



# Technology's Role in Inclusive Work-Integrated Learning for Students with a Disability

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As highlighted through the COVID-19 pandemic, technology plays a key role towards the goal of equitable higher education. In this paper, we focus on the role of technology in supporting inclusive work-integrated learning (WIL) placements for students with a disability. We present three student vignettes, generated from survey data of the perceptions and experiences of students with a disability in WIL (n=132). We used these vignettes in follow-up focus groups (6 focus groups, n=27) which explored students' ideas on how technology could better support students. From our data, we discuss students' conceptualisations of how potential technological solutions could improve WIL, across both the mode of WIL offered (e.g., online), but also towards supporting deeper relationships and improving the personalisation of WIL. We conclude by recommending greater collaboration between WIL practitioners and learning technologists to explore the role of technology in creating inclusive WIL experiences.

Keywords: work-integrated learning, vignettes, students with a disability, inclusion, equity

## Introduction

In Australia, and globally, there is growing emphasis on how universities can support inclusive and scalable work-integrated learning (WIL) placements (Dollinger, Ajjawi & Finneran, forthcoming; Dollinger & Brown, 2019; Gamage, 2021; Kay et al., 2019). WIL, often described as an umbrella term, can extend to a myriad of practices that seek to link the practice of work to students' learning experiences (see Patrick, Peach & Pocknee, 2008), such as simulations or project-based learning. But commonly, the term is used to describe work placements, where students are matched in an industry setting, such as a hospital, school, law office, or business environment, and they undertake a project or set of tasks before reflecting on the experience and/or what they have learned through assessments. The placement itself can vary widely and just like authentic work environments, students report spectrum of experiences, ranging from incredibly positive and transformational to unfulfilling, distressing, or simply bad (Bruno & Dell'Aversana, 2018; Martin & Rees, 2019).

In June 2020, the Australian Government announced the Job-ready Graduates Package and with it, the National Priorities and Industry Linkage Fund (NPILF) which specifically aims to "increase the number of internships, practicums, and other innovative approaches to work-integrated learning" (DESE, 2020, 1). However, while the goal to create more WIL experiences and opportunities for students is admirable, there remains unaddressed complexity in how universities will support inclusive and scalable WIL. Researchers such as Dean and Campbell (2020), for example, have highlighted that there is need for new models of WIL, that consider work allocation for staff, as well as ensuring quality experiences for students. Further, with the growing diversity of the student cohort in higher education, there also remains unanswered questions on how diverse students can be supported in WIL, to support fair and equitable access and experiences (Aprile & Knight, 2020; Bell et al., 2021; Vu, Ferns & Ananthram, 2021).

In our study presented here we address one small, but critical part, of the changing WIL landscape by exploring the perceptions and experiences of students with a disability in WIL. Our study is part of a wider project to establish a National Career Development Learning (CDL) Hub, funded by the National Careers Institute and led by the National Centre for Student Equity in Higher Education (NCSEHE) (NCSEHE, 2021). Through the project, we sought to understand students' perceptions and experiences in WIL, and specifically, gather ideas and suggestions on how technological solutions could help redesign WIL models to be more inclusive to students with a disability. In our study, we defined disability as extending to students with learning, physical or sensory disabilities, as well as mental health, neurodivergent and/or chronic medical conditions. We

acknowledge, however, that not all students may consider such conditions disability, and that there is disputed naming in the discourse.

## Research Design

Our study adopted a mixed methods design with two phases of data generation. Phase 1 was an anonymous online Qualtrics survey (n=132) which sought to explore students' perceptions and experiences in WIL. The survey was distributed through our university disability support centre, and available to both students who had participated in WIL and those who had not. Following the data collection and analysis of our survey results (using Bazley's 2009, describe, compare, and relate), we created three student vignettes (discussed below) that summarised key themes that students submitted through the survey. We then invited students to participate in Phase 2, a series of 1-hour online focus groups hosted via Zoom (6 focus groups, n=27), where we presented the vignettes and asked students for their ideas and feedback on how technology could have better supported students in the stories. Note: some students who participated in Phase 1, chose not to participate in Phase 2, and vice versa. Our study was approved by the university's Human Research Ethics Committee (reference number: 2022:021).

Our decision to use authentic data-generated student vignettes in our follow-up focus groups was linked to growing literature that showcases the benefits of vignettes in qualitative research to explore complex and potentially sensitive topics (Rizvi, 2019). By using the vignettes from the student data, rather than generating vignettes based on our own biases or assumptions, we ensured the vignettes were authentic and aligned to the students' current place and time. We also hoped the display of vignettes would help normalise the challenges students expressed in the survey, as students could see others may have shared experiences and they were not alone (Lister & McFarlane, 2021). The vignettes were further designed to spark students' reflection on the ways WIL practices could become more inclusive to students with a disability.

To ensure inclusivity in our focus groups for diverse student participants, the three scenarios were read aloud by the facilitator (Dollinger and Finneran) and the text was also shared on the screen for participants to read. Students were given a few moments to reflect on the vignettes before they were invited to discuss and offer solutions as to what the university, industry, and/or the person in the story (i.e., the student) could have done to improve the WIL experience, with a focus on technological solutions. Students were given the option to orally speak, contribute to an anonymous online Padlet, or insert text into the Zoom chat, to allow for a variety of communication channels. All oral data was later transcribed, and then data, regardless of input, was organised by the vignette it related to. Then each researcher independently coded data by theme and lastly met to compare themes and discuss patterns in the data. To present our findings here we will share with the reader each data generated vignette before we discuss the students' ideas and suggestions.

### Vignette 1: May

May has a chronic medical condition and is unsure whether she wants to do a work placement while at the university. She is concerned whether the location will be close to home (she isn't comfortable driving long distances), and the financial sacrifice she will need to make, as she currently works part-time and won't be able to work and do the placement – and study at the same time.

May's story represented several common themes from our survey, as many students expressed uncertainty if they wanted to do a WIL placement and how it would impact their current work-life-wellbeing balance. As shown through May's story, students often expressed concern over driving or traveling long distances for their placements, and the potential income they may have to forgo while on placement.

A prominent student-led suggestion arising from May's vignette was that the WIL placement take a blended or online approach to help May juggle multiple commitments and relieve the stress of traveling. As summarised by one student that would support May 'being able to do a placement from a work-from-home situation, so the work could be done during the day or night when she is not busy'. Students also suggested universities could create work-schemes or scholarships to help support students financially while on placement.

However, another key theme that arose from this vignette was around students' idea of a placement database, where students could search and compare potential WIL supervisors or locations. Students in two focus groups (of six) discussed this idea excitedly, with students suggesting that the database could help students locate placements near their home and/or compare travel options. As one student suggested:

May is not going to be only person that has these sorts of concerns. I think it's one of those things where if there was an available database of place that are willing to do work placements that could be beneficial. That way, you could use it on a radius basis to assess and see the walking distance or what you are willing to travel.

Other students further built on this idea of an online database suggesting that it could also be used to book consultations with university staff to discuss potential placements and to store anonymous student reviews of placement organisations. In particular, students liked the idea of knowing previous students reviews on the inclusivity of the organisation as one student noted, 'I don't want to be in an organisation where they would look down on people with disabilities' as another added, 'yes, because obviously a company is going to be biased, but having anonymous feedback counteracts that'.

## Vignette 2: Max

Max has just started his in-person placement. He has an 'invisible' disability and isn't sure whether he should disclose to his supervisor, however, he is also concerned whether he will be able to manage the existing timelines, as he often works at a slower pace. At the university he is allowed extra time for exams or assessments, but if he tell his supervisor this, will they think he's lying or that he's just lazy?

A common theme to arise from our survey results was that students did not feel comfortable disclosing their disability to industry supervisors and were concerned about potential discrimination or consequences that would arise if they decided to disclose. Several students indicated they underwent severe discomfort to 'mask' their disability, which undoubtedly impacted their ability to learn and enjoy the placement experience. Therefore, it was clear from our data that the story of Max, and his anxiety over disclosure, was an important story for our focus group participants to reflect on and discuss.

Student suggestions arising from this vignette focussed on two aspects. One, that the university should play a greater role in not only supporting students but advocating for them to industry supervisors. Suggestions included a form or survey students could fill in discussing their preferences on how and when disclosure takes place to their disability liaison officer, as well as universities providing online templates of emails or phone call conversations students could use when disclosing. Students also suggested resources, such as videos or podcasts, with student stories – both good and bad – of how they disclosed and what happened, to help normalise disclosure. Another student indicated that, since some industry supervisors might not understand the nature of the disability(ies), that the university could provide a form, with information on the disability and how it may affect the student. As one student reflected:

[Documentation] would just take that whole need to explain away, but also goes, well, this is-- It also in a way, sets a standard for the work, for the placement, for the employers or potential employers to go, 'Well, this is just part and parcel of what happens when you're dealing with people rather than robots.'

Students also suggested disability liaison officers to set up Zoom calls with themselves, the student, and the industry supervisor to discuss and talk-through any accommodations that might be needed. Though, students noted this meeting should take place after the placement has been secured, for fear that the industry supervisor might otherwise decline the offer to support the placement.

## Vignette 3: Chen

Chen has decided to do an online placement because they focus better at home due to their ADHD. However, one of the big motivations for them in doing a placement was to form meaningful connections in industry and, hopefully, receive mentorship. Will they lose social connection because they opted for online?

As touched upon in the story of Chen, student participants, both in the survey and in focus groups, often spoke to the value of online or blended placements for multiple reasons. This included relieving the stress of in-person interactions, ensuring appropriate ergonomic work equipment, and, in the case of Chen's story, being able to focus better at home. However, students also expressed concern whether online placements would be able to offer the same relationship building opportunities as in-person, and what they might lose by going online.

In the focus groups students reflected on Chen's story. Many participants noted that the future of work might be increasingly online anyway and that learning how to work, and connect, online might be an equally important skillset as communicating in-person. Other students noted the improved accessibility of online meetings, such as subtitles, which in turn better supported the creation of relationships, as they could absorb the dialogue and provide greater contributions and feedback. One student suggested Chen should not worry, as they noted:

I actually ended up doing my placement online [because of COVID-19]. I was still invited to all the Zooms, so like if they were having big organisational meetings, I was still invited and introduced as the student on placement. I was able to receive connections, and have good connections, so it could be a good experience.

Another student noted that since moving to online learning they feel more connected, 'we're always connected on Microsoft Teams'. But other students added that if Chen was concerned about isolation, potentially having 1-2 scheduled in-person meet-ups with their supervisor could help support the online placement and put a friendly face to the name.

## Discussion

Well before the COVID-19 pandemic, researchers and educators have stressed the important role that technology can play in facilitating stronger relationships between university staff, students, and other stakeholders, such as industry supervisors. However, the pandemic accelerated this growing consensus and showcased that technology was an aid, not a barrier, to equitable higher education. Students in our study repeatedly reflected how they conceptualised the value of technology in their WIL experiences, as they suggested ideas for online resources, industry supervisor databases, online or blended placements, and the flexibility and access that online learning afforded them. They saw technology as an enabler to inclusion – and were excited for its potential promise.

However, online WIL is not a panacea and will not 'solve' the challenges to create inclusive and scalable WIL alone. In fact, what we found in our study was that much of students' expressed anxiety and tension around WIL, was *before* the placement even took place. For example, concerns over the placement location, how to travel there, if work equipment would be suitable, if the supervisor would be flexible or welcoming. And it was here, in the pre-placement stage, that students focussed their suggestions on how technology should improve the WIL experience. Ideas such as a database of potential WIL supervisors, that indicated not only distance, but reviews of the organisation, or online forms or resources that helped students decide on disclosure, and how to facilitate those potentially sensitive conversations. Students also felt online resources, created by former students that normalise the experiences, and anxieties of WIL, were key resources that every university could – and should – provide.

Ultimately, our study adds to the growing chorus of scholars who are exploring the role of online WIL in the post-COVID world (Bell et al., 2020; Bilsland, Nagy & Smith, 2020; Dean & Campbell, 2020; Hodges & Martin, 2020). Like them, we too found that online or blended WIL will play a major role in the future of WIL and unlocks value to students who might not otherwise choose to engage in WIL. As the students in our study expressed, the world of work is changing, and if the goal of WIL is to prepare students for the workplace, why too shouldn't WIL change with it? Through online WIL, students may be able to have more comfortable, less anxious, and more productive WIL experiences. However, as showcased here, the role of technology in WIL goes beyond mode, and there is a need for WIL practitioners and learning technologists to work closer together to explore what else technology can offer to support inclusive and equitable WIL.

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