The role of work-integrated learning in the development of entrepreneurs

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The role of work-integrated learning in the development of entrepreneurs

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This study explored the ways that work-integrated learning (WIL) influences the development of entrepreneurs. Seven alumni from Canada and the United Kingdom, who experienced differing forms of WIL during their degree, participated in qualitative in-depth interviews and provided rich pictures. A *rich picture* is a pictorial representation of a situation, including what happened, who was involved, how the participant perceived the situation. During the interviews, participants reflected on how WIL impacted their career and they created rich pictures to depict their perception of an entrepreneur and what influenced them to become an entrepreneur. Several important themes emerged and included seizing opportunities, thinking "outside the box," being resilient during difficult times, and the importance of networks. The influence of WIL was important for all participants and provided the framework of support that enabled the participants to manage difficult times and turn disruption into opportunity.

Keywords: COVID-19, work-integrated learning, entrepreneurship, rich picture, resilience

Entrepreneurship extends beyond the creation of new businesses. Defined as a combination of autonomy, innovativeness, risk-taking, proactiveness, and competitive aggression (Lumpkin & Dess, 1996), an entrepreneurial orientation may provide an individual with the ability to creatively solve problems and contribute to the growth of an existing organization. Entrepreneurial orientation in employees has been linked to organizational performance, increased profits, growth, and innovation (Moreno & Casillas, 2008). Therefore, there has been an increased call in the workplace for individuals who demonstrate entrepreneurial characteristics (Lumpkin et al., 2009). One large study demonstrated that 29% of managers look for students with entrepreneurial experience when recruiting for their workplace (Schwabel, 2012). This demand has not gone unnoticed by higher education (Higgins et al, 2013). Recently, policy makers have committed funding to entrepreneurship activities and education (Government of Canada, 2019; New Zealand Government, 2020; Universities United Kingdom, 2015).

The COVID-19 pandemic presents increased opportunities for the development and application of an entrepreneurial orientation/entrepreneurial attributes. The worldwide response to the pandemic has highlighted the need for the development of these skills in everyone but especially students and recent graduates who will need to navigate a rapidly changing world. Educational institutions may want to consider introducing or enhancing work-integrated learning (WIL) programs, given that WIL

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experiences may assist in entrepreneurial skill development and that entrepreneurial WIL programs may prove to be a viable alternative during times of disruption and an uncertain job market. This paper describes a study that examined how WIL experiences can influence an entrepreneurial orientation with specific reference to adaptability and the impact of uncertainty on the development of entrepreneurs.

LITERATURE

Despite an increased demand for new workplace entrants to possess the skills of entrepreneurs, traditional pedagogical methods have been shown to be insufficient in developing entrepreneurial abilities in post-secondary students (Higgins et al., 2013). However, higher education can influence innovativeness in individuals as it provides students with new knowledge and the ability to create new knowledge (Koellinger, 2008). Targeted educational opportunities may increase the development of entrepreneurial abilities in graduates (Higgins et al., 2013). In particular, work-integrated learning (WIL) may provide an opportunity for students to increase their entrepreneurial orientation. For example, exposure to entrepreneurial business through employment history has been shown to positively impact attitudes towards entrepreneurship (Harris & Gibson, 2008). Manning and Parrott (2018) reported an increase in entrepreneurial attitude after industrial placement and Jackson (2013) demonstrated that students reported an increase in developing initiative and enterprise which may be similar to the development of an entrepreneurial orientation. Therefore, post-secondary institutions may increase students' entrepreneurial orientation through WIL programs.

Numerous benefits of WIL have been voiced by WIL stakeholders. These benefits include the fostering of students' skills and career development, confidence, independence, personal development, civic engagement, and graduate employability (Jackson, 2013; Sattler, 2011; Sattler & Peters, 2013; Wilton, 2012). For paid experiences, WIL provides financial support to students (Sattler & Peters, 2013). Participating in WIL can also help students become more engaged in their academic studies (Peters, 2012). Follow-up surveys after graduation showed that compared with students who did not participate in WIL, WIL graduates were more likely to feel appropriately qualified for their post-graduation job, and that their job was closely related to their studies and long-term career goals (Peters, et al., 2014; Wilton, 2012). From an employer's perspective, WIL allows employers to strengthen their talent pipelines, since it allows them early access to young talent before students graduate (Drewery et al., 2020). These temporary WIL experiences contribute to overall organizational productivity and provide employers the opportunity to screen for potential future hires (Drewery et al., 2020).

Another benefit of WIL is that it can foster entrepreneurship and entrepreneurial skills, such as innovative thinking, creative problem solving, and leadership skills (Jackson, 2013; Sattler, 2011; Wilton, 2012). Successful entrepreneurs have recommended WIL as a means to ignite entrepreneurial passion in students, and to provide a better way for entrepreneurial-minded students to learn, compared with traditional classroom learning (Meldrum, 2008). WIL requires students to be creative, resourceful, and resilient, which are all qualities of an entrepreneur (Meldrum, 2008). Students have indeed indicated that their WIL experiences have improved their adaptability, and employers have also rated their WIL students highly on this domain (Lim, et al., 2020). WIL, therefore, has the potential to foster entrepreneurship in those students who already wish to be an entrepreneur, as well as entrepreneurship in those students who might not have considered such a career path. In addition, supporting the development of resilience and adaptability not only prepares students for entrepreneurial pathways, but also prepares them for challenging times such as those faced during the COVID-19 pandemic.

METHOD

The purpose of the study was to examine how WIL experiences can influence entrepreneurial orientation and to examine the research question: In what ways can WIL influence the development of entrepreneurs? The methods used in this original research were qualitative in-depth interviews with the integration of a rich picture drawing approach as part of the interview. Rich pictures is a soft systems methodology and participatory approach to problem solving as devised by Peter Checkland (Checkland, 2000; Bell & Morse, 2012). It uses the creation of drawings or pictures as a starting point for soft systems which can be used to gather ideas and can then be used further to examine influencing factors, identify causes and in developing ideas or strategies. The interviews were conducted during 2019 prior to the COVID-19 pandemic.

The sample comprised seven recent university alumni who had graduated within the past five years, included at least one WIL component in their degree, and set up their own business. Five participants were located in Canada and two in the United Kingdom, represented in the results by alphanumeric codes to protect identity. Six participants had undertaken multiple WIL experiences, described in the United Kingdom as placement and in Canada as work term. Three Canadian participants had undertaken traditional work terms (known as co-op) before undertaking an entrepreneurial co-op (e-co-op) which is a formalized WIL offering that allows students, with assigned mentors, to work on starting their own business, in lieu of a traditional work term (Table 1). All of the WIL experiences were gained through competitive situations, whereby the participant had to apply for the opportunity in competition with other applicants. None of the participants were placed directly by the academic institution into a role. However, the institution may have offered support or introduction to potential workplaces.

TABLE 1: Description of the participants' discipline and WIL experiences

ID	Discipline	WIL Experience
UK1 Male	Agri-food	Year-long undergraduate placement with one employer and four post-graduate rotations each of six months
UK2 Female	Agri-food	Year-long undergraduate placement with one employer
Can1 Male	Marketing	Completed four work terms, each of four months, two of which involved starting his own business and hiring other co-op students
Can2 Male	International Business	Completed three work-terms 4 months each
Can3 Male	Technology Engineering, Electrical & Computer Engineering	Completed several co-op work terms of 4 months each. Last work term was e-co-op where they developed their start-up
Can4 Male	Computer Science (did not graduate)	Participated in a start-up program at university which is not formally part of WIL. Decided to not complete degree but to concentrate on their start-up business
Can5 Male	Nanotechnology	Completed several co-op work terms. Last work term was e-co-op where he developed his startup

Purposive sampling was undertaken, whereby participants were chosen from alumni records by the researchers for their WIL and entrepreneur experiences that enabled exploration of the research question (Ritchie, et al., 2014). All aspects of the contact with the participants and analysis were conducted in accordance with the Ethics Approval granted by each participating university (Harper Adams University: Protocol #1106-201812; University of Toronto Scarborough: Protocol #00038189; University of Waterloo: ORE #32121), which included informed consent for participants, voluntary participation and confidentiality of reporting.

During the interviews, participants discussed the influence of their study on their work history to identify how WIL had impacted on their career and how it compared with other influences. Participants drew rich pictures to depict what influenced them to become an entrepreneur and how they would describe an entrepreneur. A rich picture is a pictorial representation of a situation, in particular how the participant perceives the situation (Christancho & Helmich, 2019). An example is shown in Figure 1.

FIGURE 1: An example of a rich picture depicting influences to becoming an entrepreneur
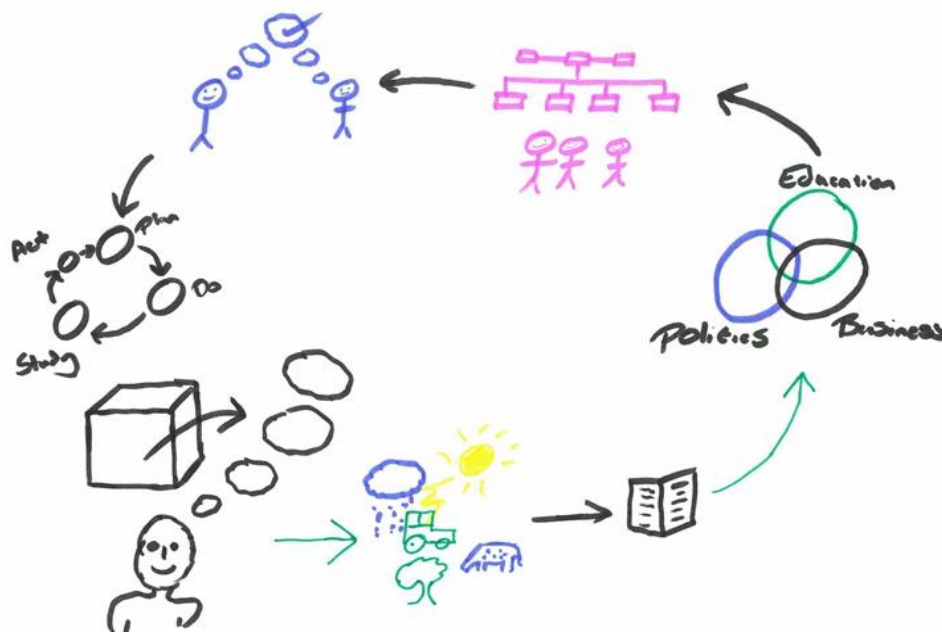
There are different approaches to interpreting rich pictures (Bell et al., 2019; Berg & Pooley, 2013; Ledin & Machin, 2018). For this study, the analysis focused on the complementary nature of the rich picture drawing with the narrative and discussion that takes place in the in-depth interview (Parrott, 2019). Each picture was analysed in conjunction with the full interview transcript to develop vignettes, which are focussed narratives of the chronological flow of events (Miles et al., 2014). These vignettes were examined to identify the overall journey and types of influence experienced by participants. Frequent reference to the drawings was made during analysis as they encapsulated a summary of each experience.

Two waves of analysis were undertaken: inductive and deductive (Miles et al., 2014). The first wave was inductive, whereby themes emerged from the data by comparing the journeys of the participants. In the second deductive wave, the journeys were revisited to identify the data relating to the effect of

unexpected circumstances and adaptability on the development of entrepreneurial skills. Experience of the unexpected may be similar to the effects of COVID-19 on entrepreneurial development. This paper focuses on the role that work-integrated learning can contribute towards the development of key attributes of entrepreneurship that arose from both these phases of analysis.

RESULTS

The backgrounds and journeys of the participants differed en route to setting up their businesses. The key background from the vignettes and from the interview and rich pictures for each participant are in Table 2. In spite of the differing journeys, similar themes emerged in the narrative stories that were complementary to the rich pictures.

TABLE 2: Summary of each participant's journey to becoming an entrepreneur

ID	Key points from vignettes
UK1 Male	From a farming background. First generation to study at degree level. Started a rural on-farm diversification business.
UK2 Female	Placement year had been challenging. Created a bee keeping production, education, and management business.
Can1 Male	25-year-old entrepreneur. Graduated in 2016 and has started and continues to run a number of businesses. Never intended to become an entrepreneur, however he discovered gaps in business processes during his first and second work term and these gaps presented opportunities for his own business.
Can2 Male	23-year-old entrepreneur. Runs his own data analytics consulting company after joining one of his work term employers full-time and discovering that he could have more financial success selling his consulting services back to his employer and other companies.
Can3 Male	Came to Canada alone at age 16 to attend university with no real work experience. Developed a medical device after mentorship from co-op employers and a university professor. Created a start-up for the device during e-co-op and now, after graduation, he works at his start-up full time.
Can4 Male	Drawn to the specific university for its entrepreneurial spirit. Partnered up with other students to start a business focused on car sharing and participated in an on-campus start-up incubator. His business grew and became profitable, so he left his studies to pursue his start-up full time.
Can5 Male	Decided to complete an entrepreneurial WIL experience when his traditional co-op job was unexpectedly cancelled. He incorporated his display technology business halfway through his e-co-op term and has been working on it for the past four and half years.

The results in this paper focus on four broad themes: seizing opportunities, thinking "outside the box," being resilient during difficult times and the importance of networks. In addition, the influence of WIL

and the university was important for all participants and provided a framework of support that enabled the participants to weather difficult times and turn disruption into opportunity.

Seizing Opportunities

Many of the participants spoke about the importance of seizing opportunities as they arise. This included being able to identify solutions to problems, being able to spot new opportunities and having the courage to accept new opportunities even when challenged.

For example, Can1 identified a different way of working with clients. He was able to see a better way to align an IT company's vision with his client's vision by requesting to be a stakeholder in any profits made from his final system. This innovation overcame problems with the industry norm of charging the client an upfront fee to purchase a yet-to-be-developed internal IT system that could cost millions of dollars and be redundant by the end of the development.

> So, what I'm basically saying is there are ways that the entrepreneur figures out by going this route, 80/20. By only focusing on twenty percent of the things that have eighty percent of the impact on the organization, rather than focusing on eighty percent of the things that only have twenty percent impact on the organization. (Can1)

Can4 pointed out the importance of being observant with your own daily problems, as the basis for a new product.

> The number one this is, like, kind of identify problems that you have yourself on a daily basis. Write them down. This is huge. . . . People are like, "I need the perfect idea". But that's not true. Like, the perfect idea could be the problem that you're solving for yourself, right? (Can4)

When asked what qualities make an entrepreneur, the first thing that UK1 drew on the rich picture was a large set of open eyes with an arrow pointing to a speeding car (Figure 2) and explained it as:

> Someone who's always got their eyes open. You never know what the opportunities are going to be, always aware of what's going on around you. Always moving, always forward thinking, I think that's important too. The car is for going forwards, it's progress. If you made cassettes you'd be out of business because progress has just kept happening, keep up with the times. (UK1)

> FIGURE 2: Part of UK1's rich picture showing that being an entrepreneur means being observant for new opportunities and thinking differently

In saying this, UK1 was of the view that the qualities of an entrepreneur, of being observant and aware, in always seeking opportunities, having self-confidence to adapt to change were qualities to stay in

business. These qualities may help innovation and the management of change in challenging circumstances arising from disruptive situations.

It was also equally important to have courage, described by participants as "not being afraid." For UK1 it was the courage to be different, with the comment arising from his rich picture about observation (Figure 2), about which he also said:

> The person on the right is in pink, don't be afraid to be different a lot of the time. These people might say "why is he doing that" and it does happen, sometimes the difficulty can be communicating back to them and showing leadership. I'd say entrepreneurs do think differently. (UK1)

Can2 also mentioned that it was important not to have fear. For Can 2 this differentiated entrepreneurs from other people, as shown in Figure 3. It is the characteristic that leads entrepreneurs to agree to opportunities.

> Generally, entrepreneurs don't really accept the status quo. They don't like how things have been, if they're not really ideal. I would say they– this is a mixture of being brave and underestimating the challenges that they need to face, so there's like tons of problems that they need to solve. They say it's a minor hiccup . . . . I'd say quite a few people I knew are entrepreneurs just underplay all the hurdles that they need to overcome. (Can2)

FIGURE 3: Part of Can2's rich picture depicting entrepreneurs as fearless
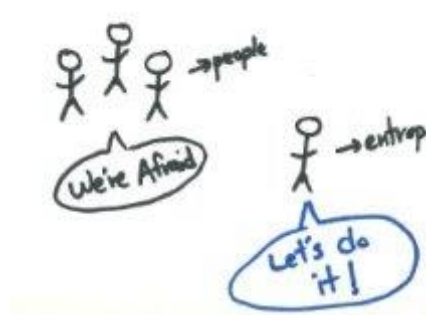
Can5 spoke about his parents encouraging him to say "yes" whenever possible and noted that his path to entrepreneurship was the direct result of responding to the right opportunities:

> Another part of it is just opportunity. It's not something that comes around very often, especially with the right people in the right environment that you have here to kind of foster it. So part of it is just saying yes to an interesting opportunity. (Can5)

Fear of difficulty in his new venture did not dissuade him from pursuing it, rather, the fact that it would likely be challenging was an incentive to take it on. In his rich picture, he represented this challenge with the image of a staircase (Figure 4) which he described as an appealing aspect of entrepreneurship:"For me, I like to be challenged. And I felt like this was a hard challenge. . . . So wanting to feel more struggle and difficulty was a part of it as well."

FIGURE 4: Part of Can5's rich picture showing entrepreneurship as seizing opportunities and wanting to be challenged


Thinking Outside the Box

The narratives of the participants showed that past experiences were able to play a part in how they were able to adapt and change in order to manage in the future. For instance, when UK1 was asked what influenced him to become an entrepreneur, he explained that the experience of failure in the family business and coping with difficult situations had helped him adapt to change. The rich picture shown in Figure 5 showed himself as a person being able to "think outside the box" and the imagery of the farm to convey hardships saying:

> Experiences working on the farm, probably experiencing failure sometimes, sometimes your livestock might die, have a crop failure as well, it happens really. I've always learned, and after rain there's always sunshine as well. Tomorrow is another day, you get on with it. A lot of it is about positive attitude. That also taught me a work ethic from a young age, that I think is very important. (UK1)

FIGURE 5: Part of UK1's rich picture showing entrepreneurs' positive mindset and thinking outside the box
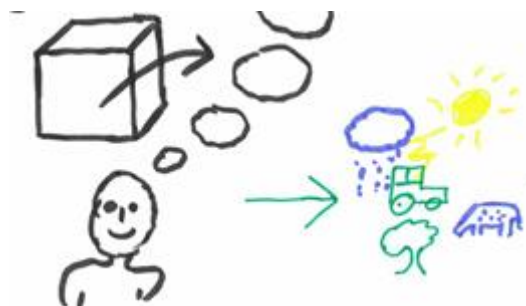
Participant UK1 was involved in the agri-food sector which is heavily affected by the impact of adverse weather and is an acceptable additional business market environmental factor. For UK1, despite the challenges that the weather, or prevailing market conditions had posed for the business, he maintained

a positive mindset and referred to, "after rain there is always sunshine", which showed a positive can-do approach to facing challenges. UK2 also spoke about being able to think outside the box and this was also one of the first images drawn on the rich picture to convey this attribute (Figure 6).

FIGURE 6: Part of UK2's rich picture showing an entrepreneur thinking outside the box

As another example, UK1 reflected that BREXIT also presented itself as a recent challenge and required strategic decision making for the business. In doing so, to aid decision making, UK1 had drawn in his rich picture a diagram of the "plan, do, study, act" model and used this model in the narrative to support the view of, "don't be afraid to try new things" (UK1).

Being Resilient and Determined

Not all WIL experiences were positive. Considerable resilience and determination were needed to navigate the difficult times. When challenges occurred during placement for UK2, it prepared her for future difficulties. UK2 spoke about having a taxing and unenjoyable placement experience saying that it was a "tough mental year". She also spoke about how getting through the placement year had strengthened her, and had provided a measure of difficulty for comparison when other things go wrong, saying, "no matter how hard it is, is it as hard as third year [placement year]?" This negative experience for UK2 is credited for influencing her own self-confidence and belief: "It contributed to my own self-belief. I wouldn't regret anything, what I've learned and what I've been through has moulded me to what I am today".

Indeed, UK2 believed that one of the traits of an entrepreneur is the desire to achieve and be successful, even when facing adversity. This was illustrated in the rich picture with an image of a stick person connected by an arrow lying horizontal and standing vertical as shown in Figure 7. This image was explained as a desire to succeed and that:

> If you push it to succeed, even if you get knocked down you need to get back up again, because at the end of the day it's only you that can do anything about it. You can't rely on anyone, you aren't being employed by anyone, you've got to be resilient. You fall down, but you've got to get back up, there's no-one else, you've got to get back up. (UK2)

FIGURE 7: Part of UK2's rich picture showing an entrepreneur being resilient

Can5 spoke about the importance of managing stress as an entrepreneur as well as the need for continual self-improvement. For this entrepreneur, both skills are critical for giving himself and his business a chance at success:

> Most companies fail if you just look at it statistically and I think, at the end of the day, what that means somewhat is the better chance you can give yourself to succeed, no matter if it's even like a 1 percent increase is worth trying to do. And my co-founder and I, along these lines, are very big into kind of self-improvement, optimizing our lives as much as possible, because we think that that gives you a better chance for success in some sense. (Can5)

In his rich picture of what it means to be an entrepreneur, Can3 drew a roller coaster which emphasizes the ups and downs of the experience of being an entrepreneur, as well as the resiliency that is necessary to manage those ups and downs.

FIGURE 8: Part of Can3's rich picture of an entrepreneur's journey depicted as a roller coaster
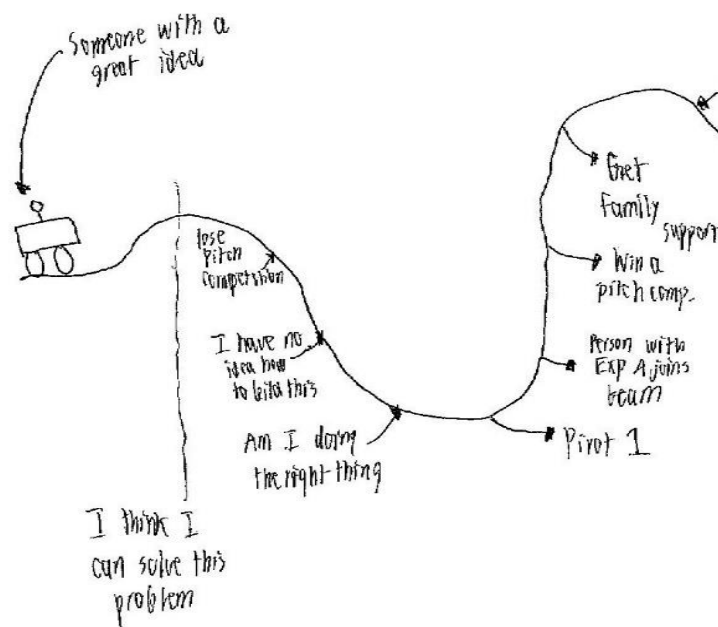
As Can3 stated, "And as you move forward, the bigger the downs and the higher the ups, as long as you're going." Can3 also indicates a number of pivots in the drawing: "So, pivots is adapting. So, that's when the company changes its approach or it focuses on completely different things. Sometimes they're minor, sometimes they're . . . huge."

In his rich picture, Can4 emphasized the ability to use rejections to their advantage, or to turn "no's" into "yes's."

FIGURE 9: Part of Can4's rich picture showing an entrepreneur not accepting rejection

Can3 elaborated on his rich picture as follows:

> Like, most people are like, "Not today, maybe later. I'll pass." Things like that. Like, over and over and over again. Most people give up because of that, but the true entrepreneur would actually be like, "How can I improve this, like, based on feedback I'm getting or people saying no? How can I turn that into a yes? (Can3)

Can3 also spoke about having patience when facing rejection, and about not giving up despite what some people might advise:

> Most people along the way were like, "Just give up," or, like, "Don't work on it anymore," or whatever. So, if you were to listen to those advices, we probably wouldn't be here today, right? So, like, that's a huge thing. So, having patience, even despite all the rejections. (Can3)

Building Relationships and Networks

Participants also spoke about the importance of building strong networks to navigate the pressures of developing and launching their own ventures. Some entrepreneurs such as Can5 spoke about the role that networks play in rounding out an entrepreneur's skill set:

> And also related to that, I think, like, who can be an entrepreneur? It's kind of anyone. There is no limit. Mainly because if you can figure it out, then, like the idea, the idea would be that you build the team that covers your faults and allows you to be good at what you're good at. (Can5)

This view was echoed with UK1 who acknowledged that communication with other people is vital and that running the business is very much a team effort. This was depicted in the rich picture with images of people in a team and structure of hierarchy, saying:

> I'm just trying to show happy people because it's not a one-man band at all, it's a team effort, it's very, very important. I think communication is very, very important as well. Just trying to communicate and get messages across, whether that's communication with employees or bank manager or agents or whatever, so many times one person can say something and think

something different, so trying to keep everyone on the same wavelength. So they're both thinking the same thing. (UK1)

However, whilst UK1 spoke of frequent tensions with his father in the farming business during the narrative, UK1 also noted the benefit of not surrounding oneself with sycophants and the importance of "surrounding yourself with people who get you to think differently. Sometimes me and dad we start with a debate, but the best answer is the one in the middle" (UK1).

FIGURE 10: Part of UK1's rich picture showing entrepreneurs need communication with other people

Can3 centred their business on a new medical device and credits the surgeon who performed their first animal study in establishing their network. The surgeon tells us, "I've worked on so many medical devices. This is like the Ferrari of medical devices. And we went out with a whole different perspective in terms of our network. I mean, that surgeon established so many networks for us, the one who did the surgery, and the results helped establish us all differently". (Can3)

Influence of Work-Integrated Learning and the University

The importance of the WIL experience in influencing entrepreneurship was directly attributed by participants as the reason for becoming an entrepreneur (Can1, Can2, Can4, Can5). With the exception of UK2, who had a difficult placement year, the overall WIL experience left participants feeling positive about their future. The WIL program was credited with providing mentorship from both the workplace and the university staff, as well as a structured program that encouraged entrepreneurial spirit. The university logo featured in the rich picture of some participants (UK1, UK2).

The influence of the university was credited for different reasons. Can3 credited WIL as having defined the trajectories of many of his peers: "I can't think of any [university name] grad where his co-ops did not influence—at least in my network" (Can3). UK1 explained that the university had helped to develop confidence in themselves and their entrepreneurial orientation: "The way I developed as a person rather than the business. I developed massively and became who I am today" (UK1). For Can4 and Can2, the university enabled them to see how businesses were managed, they gained skills and developed knowledge which could then be applied to their own enterprising project. For Can1 it was a realization of their skills required to contribute to innovation. Other participants spoke about how WIL had provided the opportunity to try new things and with different companies. Can3 mentioned both losing and then winning a pitch competition (as part of entrepreneurship co-op program). This was the only reference to WIL in the rich picture but had been a very powerful experience.

For some participants, their company supervisor was attributed as having played an important role as supportive mentor in developing skills; equally, university professors were acknowledged for their mentoring role on projects. Can1 directly attributed co-op as the reason for becoming an entrepreneur and noted the support of university professors. Throughout his co-op experiences Can3 encountered many supervisors who took the time to mentor him. Can3 recalled that during one co-op work term:

> I was working under a very special manager who helped teach me a lot of the skills, a lot of how to, you know, take projects on by yourself. You know, if you need help with anything. He was the type of guy who just let us figure it out, and we had to deliver results regardless of whether they're bad results, failures, or they were best results. (Can3)

At one point, Can3 volunteered to undertake work for a professor who also became a mentor:

> I volunteered with a professor on campus, and the professor used to give me a lot of his own personal time teaching me. I mean, I was young. I was, you know. I had no experience, I had no practical experience whatsoever, even compared to high school students from here. I didn't have that background as an international, so he took me under his shoulders, he taught me a lot of the skills that I needed to work in, like, lab environments, or to work in research, how to perform research, stuff like that. So, I appreciated that period of my life. (Can3)

The university was also credited for equipping participants with skills and technical knowledge which applied to their business. Some participants had taken an entrepreneurial-based WIL course and Can5 reflected that the structure of the e-co-op course had been incredibly valuable, specifically saying, "it was more about the frameworks that you learned in terms of how to evaluate an opportunity to some degree" (Can5). For other participants, the university and whole WIL experience provided confidence and feelings of self-worth: "gave me the confidence to go on to these next steps" (UK2); and "I never thought that in the next four or five years I could be an immensely valuable tool in the tool box for any organisation" (Can1).

Participants mentioned their field of study at university for influencing them to become an entrepreneur and aspects of the university were shown in their rich pictures (for example, see Figure 11 showing images used to convey the university).

FIGURE 11: Part of UK1's rich picture referencing university education
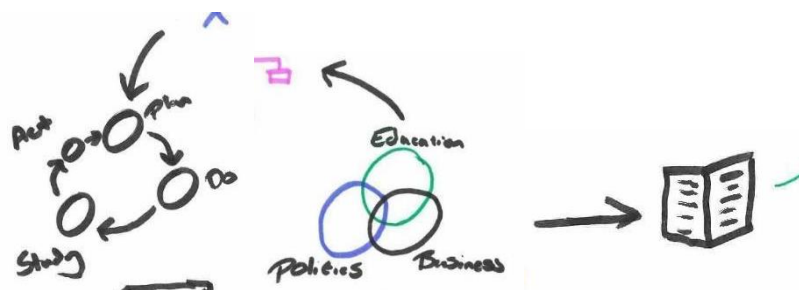
DISCUSSION

This study aimed to answer the question: In what ways can WIL influence the development of entrepreneurs? Interview and rich picture data showed that WIL experiences played a significant role in the development and success of entrepreneurs. WIL programs provided them with mentorship, a positive outlook on their future, and fostered their confidence and entrepreneurial spirit. In addition, several participants completed an e-co-op work term, which is a work term dedicated to launching student start-ups. These work terms provided participants with time, mentorship, and physical space to develop their ideas. WIL was certainly important for these alumni.

Analyses revealed several other themes related to the participants' journeys as entrepreneurs. These themes include seizing opportunities, the ability to "think outside the box," being resilient and determined during difficult times, and the importance of building relationships and networks. Such themes are quite applicable in moments of disruption or crisis, such as the current global COVID-19 pandemic. These themes allow entrepreneurs to adapt during times of change. In his rich picture, Can3 showed pivot points throughout his journey of becoming a successful entrepreneur. No doubt other entrepreneurs will need to pivot during the current COVID-19 crisis. For instance, there are likely opportunities during the COVID-19 pandemic that entrepreneurial-minded individuals can identify and take advantage of, to not only provide for themselves via business ventures, but to also provide benefits and relief for others. This will require "outside-of-the-box" thinking, resilience during the global challenge, and a reliance on relationships and networks. Despite the turmoil it has caused, the COVID-19 pandemic could be an opportunity for displaying the qualities of resiliency and innovation that entrepreneurs are known for (Korber & McNaughton, 2018; Kuckertz et al., 2020).

Being an entrepreneur requires great determination: "the ability to face numerous challenges and still have the resolve to start all over again the next day" (Trought, 2017, p. 65). This is what the participants showed, the resilience and ability to bounce back following an adverse situation (such as turning no's into yes's, suggested by Can4) and demonstrating resilience as part of WIL. Disruptors (and especially the recent challenging times of COVID-19 pandemic) all test a person (student, universities and the industries alike) and their resilience in demonstrating the capacity to recover quickly from a difficult situation. As Frances Trought notes (2017, p. 28), valuable stones (diamonds) come out of really dark places and under pressure.

Entrepreneurs are not the only ones who have needed to pivot during the COVID-19 crisis: institutions of higher education have had to quickly pivot and adapt to uncertain circumstances by transitioning their courses online, among many other shifts. This approach has been welcomed by higher education agencies such as Quality Assurance Agency (QAA, 2020) in the UK, who, supported by ASET (the Work Based Placement Learning Association), have developed guiding principles for universities to consider amended and alternative modes of placements and work based learning within the curriculum. Many WIL experiences have been lost or have become remote because of the physical distancing measures put in place to help stop the spread of the virus. For example, a recent report by Statistics Canada (Wall, 2020) suggests that 35% of students in various post-secondary degree programs in Canada had their work terms cancelled or delayed. However, this means 65% of students are continuing their work terms despite the pandemic. The vast majority of those students likely had to switch to remote work or use other innovative means to obtain their WIL experience. CEWIL Canada (2020) reports that a number of post-secondary institutions have used creativity to deliver WIL, such as reaching out to alumni and hiring large numbers of co-op students to assist faculty in making the transition to online course delivery. At some institutions, as many as 91% of WIL students have managed to find a placement, remote or otherwise, despite the challenges imposed by COVID-19 (CEWIL Canada, 2020).

As an alternative to students needing to be physically in the workplace, institutions may offer their students the option of entrepreneurial WIL, in which institutions provide students with mentorship and course credit to develop their ideas into start-ups. Considering the uncertain job market, some students and graduates may pursue entrepreneurial activities on their own rather than seeking employment. It is possible that previous WIL experiences can exert their influence on these students' and graduates' entrepreneurial activities and strategies. WIL programs that foster an entrepreneurial

mindset in students, and that can pivot and adapt themselves, will not only prepare students for successful business but will give them the tools to successfully deal with future challenges.

The themes associated with entrepreneurship that were identified from the interviews and rich pictures corroborate with findings from previous research (Lim, et al., 2020; Meldrum, 2008). The present research also supports existing literature that states that targeted educational opportunities, such as WIL, can contribute to entrepreneurial skills in graduates (Harris & Gibson, 2008; Higgins et al., 2013; Jackson, 2013; Manning & Parrott, 2018). It also contributes to mounting evidence showing that WIL is a unique opportunity for students that provides many benefits toward their personal growth and career development (Jackson, 2013; Sattler, 2011; Wilton, 2012).

The qualitative in-depth interviews and the rich picture method with alumni, who during their WIL experiences or later set up their own business, provided an opportunity to explore how their WIL experiences may have influenced the development of their career. The value of the rich pictures was evident as the process of creating the drawing added emotion, reflection and richness to the verbal narrative. This richness was apparent even when drawings did not contain an overt reference to a WIL experience. This endorsed the utility of this technique as part of an in-depth interview. The cross-country sample frame allowed for greater collaboration between universities and sharing of practice.

CONCLUSIONS AND FUTURE STEPS

This study set out to examine how WIL may influence the development of entrepreneurs. It also demonstrates the value of combining data from interviews and rich pictures. While this was a small sample, there were common themes found between the participants. The alumni that were interviewed stated that WIL programs provided them with mentorship, a positive outlook on their future, and fostered their confidence and entrepreneurial spirit. Both positive and seemingly negative experiences of WIL had been valuable. The experience of having a supportive mentor, either in the university or as a supervisor in the workplace was recognised as being an influence in encouraging entrepreneurialism.

Further collaboration and fieldwork are anticipated in New Zealand and Australia. This work will inform pedagogical development for embedding entrepreneurial teaching in future curriculum development. It is planned to investigate how COVID-19 has impacted the paths of WIL students and entrepreneurs who are currently completing their degrees. Future research can also include expanding the participant pool to include entrepreneurs who are WIL graduates who graduated more than five years ago, to determine whether the themes. found here stand the test of time, and/or whether new themes emerge with other cohorts.

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About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues dealing with Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE). Since then the readership and authorship has become more international and terminology usage in the literature has favored the broader term of WIL, in 2018 the journal name was changed to the International Journal of Work-Integrated Learning.

In this Journal, WIL is defined as "*an educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum. Defining elements of this educational approach requires that students engage in authentic and meaningful work-related task, and must involve three stakeholders; the student, the university, and the workplace*". Examples of practice include off-campus, workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (Co-op), and on-campus activities such as work-related projects/competitions, entrepreneurships, student-led enterprise, etc. WIL is related to, but not the same as, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's main aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that leads to the advancement of effective practices, development of further understanding of WIL, and promote further research.

The Journal is ongoing financially supported by the Work-Integrated Learning New Zealand (WILNZ), www.nzace.ac.nz and the University of Waikato, New Zealand, and received periodic sponsorship from the Australian Collaborative Education Network (ACEN) and the World Association of Cooperative Education (WACE).

Types of Manuscripts Sought by the Journal

Types of manuscripts sought by IJWIL is primarily of two forms; 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider best practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Best practice and program description papers. On occasions, the Journal also seeks manuscripts describing a practice of WIL as an example of best practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

By negotiation with the Editor-in-Chief, the Journal also accepts a small number of *Book Reviews* of relevant and recently published books.