average results of all grades achieved throughout a course) in which students are able to ask for their results to be converted to an Ungraded Pass (UP) if their GPA was negatively impacted by COVID-19 during Semester 1. An UP is a grade that shows a student has successfully completed a unit of study within their course but their grade does not count toward their GPA. This allows usually high performing students who achieved lower than expected results due to the effects of COVID-19 to have these results removed from their GPA calculation (provided they have passed the unit).[13]

Further strategies were based on the direct needs of our students. Flexibility around timing was requested by our students most often, allowing them extra time to complete their assessment tasks, including project deliverables, and reading through the unit(s) content. In particular, students in the 2 fully online, theory units found it difficult to meet the deadlines for the assessment tasks as they had not had time to engage with the learning material. This was evidenced through the number of formal extension requests received in these units. In addition, we provided further options for students allowing due dates to extend into Semester 2. As we were unable to provide our face-to-face masterclass days due to COVID-19 restrictions, there were also changes made to the order in which our students completed their units, to maximise the chances of students being able to attend masterclass sessions. Ongoing communication with students about their enrolment in individual units has been essential to ensure that we are providing equal opportunity for social learning outside of the workplace as well as experiential, workplace learning. Further to this, we recognised that a number of students no longer had a workplace in which to complete their project or had been seconded into a role that was not consistent with their initial project idea(s). We needed to develop a longer-term strategy for supporting these students both professionally and academically.

In line with suggestions from other medical educators, we considered adaptive strategies for learning and how to innovate in this new COVID-19 environment.[14] After much team discussion, we decided to develop a suite of virtual projects for students unable to undertake a workplace project to complete the course requirements. The projects are set in a virtual 'made-up' health service, designed to reflect current Australian health service provision, and provide a context in which students can develop problem-solving skills through data gathering and analysis exercises and planning implementation of appropriate interventions. The characteristics of a problem-based learning approach, using problems as a stimulus and focus for student activity,[15] will enable our students to meet the course learning outcomes through real-world scenarios with data adapted from previous redesign projects. The virtual projects aim to be sufficiently flexible so that students can tailor them to their own needs, experiences and interests with the teaching team facilitating this individualised learning approach. This will provide an environment that encourages creativity and critical reflection, which can be adapted to a wide variety of learning styles.[16] However, we will need to ensure that learner collaboration and interactivity are maintained as they are key enablers of learning in online environments.[17-19]

Students appeared to appreciate the efforts made by the teaching team to respond to learning challenges caused by the COVID-19 pandemic. Feedback from students throughout the semester indicating that the personal support from each member of our teaching team and the consideration shown to students by the University as a whole created a positive learning environment that made students feel valued and understood:

'I cannot stress strongly enough that understanding adult workloads, family life and study commitments, having the flexibility to hand assignments in before semester cut-off date and not fixed on a "due date" so to speak, has been hugely appreciated, this is flexible learning.' (Anonymous student feedback, Evaluate, 2020).

Influencing factors: Our teaching approach

As a teaching team we embrace constructivism as our teaching and learning paradigm and this approach continued to influence the way we responded to our students' challenges due to the COVID-19 pandemic. Constructivism proposes that students learn by observation, processing and interpretation, and that they filter information into knowledge.[20] In our teaching and learning experience, constructivism essentially provides an intellectual framework for experiential learning through contextualised meaning making. Learning is increased when students can contextualise and situate what they learn for immediate dissemination.[21] Learning is therefore regarded as an active process through engagement with real-world problems which aligns with the experiential learning theory and our pedagogical approach.[22]

As educators, we play an important role in linking students' previous experience to current learning content, enabling students to experiment with our learning material and provide feedback, in real-time, as a quality assurance approach. Similarly, consistent with pedagogical research around social learning theory[23] there are several factors that influence teaching and learning per social learning perspectives: context, culture and community. Our students' learning occurs as a combination of each of these concepts through observation and collaboration within the workplace (collegial connection) and directly through online interaction with learning materials and human interaction with lecturers. From a social learning theory perspective, knowledge is constructed while students engage in activities, receive feedback and participate in other forms of human interaction in a social context.[23] We aim to provide this social environment by supporting our students through projects that they plan, develop and implement as part of a shared goal or outcome for their organisation. This concept has been recognised in the field of medical teaching, as an approach whereby students learn to problem solve, contributing to improved clinical care and health systems.[24]

We recognise that healthcare is a diverse field with many disciplines and areas of expertise and that a virtual project may appear to be a 'one-size-fits-all' approach. Our students include nurses, pharmacists, medical officers, paramedics, allied health and administrative staff who conduct projects across all areas of healthcare. The virtual project curriculum is not based on 1 discipline but provides students with a choice of redesign projects covering a range of fields. These currently include acute medical inpatient journey, mental health, specialist outpatient clinics, pathology services, ambulance services and community healthcare. By providing a more individualised approach to virtual projects, we aim to continue to support our students as individual healthcare professionals through the development of contextually-relevant problem-solving and critical-thinking skills. Virtual project-based learning then becomes a pedagogy that essentially integrates theory with the simulated practice of work within a purposely-designed curriculum.

Alternative strategies

The creation of virtual projects was at first challenging, as we believe that the most important way to learn how to improve health services is by doing, consistent with the constructivist approach. Health service improvement involves knowledge mobilisation based on previous tacit knowledge gained in practice.[25] For many practical skills, especially 'soft skills' centring on engagement of health workers; the only way to learn and hone these skills is to practice. Our teaching is therefore centred on practice, utilising experiential learning, problem solving and the analysis of practice within theoretical concepts. Through our team discussions we came to the conclusion that this strategy could be applied to the virtual projects by retaining and emphasising the reflective elements in assessment tasks, whilst still retaining a student-centred approach to teaching and learning. We considered alternative strategies by delaying the WIL units. However, a prolonged delay may mean that students are unable to finish the degree within the maximum timeframe stipulated by the course rules.

We felt that the creation of virtual projects was the right choice but that they had potential limitations that required addressing. Participation in virtual projects as an educational model reduces the opportunity for learning in a social context. Students who choose this pathway will not interact with workplace colleagues as part of their projects. Previous research, however, suggests that students perceive greater social interaction in an online learning space when creating and sharing in-depth online messages.[26] Therefore, it will be important for us, as a teaching team, to ensure that our students remain socially connected to other students undertaking the virtual project curriculum and in the broader course.

Learning: Changed ways of knowing in practice

Our response to the challenges posed by COVID-19 has been informed by a constructivist paradigm. While we hope our courses will make a positive contribution to students' future professional careers, our ultimate goal is for our students to become safe, competent and reflective practitioners. We feel a sense of pride by offering our students alternative strategies to allow them to keep studying and we have done this by being open and responsive. We were able to create a positive learning environment were students feel comfortable to think critically. Critical thinking assists students to become capable, autonomous practitioners needed to deliver services in a health care environment, that is rapidly increasing in complexity. Similarly, as we have all practiced in various healthcare roles, we have a level of empathy for our students in that we understand the constraints that are often faced during project work in healthcare organisations. This empathy extends to include COVID-19 as we have endured many challenges with our own healthcare redesign project work within local and national organizations. The COVID-19 pandemic has led us to critically reflect on our roles as educators in the fields of health and medicine. We now

have a clearer understanding of our position within the learning and teaching space, leading to enhanced methods of support and teaching strategies, for our students' benefit. It is not unusual that a major event such as COVID-19 leads to changes in thinking and practice.[27]

Conclusion

The COVID -19 pandemic has caused disruptions in teaching and learning in our WIL course. Four key issues have emerged: workload and capacity, role changes, changes in home-life and project-specific delays. These issues provided us with insights about how our students were coping with responding to the pandemic and studying at the same time. Therefore as a teaching team we were placed in a position to reflect on our student-centred way of teaching through a constructivism lens allowing us to further develop our methods of experiential learning and teaching by concentrating on how to provide equity in access to all students wishing to study clinical redesign in a (virtual) WIL model.

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