Defining Digital Wellbeing Literacy in Remote Work Integrated Learning

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Abstract

The pandemic has accelerated the adoption of remote Work-Integrated Learning (WIL) programs for Higher Education (HE) students, fostered by advances in digital technologies. Emerging as a new post-covid normal, the 'remote workplace' and remote WIL brings further challenges with students expressing anxiety in dealing with this new form of working environment. Having the capacity to talk about wellbeing issues with others is an important wellbeing literacy (WL) skill. This paper addresses the need for a better understanding of wellbeing literacy (WL) skills in remote WIL workplaces. Interpreting WL in remote settings can further the definition of WL by extending it to a digital context. In contributing to Computer-Supported Cooperative Work (CSCW) research and the emerging field of WL, this paper explores how WIL students develop WL skills in a remote setting, which we define as Digital Wellbeing Literacy (DWL). In-depth interviews were held with WIL academics, WIL professionals, WIL students and wellbeing experts on digital and pedagogical factors that support WL in remote work. We found that students proactively use digital communication tools and social media to communicate wellbeing concerns, which in turn helps them practice DWL. We propose four strategies toward improving DWL in HE WIL offerings.

Keywords: Wellbeing, Wellbeing Literacy, Digital Wellbeing Literacy, Computer-Supported Cooperative Work, Work Integrated Learning, Pandemic, Employability, Higher Education.

1 Introduction

Since the outbreak of the pandemic, Work Integrated Learning (WIL) in higher education (HE) programs have been adjusted to remote delivery mode (Kay et al., 2020), with remote workplaces increasingly becoming the post-pandemic norm. Although the field of Computer Supported Cooperative Work (CSCW) has explored distributed collaboration for more than two decades, the pandemic has provided new opportunities to explore the unprecedented scale of remote working (Caldeira et al., 2022; Cho et al., 2022). To date the CSCW literature has approached remote working issues from the perspective of organizations, such as the challenges associated with organizational culture (Bullinger-Hoffmann et al., 2021). This body of literature and other digitally mediated communication literature has considered the authenticity of interaction (Lee, 2020) including messaging interactions (Sundar et al., 2015). The pandemic has encouraged researchers to focus on a critical analysis of individual worker experience following a universally forced remote working environment (Carroll & Conboy, 2020) as well as the associated CSCW technologies for remote work applications (Cho et al., 2022). In examining the wellbeing challenges of remote working, CSCW research proposes

that remote working could result in burnout, stress, and work-life conflicts while workers tried to maintain productivity (Aczel et al., 2021; Ahmetoglu et al., 2020; Cho et al., 2022).

While the research to date has largely focused on full-time employees, there is very limited research on the remote work wellbeing impacts on WIL students (Pretti et al., 2020). For some WIL students, like other remote workers, there is a need to deal with various wellbeing challenges, such as loneliness, insecurity and anxiety (Burtscher et al., 2020). Compared to their experienced workplace colleagues, WIL students are less practised in handling workplace collaboration and professional communications. Meeting workplace colleagues and mentors for the first time online and only have remote engagement experiences to build on, could lead to WIL students' stress (An et al., 2021). There is a greater requirement for supervision and mentoring to maintain WIL student wellbeing and productivity compared with the more experienced worker (Hunter, 2019).

Wellbeing literacy (WL) is a potential solution to maintain and increase wellbeing. WL refers to an individual's capability to use intentional language about and for wellbeing (Oades & Johnston, 2017). Rather than passively reacting to negative wellbeing incidents, WL is a soft skill that empowers individuals so they can proactively communicate wellbeing concerns to maintain positive feelings and lifestyle functions. With wellbeing challenges prevalent in the workplace (Daniels et al., 2021), WL is a critical employability skill that students can use to demonstrate their mindset and skillset throughout their careers. Remote working and learning provide a real-life context for WIL students to practice WL, improve their resilience and personal growth, and thus promote their employability soft skills (An et al., 2021). Given that research on WL is still in its infancy, the measurement of, and effective ways to develop WL require further exploration (Oades & Johnston, 2017). There is limited research focusing on WL development in higher education WIL programs.

Furthermore, the application of WL in a digital context is increasingly important to explore, particularly given the role of technology in transforming the nature of work. The pandemic has accelerated digitalization (WorldEconomicForum, 2020), with remote work becoming a routine practice for organizations around the world, even post-pandemic (Carroll & Conboy, 2020; WorldEconomicForum, 2020). Notwithstanding its benefits, remote work also creates significant wellbeing challenges. Thus, it is important for individuals to develop capabilities to enhance WL in a digitalized workplace. Prior literature has identified that students behave differently online when communicating for wellbeing purposes, compared when in a physical environment (An et al., 2021). However, the impact of remote WIL programs on student wellbeing and WL in digitalized remote work context has not been fully explored. As such, the challenges encountered by WIL students while communicating wellbeing in remote work environments, and the approaches to facilitate the development of WL in digital collaborations are the focus of this study. The research question explored in this study helps to define the concept of DWL: How do WIL students express WL in a remote, digital workplace?

Interviews were conducted with twenty-two participants comprising WIL academics, WIL administrators, WIL students and wellbeing experts. We found that online communication and social media can inhibit WL but can also create valuable environments to practice and develop WL. Our study contributes to the developing literature on WL with qualitative evidence from WIL students operating in remote working contexts. This study initiates digital wellbeing literacy (DWL) as a new direction of WL research and provides practical suggestions

for universities and industry partners to enhance student resilience in the short run while providing them with tactics to support employability in the long term.

The remainder of this paper is structured as follows: Section two reviews related literatures and sets up the research background. Section three describes the research method adopted. The findings from the interviews are presented in section four, followed by Section five on the discussion of the findings. Finally, the limitations, scope for future research and conclusion are stated in Section six.

2 Literature Review

2.1 Remote Work Integrated Learning (WIL) and its Wellbeing Impact

WIL is an umbrella term for a range of approaches and strategies bridging theory with work practice in curriculum (Patrick et al., 2008). WIL extends formal learning in traditional educational institutions by exposing students to real-world work environments. There is evidence that indicates WIL promotes employability (Gamage, 2022; Jackson, 2015; Smith & Worsfold, 2015) and helps to reduce the gap between students' competence and employer expectations (Freudenberg et al., 2011).

In recent years, digital technology has been included in administrating and delivering WIL programs, which are broadly defined as "eWIL"(Gamage, 2022). Rather than engage directly with the physical workplace, digital technology provides an authentic simulated working environment (Schuster & Glavas, 2017). Virtual WIL opportunities are provided to students when real placements are not possible (i.e., large classes) or to prepare students for WIL placement. The CSCW literature has explored the technologies including video conferencing, email and social media, online portals and virtual reality tools and how they contribute to eWIL (Bullinger-Hoffmann et al., 2021; Glavas & Schuster, 2020). However, understanding the role of CSCW technology, and the dynamics of this new remote WIL environment, has now become a pressing issue. While remote work facilitated by digital technology has been studied (Panteli et al., 2019), the scale of remote work subsequent to the pandemic is unprecedented. Regardless of their initially designed mode of delivery, whether in-person placement or a simulated work environment, the pandemic accelerated the transformation of WIL programs in many countries to be largely delivered remotely (Pretti et al., 2020).

Remote work provides workers with flexible work schedules and locations, and enables organizations to recruit talent on demand (Hunter, 2019). This may also negatively impact individual wellbeing. For example, the complexity of using various digital tools (such as computer, laptop, tablet, and smartphone), the increased amount of communication, and the expectation of instant responses has increased workers' stress (Bordi et al., 2018; Mano & Mesch, 2010; Stich et al., 2015). The asynchronous cooperation and lack of social interaction during remote work deprives employees of a sense of belonging (Panteli et al., 2019). Nevertheless, social media has penetrated the professional space, reshaping workplace relationships and work itself (Bucher et al., 2012; Verduyn et al., 2017) also contributing to influence the HE WIL student experience (Parsa & Golab, 2021). Social media has been reported to have complex impacts on wellbeing (Hassan & Pandey, 2021; Wang et al., 2014) bringing about wellbeing challenges such as social ostracism, social comparison and envy, while enabling ubiquitous social interaction, facilitating workplace support, and promoting a sense of connectedness (Charoensukmongkol, 2014; Smith et al., 2017; Verduyn et al., 2017). Social media facilitates real-time and intimate interaction with stakeholders but also

challenges workers with information overload and obscures the boundary between work and life. Social media also increases the levels of uncertainty caused by difficulties tracking sources and changes in information (Bucher et al., 2012).

Remote WIL impacts WIL students' wellbeing and makes adaptation to the work environment more difficult than in-person WIL (Pretti et al., 2020). In an online setting, WIL students have less opportunity to directly observe or interact with other co-workers in the professional working environment and learn organizational culture, procedures, and professional communication. It is also more difficult to establish relationships in the workplace and build confidence and professional identities. Together these factors can contribute to WIL student depression, loneliness and anxiety (An et al., 2021).

During the pandemic, WIL students arguably faced more wellbeing challenges than before (Pretti et al., 2020). As well as the distress caused by the sudden interruption of usual HE routines, some students lost WIL opportunities, which sometimes resulted in delays in graduation and/or impaired their competitiveness in the marketplace. This further intensified their stress and anxiety (Agnew et al., 2019; Zhai & Du, 2020). Some students work in high-risk WIL positions such as nursing, aged care and bank and feel anxious about dealing with patients or clients in a face-to-face setting. For WIL students who were fortunate to maintain their WIL positions but required to engage in remote work, decreased frequency and quality of interpersonal interaction resulted in a feeling of disconnect from the organization (An et al., 2021).

While work integrated learning (WIL) can provide students with a valuable context in which to proactively manage wellbeing challenges, the same could be argued for a remote work environment. Given WIL is a strategic priority for universities to improve student employability by offering continuous competency development in the labour market (Schuster & Glavas, 2017), it makes sense that attention also be given to manage wellbeing in students undertaking HE WIL programs.

2.2 Wellbeing Literacy in the Workplace

Wellbeing is an overarching concept combining an individual's physical, mental, emotional and social health, and refers to positive feelings and effective functioning (Magyar & Keyes, 2019)

The wellbeing of individual employees is argued to be at the heart of organizational competitive advantage and business success (WorldEconomicForum, 2020), with workplace wellbeing positively related to employee productivity and creativity, and negatively related to staff absenteeism and resignations (Alagaraja, 2020; McCrea, 2019). Workplace wellbeing is affected by a range of workplace stressors including interpersonal conflict, work overload and organizational limitations (Mazzola et al., 2011).

WIL students face even more wellbeing issues than other employees. Besides academic-related concerns about academic performance (Pascoe et al., 2020), WIL students tend to feel self-doubt and lack of self-confidence at work, which are related to their underdeveloped professional dignity and can negatively impact their workplace wellbeing (King et al., 2021) .

Facing a prevalence of mental health problems in the workplace, many employers focus on providing support when their employees encounter wellbeing issues and when negative impacts on productivity and performance have already occurred (McCrea, 2019). Mental health protection by identifying and minimizing stressors in the workplace is another trend,

but tends to be negatively framed and emphasising avoidance of mental problems (LaMontagne et al., 2014). Wellbeing, on the other hand, is not merely the absence of mental illness or problems but a state of flourishing (Keyes, 2005). To motivate this state, corporate wellbeing promotion programs draw on approaches from positive psychology (Kobau et al., 2011), focus more on the positive side of the mental health continuum (LaMontagne et al., 2014), and use training or coaching to build mindfulness, resilience and psychological capital (Martin et al., 2019). As such, it is considered important that employees are reciprocally engaged in wellbeing initiatives and can articulate with a wellbeing agenda.

Comprehensive acquisition of, and learning about wellbeing may enable more effective control of each individual's use of language and knowledge of wellbeing (Oades & Johnston, 2017). This phenomenon is defined as Wellbeing Literacy (WL), a capability for intentional language use about and for wellbeing (Oades & Johnston, 2017). WL research is in its infancy with fundamental aspects such as measurement and effective ways to develop WL still under investigation. WL helps to maintain wellbeing in the workplace and in turn contributes to work productivity and performance (Oliver, 2015).

WL plays a positive role in assisting WIL students to manage wellbeing in the workplace (An et al., 2021). With "awareness and intention" in expressing their wellbeing experiences (Oades et al., 2020) and wellbeing needs, many wellbeing-related issues in the workplace can be resolved at a local level. WL can accelerate WIL student professionalism development, because the more a WIL student intentionally communicates with colleagues about their wellbeing challenges at work, the more they receive insights from their colleagues and develop professional approaches to handle challenges (An et al., 2021). There is limited attention to HE student WL throughout their WIL experiences, even though the ability to maintain wellbeing status in the face of various workplace stressors is considered an important competence for employability (Jackson, 2015; Jackson & Chapman, 2012).

2.3 Toward Defining Digital Wellbeing Literacy (DWL) – A New Strand of Research

The CSCW literature has been contributing to health and wellbeing of workers since its inception (Fitzpatrick & Ellingsen, 2013) with CSCW technology facilitating the adoption and implementation of wellbeing programs, including emotional and mental support through digital mediated communication. To date, the wellbeing programs are largely considered externally imposed interventions, rather than initiatives that foster emergence from an individual's capacity. As such, interventions to cultivate wellbeing have been questioned for their limited efficacy (White et al., 2019) and/or inability to be used to enhance people's capabilities. While it has been argued that for WL to be developed, individuals must foster their own repertoire of skills and seek options to influence their wellbeing (Oades et al., 2020), we also content that the digital setting provides a new set of tools and tactics for the development of WL.

This paper initiates DWL as a future-focused agenda to contribute to the CSCW literature. We argue, the concept of DWL has its roots in WL, which emphasizes an individual's capability to maintain wellbeing in a digital context. For example, communication through digital media such as collaborative software, or expression of wellbeing status on social media. Extant CSCW research has analysed social media posts and/or the decision-making process of generating posts (Andalibi et al., 2017; Constantinou, 2005). The focus of these work is on investigating the representation or expression of mental health in a digital context, to better understand an

individual's mental status or even the mood of the nation (Venigalla et al., 2020). In most cases, people with mental illness such as depression and eating disorders were identified (Feuston & Piper, 2018). Alternatively, the digital setting can provide a focus on CSCW tools and tactics to support an individual's capabilities to use language for wellbeing purposes, instead of the wellbeing status per se. CSCW tools, such as digital communication tools in remote work and social media, create different contexts and channels for DWL which require different development strategies to WL in a face-to-face workplace. Research on digital literacy (Eshet, 2004; Koltay, 2011) and digital competency (Oberländer et al., 2020) addresses the cognitive and social skills in gathering information from digital sources, how to operate digital tools effectively and solve problems in digital contexts. Studies offer a refreshed definition of professional literacy which includes social media literacy, or the ability to handle overload in social media contexts (Bucher et al., 2012). To date, there is limited research focusing on the development of a new form of WL, DWL in the workplace - to express and receive information for wellbeing purposes, or ways to support WIL students to improve their DWL capacity.

With workers spending a significant proportion of working time online and communicating through social media, we argue attention to DWL should naturally flow from activities to promote workplace wellbeing and WL. Furthermore, the pandemic has accelerated the adoption of CSCW, and remote working is becoming a regular practice for individuals and organizations around the world (Carroll & Conboy, 2020; Yang et al., 2022). Given the unique challenges with this working environment, it is critical to articulate the concept of DWL as a new strand of CSCW research.

3 Methodology

3.1 Conceptual framework

Just as the concepts of Wellbeing (Magyar & Keyes, 2019) and WL (Oades & Johnston, 2017) are closely related, in this paper we explore DWL and wellbeing as similarly interconnected. That is, a WIL student's knowledge and awareness about wellbeing can facilitate DWL development. As with WL (Oades et al., 2020), we propose DWL skills enable individuals to use language to solve or prevent wellbeing issues in digital communication and collaboration.

As shown in Figure 1 below, the construct "Remote Work Environment" influences both "WIL Students' Wellbeing" and "Digital Wellbeing Literacy". "Remote Work Environment," an important aspect of CSCW, provides the context for this study, in which the large scale of remote work as a result of the COVID-19 pandemic has provided an opportunity to explore WIL students' DWL. The remote WIL programs have challenged student wellbeing due to the physical isolation and reduced social support (An et al., 2021). Digital communication adds an extra layer to wellbeing challenges as students have limited experience with digital communication in professional contexts, potentially generating a lack of confidence and stress. Nevertheless, the digital context can enable valuable social support to WIL students undergoing stressful transition from university to workplace (Mikal et al., 2013). Additionally, remote work has created a real-world context in which students can practice and develop their DWL. Students can articulate their wellbeing needs and proactively communicate about workplace stressors so that they can maintain their wellbeing, thus enhancing their future employability.

Together, the key constructs identified in the conceptual framework form the basis of the research question for this study and supports the emerging definition of DWL.

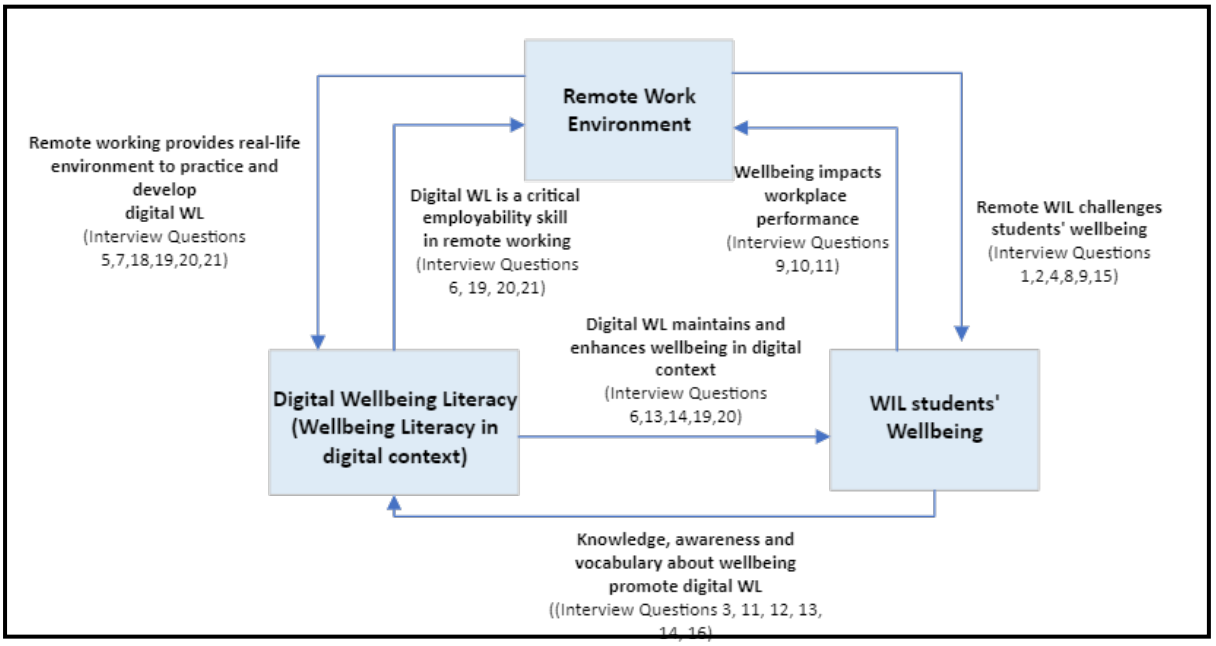

Figure 1. Conceptual Framework of the Research Design (Adapted from(Oades et al., 2020)

3.2 Method

A qualitative approach with semi-structured interviews was undertaken to better understand WIL students' DWL and explore effective ways to facilitate HE WIL students develop DWL strategies. A qualitative approach is appropriate for the exploratory nature of this study given WL is an emerging and underexplored field of research (Oades, LG & Johnston 2017).

Semi-structured interviews were used because they are suitable for collecting preliminary data for new research topics and enable researchers to access first-hand knowledge from interviewees (Creswell & Poth, 2016). Researchers can ask open-ended questions to get in-depth understanding of participant perspectives and experience, with flexibility to explore emerging key points during the interview conversations (Creswell & Poth, 2016).

3.3 Participants

Twenty-two participants from four distinct groups participated in the interviews (refer to Table 1). The first three groups consisted of six WIL academics, six WIL administrator and six WIL students. WIL administrators are professional staff who administer or coordinate WIL programs. They engage with WIL students throughout their WIL journey and facilitate students' non-academic needs, including wellbeing needs. The participant WIL students are from undergraduate marketing and management programs within an Australian-based University Business School. The students engage in their WIL experience in the third year of their four-year program. WIL administrators, WIL students themselves and WIL academics are invited because they have been identified as key participants to understand WIL student experiences holistically (Martin & Hughes, 2011). Each group contributed different perspectives to help us form a comprehensive institutional understanding of challenges WIL students face in remote WIL programs, and the impact on their DWL development.

The fourth group were four Wellbeing experts. The concept of WL has roots in the field of wellbeing, and this article identified DWL as a new direction of WL research. DWL in essence is a capability related to wellbeing and thus it is important to explore insights of wellbeing

experts. While WL is new and there are very few experts explicitly researching on WL, we invited wellbeing experts whose current research interests involve WL related topics to participate in the research. Two of the experts have experience providing clinical consulting services and, thus, have an in-depth understanding of the use of language to communicate wellbeing and people's abilities to articulate their wellbeing statuses and needs. The third expert specializes on workplace wellbeing and contributes specific viewpoints related to workplaces. The fourth expert's specialization is on mental problem prevention, which is closely related to WL because WL prevents wellbeing issues forming from accumulated stressors. This relatively small number of wellbeing experts is based on the fact that there are very few available researchers working in the wellbeing literacy-related field and the principle that experts tend to agree more with each other in their field of expertise compared to a layperson, thus smaller samples are sufficient for contributing accurate information (Guest, Bunce & Johnson 2006).

Group	Description of responsibility	Number of participants	Code
Group 1: WIL Academics	WIL Academics whose current research interests and expertise include WL or wellbeing-related topics, or who are currently coordinating/teaching WIL courses.	N=6	A1-A6
Group 2: WIL Administrator staff	WIL administration staff who have been working in universities to administer or coordinate WIL programs and engage with WIL students. They have been in their current position for at least 12 months to ensure they have a comprehensive understanding of the WIL program.	N=6	P1-P6
Group 3: WIL students	Undergraduate students from business degrees who have participated in remote WIL programs.	N=6	S1-S6
Group 4: Wellbeing Experts	Wellbeing experts whose current research interests and expertise involve wellbeing literacy-related topics.	N=4	E1-E4
Total number of participants		Total N=22	

Table 1. Interview Participant Group Data

3.4 Data Collection and Analysis

As part of the initial recruitment process, four WIL academics, five WIL administrators and three wellbeing experts were initially recruited from the research team's professional networks. After the initial interviews, another two WIL academics and one WIL administrator were invited through snowball recruitment. Two WIL academics helped to forward the invitation email to WIL students, and six WIL students responded the invitation email to participate in the interviews. Another wellbeing expert was invited based on contact information from a public website.

The interview questions were developed based on the existing literature and our research questions and conceptual framework. Participants from all four groups were asked questions about each key topic to prompt reflections from their perspectives. The full lists of interview questions for each group are in the appendix.

All the participants were sent the list of questions and a detailed introduction to the research before their interviews. Because WL is a new concept for most of the participants, the provision of an introduction to the research and the interview questions in advance gave participants

adequate time to understand the research aims and to think about each question. This helped them to provide more detailed, considered and thorough responses during the interviews.

The data collection was conducted in two phases. In phase one, five WIL academics and six WIL administrator staff were interviewed individually during the March-October 2020 COVID-19 lockdown period. They had all been in their roles before COVID-19 started. Except for one WIL academic, all the academics coordinated or administered WIL programs. Thus, they have substantial experience in coordinating and supporting WIL students in the emergency remote WIL context. In phase two, six students, four wellbeing experts and one WIL academic were interviewed individually from November 2020 to December 2021. All students had completed their WIL programs at the time of their interviews and, thus, could reflect on their entire WIL experience. Two of the six students also participated in a one-year placement WIL program in 2019 and were able to compare their WIL experiences in traditional face-to-face contexts to the remote WIL context.

Individual semi-structured interviews were undertaken over the Microsoft Teams online conferencing platform with each of the participants. All the interviews were audio-recorded using Microsoft Teams. Participants in the same groups were asked the same questions based on the question list in the appendix. Follow-up questions such as "what do you mean by…." were often used to explore topics in-depth or clarify emerging key points. The interviews were transcribed, and the transcripts were imported and analysed in NVivo 12 (NVivo, 2020), a software commonly used by researchers for qualitative data analysis (Feng & Behar-Horenstein, 2019; Welsh, 2002).

A thematic analysis of all the transcripts was undertaken based on Braun and Clarke's (2006) guidelines (Braun & Clarke, 2006). After carefully reading each transcript to gain familiarity with the content, an initial coding was conducted. Some codes such as "seek help" were generated from the literature review while other codes such as "lack of confidence" emerged from the transcripts. All the codes were summarized in the code system, and the related quotes were mapped to the codes. Then, three themes were formed based on the analysis of the codes and the research questions, discussed in detail in the Findings section: the impact of social media, online communication, and the role of emojis, on students' DWL.

4 Findings

Overall, working and learning online exposed WIL students to wellbeing challenges and prompted them to practice WL in the remote workplace setting. In the following sub-sections, we discuss WIL students' approaches to managing WL in a remote environment and the unfolding DWL that emerged from the use of social media and other digital communications, including the role of emojis.

4.1 Wellbeing Literacy and the use of Social Media

Students were already familiar with the use of social media platforms, such as Facebook, Instagram and Line, frequently in their personal lives before they enrolled in WIL. Thus, they naturally extended the use of social media to their remote working context. Besides using social platforms such as group chat and video conferencing as communication tools to engage with their work teams, WIL students sometimes used social media as research tools to collect market information for their WIL projects (S1).

The use of social media played a positive role to relieve loneliness during the remote learning and working. Social media provides a channel for students to talk about their wellbeing status, and students indicated that they preferred to post on social media when they felt happy and always browse social media while feeling bored or isolated and that funny social media content could improve their moods. A more critical contribution of social media is to facilitate relationship development. The language ability to build positive relationships is an important aspect of WL and in the digital context, statements about wellbeing status and expressions for wellbeing purposes demonstrate this language ability on social media. WIL students noted that they frequently and proactively use Instagram, Facebook and WhatsApp to connect and interact with teammates and colleagues from their work placement. Besides chats and audio/video calls, students also browse, "like" or comment on posts and profiles of close friends. Students believed that social media provided important background knowledge about co-workers, assisting in developing relationships with them (S3).

However, social media also negatively impacted WL. For example, when building relationships, social media better supported "*relationships already constructed before [communicating on social media]*" (A6). Adding new friends without "*a healthy and good social relationship*" (A6) can feel like a social media trap as "*you are posting your status or your emotions… you can be really hurt by some of the comments [others post in response to your post]*" (A6).

When expressing their wellbeing status on social media, there are cases when students commented that they could depend too much on friends' comments or "likes" for satisfaction. This distracts students from working and may frustrate them if they are not getting the expected numbers or quality of feedback on social media. Another risk of posting wellbeing information online is the possibility of undesired feedback or even being cyberbullied (A6).

Despite the complexity of discussing personal wellbeing on social media, social media provides an easy and attractive education channel for a general audience, including students, to access and learn about wellbeing and obtain wellbeing support information to improve their DWL. One wellbeing expert (E3) said that conversations about wellbeing should be encouraged on social media, including the vocabulary to describe wellbeing and self-care and self-management strategies, because this is a neglected but critical aspect of WL.

He explained that his institution moved a range of wellbeing content to social media platforms during COVID-19. The benefits were obvious: they reached many more students, increased their frequency of interactions with their audience, and developed interesting ways to promote user-generated wellbeing tips and self-care plans.

4.2 Developing Digital Wellbeing Literacy through Online Communication

WIL students acknowledged that the unexpected challenges during remote work provided them with valuable contexts to improve their resilience, an important WL skill (Oades et al., 2017). For instance, two students (S1, S3) shared their personal experience about adapting to time differences in group collaboration. They gradually adjusted their attitude to appreciate the international collaboration opportunities and developed strategies to use a more inclusive schedule. All these adaptations facilitated their resilience development in the digital workplace.

Online communication was reported by students as an unnatural way to convey information. In WIL, students receive access to various types of online communication tools, such as instant messaging, video or audio conferencing with chats function, email, and digital collaboration

tools, among others. Most students had very limited experience with communicating purely online in business contexts. They tended to feel a lack of confidence when speaking out online in group meetings, especially to initiate conversations (S2). While video conferencing has been widely used by professionals in both formal and informal communication, to maintain collegial ties and reduce social barriers (Bleakley et al., 2022), students reported they were not comfortable using video conferencing tools. Their lack of confidence and feelings of insecurity explained why many students preferred to turn off their video cameras during group discussions and why they prefer using messaging, chats and emails to communicate with co-workers (S3). However, exposure to online communication and constant practice gradually improved WIL students' familiarity with the online context and enhanced their confidence and skills with online communication (S2).

Students also improved their ability to use professional digital tools to facilitate group collaboration. In line with previous research (Glavas & Schuster, 2020), students mentioned that they used mobile applications frequently which enabled them to collaborate with other group members efficiently and effectively, even when they were working separately and asynchronously (S3). While students were not familiar with communication software used for business, such as Microsoft Teams, Miro and Slack, they were excited that, with the help of these digital tools, they can deliver "*the same standard of work but online*" (S3).

Furthermore, several WIL academics and professionals agreed that online communication provided more comfortable working environments for introverted students and more opportunities for them to speak up in group discussions:

> *Industry partners are finding that ...when [students] work together, the more introverted students are speaking out a bit more and the more extroverted students who tend to take over in a classroom don't have that opportunity because it's so much more democratic when you're using [Microsoft] Teams.* (P3)

Online communication promoted help-seeking, which is an important WL skill in the workplace. Students found that they were more confident to initiate help-seeking for more serious or tough problems through emails or phone calls instead of face-to-face communications (S2 and S3). The asynchronous communication allowed deeper and holistic thinking which is necessary for resolving serious problems. Remote working made help-seeking through online communication even more essential, as it has not been possible to use other face-to-face channels. A WIL student (S1) shared that she appreciated being able to contact friends for help and advice about job hunting remotely, which greatly relieved her stress (S1). Students also found, "*it is really helpful just to communicate between our group members*" (S3).

Similar to the use of social media, effective and efficient help-seeking online worked well only with pre-established relationships (A6). Both students and academics agreed that it is difficult to build new and strong relationships using online communication. For example, a student (S3) reported that online introductions are not as informative as face-to-face introductions, which meant that team members only gained limited understanding of each other. For students in project-based remote WIL programs, their engagement with industry was also limited, because industry visits were cancelled due to the COVID-19 lockdowns.

Most student participants mentioned that they felt uncomfortable when collaborating online, and it was hard to express emotion in online communication. One major factor was the lack of nonverbal cues to express and perceive wellbeing-related information (A4, E1, E2, E4).

One of the wellbeing experts (E2) has provided wellbeing consultancy to clients who could not speak English, and interpreters were invited to translate the conversation. However, the translation of the language could not convey the full wellbeing message, which demonstrates the importance of non-verbal elements from another perspective.

Students also acknowledged, "*the main setback [of online communication] is the lack of nonverbal cues*" (S2). Facial expressions and body language are important nonverbal aspects to express emotion and wellbeing status, and these can be captured through video camera. However, many students do not turn on their video cameras during group discussions, and for those who do, it was still very hard to connect emotionally, because "*you have no idea what people are doing over there: looking at you or they just look at the computer*" (S2). In addition, students mentioned that the atmosphere while working face-to-face was much better because they can easily see others' emotions which makes it easy to empathize with each other (S1).

While contextual information and non-verbal cues are not present in online communication, articulation of wellbeing depends more on language itself. Thus, wellbeing vocabulary and the logic to articulate wellbeing, as a fundamental part of WL, are even more important to convey wellbeing information. All the wellbeing experts indicated that the general public had very limited "*words, terminology or lexicon to talk about Wellness*" (E3). This matches the students' self-perceived WL capability, who always found it was difficult to precisely describe their wellbeing situation using language (S4, S5 and S6).

If people are talking about wellbeing to an expert, their lack of accurate wellbeing vocabulary will not be a big barrier for the listener to understanding (E1). However, if one is discussing wellbeing to a non-expert who is also not familiar with wellbeing vocabulary, this would be much more likely to cause confusion, especially in online communication without non-verbal cues. This is an extra barrier for non-native speakers to articulate their wellbeing. International students admitted that they could not express feelings and emotions very well because they did not have the appropriate vocabulary in English (S1, S5 and S6). Another academic found it was hard to find an exact wellbeing word in English to match her intention (A6).

4.3 The role of Emojis in WIL students' Digital Wellbeing Literacy

Emojis are small digital images or icons conveying ideas or emotions, widely used in digital communications (Gamage, 2022; Wijeratne et al., 2017). All the student participants found emojis helped to express their emotions in an easy way and avoid misunderstanding in online communications. Students also found that emojis facilitate a funny and interesting atmosphere, which promoted friendly conversation.

Emojis contain emotional information, which is an important aspect of individuals' wellbeing (Ryan & Deci, 2001). While the wellbeing experts agreed that most ordinary people have limited vocabulary on emotions, emojis nowadays are "*becoming more sophisticated*" (E4) in expressing fine-grained emotional information. For example, there are various laughing emojis ranging from smiling with squinty eyes to laughter with tears, which are well recognized by the general public. Student participants said they could differentiate the various emojis and developed their own preferences to convey emotion in different contexts.

Conveying emotions in the form of emojis compensated for the absence of nonverbal information in online text communication, and it helped individuals to reflect on their own emotions. A wellbeing expert (E4) pointed out that, even when people communicate face-to-face with direct facial expressions, they usually do not think about what emotions should be attached, and emotional context is implicit. However, while using emojis, before transmitting messages to other individuals must be "*introspective and have the ability to work out their own emotional response*" (E4). This could potentially "*enhance people's ability to be introspective and aware of [their own] emotions*" (E4).

Emojis are especially helpful to eliminate language and cultural barriers of WL for non-native speakers. While the lack of emotion vocabulary prevents people from expressing themselves and understanding others' wellbeing precisely and efficiently, emojis are an "*internationally understood language*" (E4) and thus can be expressed and recognized regardless of individuals' native language.

5 Discussion

Our research provides insights into DWL, a new strand of research. We argue that compared with WL in traditional physical settings, the expression and communication about wellbeing in digital context demonstrate different characteristics. In a remote working environment, people rely on digital tools to explore the context and mediate interaction with others. CSCW technologies provides multiple channels (such as video, audio, and text), multiple platforms (such as digital conferencing software, digital discussion forum, social media and emails), with various digital tools (such as emojis). The CSCW technologies also support both synchronized and asynchronized communication. While some physical context information and non-verbal cues are missed, the CSCW technologies mediate interaction and enables individuals to take control of their expression in a more flexible way: they can choose their preferred time and channels to interact with others. This can improve their confidence and ability to communicate, which is especially important for expressing wellbeing related information. For example, WIL students who are not familiar with their new colleagues may feel not confident to speak up in front of a group of colleagues and they may choose to keep silent in face-to-face team meetings. However, with digital conferencing tools, they can turn off the camera if this makes themselves more comfortable. They also have the option to write down their opinions in chats, express their feelings through emojis or write emails to discuss questions after the meeting.

In a digital context, DWL is closely related to Digital Literacy (Gilster & Glister, 1997). The concept of Digital Literacy evolved from the awareness of skill-based competencies and functional use of technology (Gourlay et al., 2014) to further emphasize the social and cognitive implications. This development highlights the extended purpose of Digital Literacy awareness to foster confident online communication, adoption of technologies to support critical thinking (Chan et al., 2017; Spante et al., 2018). Thus, Digital Literacy is a critical competency for evaluating and supporting employees (Bejaković & Mrnjavac, 2020). While HE students are relatively familiar with digital technologies, they lack the more nuanced digital culture and social practice experience to function effectively as digital workers. Our research showed that WIL students' Digital Literacy improved with practical CSCW tool experience in the workplace. The advancement of an individuals' Digital Literacy not only enhanced the WIL students wellbeing in a digital context (Vissenberg et al., 2022; Yue et al.,

2021), but also improved their DWL capability, making them more confident and aware of the most suitable digital methods to communicate for wellbeing purposes.

DWL not only demonstrates its importance in a working context, but also its impact on the work life of remote workers. While remote working has the potential to enable a better work-life balance and wellbeing, because of the minimized commute time and improved flexibility in juggling personal commitments (Cho et al., 2022; Lima & Souza, 2017; Tamunomiebi & Oyibo, 2020), the boundaries between work and life must be continually managed to achieve and maintain improved work-life balance. This is challenging for working professionals, and even more difficult for HE students (Cho et al., 2022; Lim et al., 2017), including WIL students. Work-life balance has been reportedly a challenge for many students, especially at the early stages of WIL programs (An et al., 2021). In a remote working context, it is critical for individual workers to be aware of the wellbeing risks related to the blurred boundaries between work and life and compose discussion with both family members and co-workers to proactively establish and negotiate boundaries. These are all important for developing DWL capabilities.

Our research provides valuable insights from WIL academics, WIL administrators, wellbeing experts, and WIL students themselves to understand students' DWL in remote WIL programs. Every individual has WL capacity because they acquire language and socialization capabilities relating to wellbeing. However, individuals demonstrate very different WL capabilities and people with high WL have increased language use choices for wellbeing purposes (Oades et al., 2020). All student interviewees discussed their wellbeing during remote working, which demonstrated that they had basic level of WL, which is using language to explain wellbeing status. Students' WL capabilities are different. For example, some students only used simple and repeated words such as "happy" or "sad" to describe their wellbeing generally, while others had much broader vocabulary to precisely express their feeling in various contexts. Some students also demonstrated more sophisticated awareness of wellbeing stressors and more proactive to seek help to mitigate the wellbeing impact. With regards to WL in digital settings, students also demonstrated differentiated DWL capabilities. For example, some felt less confident or insecure when expressing wellbeing issues in digital settings, while others could choose the appropriate digital tools to convey wellbeing information, building up relationship with colleagues, and able to seek help.

The findings of the study help to define the concept of DWL as below:

Defining Digital Wellbeing Literacy

Digital Wellbeing Literacy is defined as individuals' capability to proactively choose the appropriate combination of digital communication platform(s) and digital tools, so that they could comprehend and compose information to improve their wellbeing.

Recommendations

Remote collaboration is isolating (Fitzhugh & Daniels, 2020; Hafermalz & Riemer, 2016). However, the students in our study proactively used digital tools to connect with their teammates. This not only relieved the students' stress and loneliness, but also improved their sense of belonging and motivated them to work harder.

Research on WL is in its infancy and there is even less research on developing DWL for WIL students. The remote WIL environment is very different from the traditional face-to-face

working environment and thus calls for different WL strategies. Our research has identified key aspects that universities and WIL industry partners could focus on to improve students' DWL to better prepare them for their future careers. The following four strategies were identified to help develop students' DWL in remote work environments.

First, universities and industry partners could facilitate DWL in students by improving their digital competencies (Oberländer et al., 2020) and familiarity with CSCW tools through formal training. Given that DWL is WL through digital media, it can be argued that individual knowledge, skills and abilities to communicate efficiently using digital media are foundational to their DWL. However, most students found the digital communication in remote WIL programs unnatural and even frightening, which caused them to refrain from expressing their opinions and emotions. They also had limited experience with business collaboration tools for professional communication before they started their WIL program. Furthermore, even though the students were frequent social media users (Dagli et al., 2020), they were not fully aware of the potential risks of discussing their wellbeing status and seeking support through social media. In the future, universities and host organizations could integrate more comprehensive digital competency training into their formal WIL preparation curriculum to ensure students are confident and competent in the digital working context.

Second, we recommend that universities and industry partners facilitate WIL students to establish high quality relationships with co-workers. While building positive and deep relationships in the workplace contributes to workplace wellbeing and provides a foundation for WL, it is difficult for students to establish strong and lasting relationships with colleagues in a digital context. Universities and industry partners can carefully design and adjust remote WIL programs to remove barriers and create opportunities for interpersonal engagement. Constructive and genuine feedback from workplace colleagues is encouraged. Social interaction on Enterprise Social Media (ESM) with internal co-worker discussion on wellbeing-related topics could be beneficial in facilitating WIL students' WL development as well as increasing their sense of belonging. While the authenticity of WIL programs has been arguably compromised in remote programs because of the reduced quality and frequency of interactions with host organization supervisors (Smith, 2012), this could be alleviated somewhat. Purposefully designed in-person interactions such as inviting WIL students to attend mentor meetings, provide students with opportunities to observe and experience professional cooperation. Students can learn to communicate wellbeing in a professional way, which is especially important for their DWL.

Third, universities should better prepare students to develop WL skills. Students reported that they expected practical skills development to help them tackle workplace issues. Wellbeing experts also believe that universities should help WIL students "*to be able to take care of themselves physically, mentally and spiritually at work*" (E1). It is beneficial to help students build a rich wellbeing vocabulary so that they can accurately articulate their feelings and their own experiences, which sets a foundation for self-care strategies or help-seeking. Micro-credit courses or social media campaigns can be used to promote awareness of wellbeing challenges and facilitate the learning of wellbeing vocabulary and knowledge. WL capability is context base, and universities should provide students with contextualized learning opportunities, such as role play or simulation games, to practice adaptive strategies such as negotiation, conflict resolution or help-seeking and to diminish reliance on maladaptive strategies when they get into the workplace.

In addition, students should have context awareness in remote work. Wellbeing experts (E1 and E3) warn that wellbeing is not the students' own responsibility and that host organizations play important roles in WIL students' wellbeing. Having very limited working experience, WIL students may tend to blame themselves in the case of wellbeing challenges, instead of analysing the context (An et al., 2021). Universities should prepare students to understand that, where the host organizations' values contradict students' own personal values, students should have the confidence and capability to protect themselves, because "*people's values are important to their wellbeing*" (E1).

Finally, it is important for universities and industry partners reposition their mental health services to support students' DWL development. Currently, students perceive university and organizational wellbeing support to be only targeting those students experiencing serious mental health problems. Compared with help from family and friends, universities and host organizations can provide more effective, efficient and pertinent support to students. Universities can also develop programs to facilitate student engagement with peers and encourage mutual support channels to develop DWL skills. For example, students can share the wellbeing challenges and ethical dilemmas they encounter in the workplace and discuss coping strategies, either in face-to-face groups or virtual social groups facilitated by online platforms. In this way, they not only practice their WL skills, but also improve their sense of belonging to the student community, which is critical to fostering wellbeing. Specific to remote work contexts and challenging situations, such as COVID-19, digital tools and platforms could be applied for educational purposes to develop students' DWL. For example, social media platforms match students' learning style and are beneficial to facilitate higher education students' learning (Dagli et al., 2020). Thus, WL educational resources could be developed and distributed by universities through social media to encourage more extensive and in-depth wellbeing-related conversation among WIL students.

Given that DWL is a critical employability capability for students in the post-pandemic era, it is also able to be generalized further to other HE students, or even co-workers already in the workplace setting. Compared with WIL students who can practice professional skills in WIL programs, many other HE students have limited opportunities to experience the professional workplace and collaborate with colleagues before graduation. The recommendations related to trainings and skills development can also be used to support other HE students so that they can better develop their DWL and get prepared for their future workplace. Co-workers already in the workplace and shifting to the remote workplace, might also benefit from the recommended upskilling opportunities.

6 Conclusion

The remote working environment, including remote WIL, has created a very different context compared with the traditional physical working environment and ask for distinct strategies to manage wellbeing challenges (Nauwerck & Cowen Forssell, 2018). Our research has identified DWL as a new direction of CSCW research and provided insights about DWL for students in remote WIL programs. Although remote WIL impacted students' wellbeing during the pandemic, it also provided students with valuable real-life opportunities to practice DWL in remote work environments. Universities and WIL host organizations can develop systematic ways to facilitate DWL development to benefit student employability both in the short- and long-term. It is also meaningful to generalize the recommendations of facilitating WIL students DWL to all HE students and others requiring upskilling, particularly given the

prevalence of digital practices in the workplace during (WorldEconomicForum, 2020). In the post-pandemic era, DWL skills arguably should be the requirement of future work (Gartner, 2020). This not only benefits HE students but also the future workforce.

Limitations and future research

Our analysis is based on the experiences and perspectives of WIL academics, administrators and students. In the future, mixed-methods approaches can be used to further enhance the reliability and validity of the results from our study.

Due to the difficulty in recruiting student participants, we only interviewed six WIL students, all of whom were from business degrees and participating in project-based WIL programs during COVID-19. In future studies, more students from varied disciplines and from different types of remote WIL should be interviewed to provide a more comprehensive understanding of WIL students' experiences during remote work and their DWL in various context. Furthermore, our study lacks a perspective from industry partners who are critical stakeholders in design and implementation of WIL programs and have great impact on students' DWL development.

Our study has already identified the trend of WIL programs collaborating with international host organizations, which aligns with the worldwide trend of geographically flexible work accelerated by COVID-19 (Gartner, 2020). Cultural and geographic backgrounds have significant impact on workplace collaboration (Hofstede et al., 1990; Hofstede et al., 2005). While extending their work experience across international borders, WIL students will also face additional challenges. This will not only impact students' wellbeing but also influence their DWL, because WL is a language ability closely related with culture and social background, which can affect an individual's motivation or confidence to discuss wellbeing issues (An et al., 2021). In addition, "context-awareness" is an important aspect of WL (Oades et al., 2021). In international remote WIL programs, students need to understand both social and organizational cultures. Culture is implicit and is even harder to observe and acknowledge through digital platforms in remote WIL. Thus, further investigations of DWL in international work collaboration is a promising direction for future research. Besides WIL students, other HE students are also facing challenges in adapting remote learning environments and are expected to enter the future workplace as digitally adept graduates with the ability to work remotely. This provides a future direction for researchers, interested in investigating how to improve DWL for a broader cohort of learners.

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