

Supervised entrepreneurial work-integrated learning

ALON EISENSTEIN¹

University of British Columbia, Okanagan, Canada

CYNTHIA GOH

EMANUEL ISTRATE

University of Toronto, Toronto, Canada

Experiential learning is increasingly being recognized as the preferred teaching method in entrepreneurship education, with particular emphasis on students' 'real-world' experience. This paper critically examines the adequacy of using work-integrated learning (WIL) pedagogy for the purpose of entrepreneurship education. A novel approach is presented for achieving learning through entrepreneurship, referred to as supervised entrepreneurial work-integrated learning (sEWIL). The rationale and pedagogical considerations for sEWIL are discussed using a case study that is based on an internship-based entrepreneurship course offered at a major Canadian university. As part of the course, students learn about entrepreneurship through a combination of in-class experiential learning activities and a WIL component in the form of an internship with early-stage start-ups, which provide the work environment. Using formative and summative reflections, students critically examine their understanding and belonging to entrepreneurship, leading to personal growth and emerging self-awareness.

Keywords: Entrepreneurial work-integrated learning, entrepreneurship education, pedagogy

The increasingly accepted role of universities in offering entrepreneurial experiences to students has led to a proliferation of curricular and extra-curricular offerings, both globally and in Canada specifically (Ibrahim & Soufani, 2002; Sá, et al., 2014). While, as Kuratko (2005) noted "the question of whether entrepreneurship can be taught is obsolete" (p. 580), the debate about the nature of entrepreneurship education is far from being resolved (Haase & Lautenschläger, 2011; Pittaway & Cope, 2007). Even more so, the legitimacy of entrepreneurship education and its research has been recognized to be lacking, partially due to the lack of criticality and rigorous methodology (Fayolle, 2018). Within the academic discussion about how to best teach entrepreneurship in higher-education, two particular aspects of entrepreneurship education have received significant attention (Fayolle, 2018; Haase & Lautenschläger, 2011; Pittaway & Cope, 2007). First, is the question about the purpose of entrepreneurship education, which can be either the pursuit of knowledge, the acquisition of entrepreneurial skills, or the development of an entrepreneurial attitude. The different goals of entrepreneurship education as categorized by Pittaway and Edwards (2012) are:

- Teaching *about* entrepreneurship, where entrepreneurship is perceived as a body of knowledge that is to be transmitted
- Teaching *for* entrepreneurship, where entrepreneurship is perceived as a vocation that requires the mastery of certain skills; and
- Teaching *through* entrepreneurship, where entrepreneurship is perceived as an attitudinal approach that needs to be developed.

Second is the question of learning approaches and pedagogy in order to achieve the desired objectives, where consensus is building around the use of experiential learning as the preferred choice of pedagogy (Haase & Lautenschläger, 2011; Krueger, 2007; Kuratko, 2005; Mason & Arshed, 2013; Sá, 2018). Adapting Kolb's (1984) frequently referenced experiential learning cycle, entrepreneurship learning is

¹ Corresponding author: Alon Eisenstein, alon.eisenstein@ubc.ca

understood as a process of learning in which students engage with an experience, reflect on their experience, conceptualize their learning, and actively test their learning. The choice of the experience is therefore of great importance as it forms the foundation for the learning that will take place in subsequent steps. Different experiential learning activities have been proposed to achieve the various learning objectives of entrepreneurship education. Examples include:

- Case studies about entrepreneurs and their decision-making, that are used to teach *about* entrepreneurship
- Developing and pitching a business idea for a new venture, which is used to teach *for* entrepreneurship; and
- Launching a new venture, which is used to teach *through* entrepreneurship.

In the Canadian context, only a handful of papers have examined the role of experiential education pedagogy in the service of entrepreneurship education. Vincett and Farlow (2008) shared their experience in designing and delivering a pair of courses that offer “highly experiential” (p. 275) learning opportunities in Wilfrid Laurier University’s School of Business program, where students learn *through* entrepreneurship. The first course, referred to as a workshop, includes individualized mentoring of students as they develop their ideas for new ventures, while the second course, referred to as an incubator, allows students to launch their new venture. This, the authors suggest, offers students a realistic entrepreneurial experience rather than the traditional unreal learning experiences that rely on business plan writing alone. Wielemaker et al. (2010) describe the development of a new entrepreneurship program at the University of New Brunswick that includes four separate courses. Three courses are taken concurrently in a single term, with the fourth course in the following term. While the extent to which experiential learning pedagogy is used throughout the courses varies, students work in teams throughout the program, where each group of students is teamed up with a client, a person with genuine intentions to launch a new venture. The authors argue that it is the fact that students are working with “clients with business ideas” (p. 569) that constitutes the experiential learning opportunity. Malach and Malach (2014) describe an entrepreneurship course that has been offered at the University of Calgary for well over two decades, where the objective “is to provide both a tangible and a tacit learning experience that is directly transferrable to future entrepreneurial activity” (p. 177). Experiential learning is used in reference to both in-class activities as well as a culminating Start Your Own Business assignment, where students are expected to operate an actual business and report on their earnings.

While experiential learning is often presented as the preferred pedagogy for entrepreneurship education, there is very little discussion about the particular choice and the specifics of such experiential learning pedagogy. Authors often simply assert the need for a real or authentic entrepreneurial experience but fall short on qualifying these terms. Therefore, it is the purpose of this paper to describe a particular experiential learning pedagogy, namely work-integrated learning (WIL) pedagogy (Stirling, et al., 2016), as applied in the service of entrepreneurship education, which henceforth will be referred to as Entrepreneurial WIL (EWIL). As a pedagogy, WIL purposefully places students in a real or simulated working environment, as part of the students’ academic activities. Therefore, a WIL experience requires the interaction of the academic staff, the students, and a host organization. It is the latter of the three stakeholders that differentiates WIL pedagogy from most other experiential learning pedagogies, due to its focus on a real-world, well-defined working environment for them to interact with and to reflect upon.

Reviewing the literature reveals only a handful of occasions where authors explicitly referred to WIL pedagogy in the context of entrepreneurship, though not consistently for entrepreneurship education as a discipline. The earliest of such examples is that of Dhliwayo (2008) who proposed a conceptual model for the implementation of WIL pedagogy for entrepreneurship education in South Africa's universities. Although thorough in its conceptual framing, the paper is limited to theoretical considerations. De Villiers Scheepers et al. (2018) describe a credit-bearing course that uses a proposed experiential entrepreneurship WIL model, where students work in teams to develop a new venture idea. In lieu of a designated supervisor or mentor, students are introduced to a supportive professional community through an intensive entrepreneurship focused weekend workshop. While offering a novel approach to WIL pedagogy, the authors' learning outcomes are less clear with respect to the purpose of entrepreneurship education, as entrepreneurship is treated as a mindset rather than a disciplinary focus. Andrade et al. (2018) examined how entrepreneurship, namely the creation of start-up companies, has impacted the availability of WIL placement sites, particularly for the co-operative education program at the University of Waterloo. While the authors noted that some students used their co-operative work term to start their own business, their analysis focused on the economic impact rather than the pedagogical considerations of the students as entrepreneurs or the nature of the working experience. A recent review of innovative approaches for WIL pedagogy in Australia identified that "WIL activities linked to start-ups and incubators and focused on entrepreneurship are occurring, but not in great numbers and appear to be more aspirational at this stage." (Kay, et al., 2019, p. 411). Finally, Pretti et al. (2020) examined the role that WIL experiences had on students' entrepreneurial mindset. Although one of the study's subjects did report having participated in an EWIL program, the paper does not explore pedagogical specifics of such programs and restricts its reference to EWIL as those WIL programs where students develop their own ideas into new ventures.

In the EWIL programs described above, the WIL pedagogy is applied to entrepreneurship by allowing students to start a company, essentially gaining WIL experience inside their own start-up. This means that they do not have access to a work environment defined by a host organization. Students do the work by themselves, from either their own private homes or from co-working spaces that offer desk space to entrepreneurs. In the absence of a host organization, however, the use of WIL pedagogy for the purpose of teaching *through* entrepreneurship becomes harder to capture and define, as the students lack the direct guidance and feedback of a workplace supervisor.

ENTREPRENEURIAL WORK-INTEGRATED LEARNING

Unlike the more common forms of WIL opportunities (e.g., co-operative education, internships, apprenticeships), where the student is directed by an experienced supervisor, in entrepreneurship education students are often expected to create their own venture (Vincett & Farlow, 2008; Malach & Malach, 2014). Therefore, the simple transference of WIL pedagogy into entrepreneurship education as EWIL risks having the students essentially acting as their own supervisors. While it is commonplace for students to report to either course facilitator or industry mentor while engaged in experiential entrepreneurship activities (Dhliwayo, 2008; Vincett & Farlow, 2008), the relationship between student and mentor is distinct from the relationships that are found in traditional WIL placements, where students report to a direct supervisor. In this sense, implementing EWIL pedagogy, where the students are self-directed would-be entrepreneurs, presents a unique learning context that is distinct from other more traditional WIL opportunities. It should be noted that certain attributes of WIL pedagogy are missing in such self-directed EWIL opportunities. First is the vagueness of the working environment. Whereas an established company has a well-defined physical working space, new ventures are typically created in people's own homes and/or in coffee shops. Only at a later stage do new ventures occupy a physical space within incubators or co-working spaces. Second is the fundamentally different nature of accountability that exists between student entrepreneurs and their mentors or course

facilitator, as compared with the accountability between students and their workplace supervisors. Lastly is the fact that the direct professional feedback that is afforded in traditional forms of WIL experiences is not guaranteed for EWIL.

In this paper, a novel approach for EWIL is introduced, termed *supervised-EWIL* (sEWIL), that teaches *through* entrepreneurship and focuses on students' experience with new ventures. Here, students are directly supervised by entrepreneurs who have recently launched start-up companies. Placing students within such early-stage new ventures can be seen as a particular variant of internships, a traditional and common type of WIL experience. Essentially, students who are participating in a sEWIL program assume the role of interns within existing early-stage start-up companies. The distinction between sEWIL and other traditional forms of internships is attributed to two main elements: first is the choice of placement site, and second is the nature of the working experience within such placement sites. It should be noted that in this paper, the term start-up is used in the wider sense of the word, which also includes non-profit companies, as well as projects that have yet to be legally incorporated. The focus of the currently presented model is on the activities of the start-up, such as understanding product-market fit, developing the market and communication materials, etc., rather than the exact legal status of the organization.

When choosing a placement site for students, traditional WIL programs are less sensitive to the nature of the company within which students are placed, as long as the quality of work experience and the supervision are guaranteed. In contrast, since the sEWIL program's objective is to teach *through* entrepreneurship, it is required that the participating placement companies match the specific characteristics of entrepreneurship as defined by the sEWIL program facilitator. Regarding the nature of the working experience, traditional WIL programs offer students the opportunity to apply their disciplinary knowledge and skills within a real working environment. Therefore, the choice of placement site is directed by the nature of the work that will be offered to the students. In contrast, entrepreneurship is characterized by a dynamic working environment, and therefore there is less emphasis on particular functions for the students at the placement sites. Rather, it is the dynamic and evolving nature of the working environment that directs the choice of the placement sites, thereby affording students the opportunity to experience the entrepreneurial nature of early-stage start-ups.

EXPLORING NEW VENTURES

Beginning in the 2013-2014 academic year, the course Exploring New Ventures, has been offered in the faculty of arts and science at the University of Toronto. The course, an sEWIL opportunity, was designed to facilitate learning *through* entrepreneurship, as was explained in the previous section. The course was part of the ecosystem of activities managed by the University of Toronto's Impact Centre, an extra-departmental unit within the faculty of arts and science and was made possible by the presence of start-up companies being incubated by the centre. Through this course, undergraduate students were matched with early-stage start-up companies that were connected to the Impact Centre. The course was offered in two different lengths. The shorter version, being a half-course at the University of Toronto, spanned 12 weeks and included 100 hours of working hours internship at the placement start-up company. The longer version, being a full-course, spanned 24 weeks and included 200 hours of placement.

In order to fulfil the course objective that students learn experientially *through* entrepreneurship, two integrated components were used: in-class bi-weekly lectures and the weekly internship hours at the early-stage start-up placement site. Class topics covered both entrepreneurship and personal

development, including professional communication within the company environment, common entrepreneurship concepts and tools such as the business model canvas and the value proposition, communication skills and negotiation, and goal-setting tools, to name a few. In-class activities were guided by experiential learning principles in which students reflected and shared their personal experiences and tasks at their placement companies through small group activities, discussions and presentations. Critical reflection was also used for both formative and summative assessment purposes, which included individual meetings with the teaching staff, midway and final oral presentations, and a final report. The presentations, in addition to their use as formative assessment, also gave students a much bigger view of the start-up world since each student's placement activities were unique. Therefore, listening to the experiences of others, indirectly exposed students to a wider range of start-up environments and activities. The final report required students to critically examine their experience at the placement site, and the meaning of that experience, considered within the context of their personal professional development path.

Individual meetings of each student with the course staff formed a significant component of the course activities, and also served as a formative assessment. The main purpose of these meetings was to facilitate students' reflection on their contribution and their learning at the company, as well as to ensure that the activities students were asked to perform at the company were meaningful and appropriate for their learning objectives. Moreover, these meetings ensured that students did not fall too far behind on their assigned company tasks, by providing an opportunity to proactively resolve challenges that students faced at their internship. In essence, these individual meetings with the students served a dual purpose: quality assurance of the internship experience offered by the placement companies, and a formative assessment of the students' learning through critical reflective practice. In addition to individual meetings with students, the course staff also met individually with the entrepreneurs who were supervising the students at their internships. The meetings with company supervisors also served two purposes. First, they allowed course staff to learn about issues that the student might be struggling with. Second, they provided an opportunity to mentor the company representatives on supervisory and managerial skills. Due to the early-stage nature of the placement companies, company supervisors typically had little experience managing teams. Therefore, individual mentorship of the supervisors was often necessary and beneficial for both supervisors and supervisees alike. The meetings with students and supervisors were done separately, in order to provide students with a safe environment for them to speak up about potential problems. While these individual meetings required a large time investment for the course staff, they were an essential component to facilitate the students' learning process by recognizing the meaningful learning that is afforded by their experiences at their internships.

DISCUSSION

Between 2013 and 2020 a total of 380 students participated in the course, and a total of 84 early-stage start-ups, at various stages of growth, have provided placement opportunities. Enrolment per academic year varied from nine students, during the first year, to close to 100 students. In total, female students accounted for 57% of the participants, and male students accounted for 43%. While it is beyond the scope of the current paper, it is worth noting that women have historically been under-represented in entrepreneurship (Women Entrepreneurship Knowledge Hub, 2020). Therefore, the over-representation of women in this current program is noteworthy and warrants further investigation. Traditionally, entrepreneurship courses are most commonly offered within schools of business, followed by schools of engineering (Mirkovic et al., 2019; Sá et al., 2014). With the course Exploring New Ventures being offered within a faculty of arts and science, student participation was

overwhelmingly represented by non-business students, with only 30% of students from the commerce undergraduate programs. Of the remaining 70%, the most represented programs of studies were economics (16%), statistics (16%), mathematics (9%), human biology (7%), computer science (5%), psychology (3%), cognitive science (2%), immunology (2%), and physiology (2%). Close to 60 additional programs of studies have been represented by students participating in the course, with each program accounting for less than 2%, from as little as a single student from some programs to as many as 11 students from the East Asian studies program. While some start-up companies participated in only a single course session and have taken only a single student intern, others have participated in over 10 sessions throughout the years and had over 40 students working with their company. Startup companies were restricted in the number of placement students they were allowed to supervise at one time, capped at a ratio of up to three students for each direct supervisor, in order to maintain the quality of supervision and guidance by the entrepreneurs. Start-up companies were also required to have an office, so that the students could be placed in an authentic working environment. Companies that were run from the founders' homes were not allowed.

The Impact Centre catered to companies that often chose a bootstrapping financing model (Lahm & Little, 2005), which is associated with a slower and more organic growth, as compared with raising venture capital investments. Following the bootstrapping model is particularly advantageous for companies started by graduate students, since the slower growth of the company allowed the founders to complete their studies at the same time as launching their new venture. It was also a good learning experience for the undergraduate students in their placements, who could experience all activities of the company, since bootstrapped companies are not divided into departments. The incubated companies at the Impact Centre participated in Techno, an intensive program offered annually over a few weeks in the summer (Bogart, 2014; McDermott, 2017). The Techno program was specifically designed for students, typically from science and engineering disciplines, to focus on the formation of science-based start-ups (Zhu, 2014). Once the intensive training was completed, these Techno companies continued to be mentored at the Impact Centre. Part of this mentoring involved strategies to expand the team, which included the possibility to offer placements for undergraduate students. While the companies were typically science-based, the undergraduate students who participated in the course came from all disciplines within the arts and the sciences, as noted above, thereby enriching the start-up companies with unique perspectives and skills which were missing in the team of founders. Essentially, the sEWIL program is modeled after the general practice in the industry, where technology companies rely on contributions from many diverse disciplines, including the social sciences and the humanities (Shah, 2017).

Although students' disciplinary backgrounds were quite varied, early-stage start-up companies' needs tended to be more uniform, as they mostly came from STEM fields. Most often, students were assigned roles relating to business development, including market research, marketing activities, and, for the more advanced companies, even engaging in sales. Regardless of the particular role students assumed within their placement company, lectures were devoted to understanding entrepreneurship as a human-centric process, where the needs of potential customers serve to drive the creation and growth of the start-up. Therefore, students' working experiences at their placement companies provided them with an opportunity to integrate their leaning and understanding of entrepreneurship into their particular role within the start-up company. Applying a sEWIL pedagogical model allows students to deepen their understanding of entrepreneurship by learning *through* entrepreneurship, yet without the stress that is associated with searching for, and attempting to execute, their own idea for a new venture. Supporting the entrepreneurs who are their placement supervisors, students engage with

entrepreneurship in an authentic and meaningful way, while avoiding the risks that are inherent to entrepreneurial endeavors.

Oftentimes, the students' assigned tasks were different from their disciplinary background. Focusing on tasks outside of their core area of expertise encouraged students to take a more multi-disciplinary approach to their work, which is an important skill for entrepreneurs to develop (Robinson & Malach, 2004). Most entrepreneurs feel that a multidisciplinary approach is important for their success. The majority of the companies were technology-based (STEM businesses) working to commercialize a scientific or engineering discovery, or some technical know-how, while the students came from all the disciplines of the arts and sciences, as well as from commerce programs. This allowed students to learn to collaborate with people of vastly different backgrounds, an important career skill for them to develop, even if they do not pursue a career in entrepreneurship. At the same time, the young start-up companies learned how to collaborate with people of diverse disciplines, and how to manage a team with members of diverse backgrounds.

Unlike traditional WIL programs, such as co-operative education, where students work full-time at their placement, the sEWIL course presented in this paper was taken alongside other courses. This meant that students had limited amounts of times available to devote to the placement. This is similar to the other aforementioned Canadian examples of experiential entrepreneurship education (Malach & Malach, 2014; Vincett & Farlow, 2008; Wielemaker et al., 2010). For the sEWIL course it was observed that the amount of time that students spent at the placement directly influenced the types of tasks they were asked to complete. Students who participated in the full-course version of the sEWIL course were generally assigned tasks that were more central to the companies' activities, which in turns resulted in a more intimate understanding of the process of launching a company. The availability of a longer time with the placement start-up company also meant that the company could invest more effort into training the students with the intricacies of their company and of their line of business, which led to a more meaningful experience for the student. Moreover, as students' availability fluctuated throughout the academic term, significantly reducing during mid-term and approaching final exam periods, the required time flexibility exerts competing pressures on the students' time and were often the subject of discussion during the individual meetings with course staff. In particular, course staff usually advised the company supervisors on how to manage such time flexibility requirements and the students on how to manage their time during the placement. Time management for both entrepreneurs acting as manager assigning tasks, and for students being responsible and accountable for their work, was recognized as an important learning outcome for the sEWIL program.

When reflecting on their work at the placement, students highlighted a diverse range of skills that they developed. They mentioned professional skills quite often, which included professional communication, time management and collaborations across the disciplines. Students appreciated increasing their self-reliance, including the ability to make decisions with ambiguous information, ability to work independently, expressing their creativity, and learning the importance of planning. Many supervising entrepreneurs have given students large amounts of freedom in their work, which they appreciated, but which also made them realize the value of direct, timely feedback. When it comes to understanding their own work ethics, students brought up the need for persistence and hard work to overcome difficulties, while also remarking on the pride and excitement resulting from this work. Students were happy to practice working with real-life data, collecting information from a variety of sources and analyzing it. The students engaged very strongly with the company, often reporting frustration and disappointment when their placement company failed to meet certain goals, in sales, website traffic, etc. They reported that the internship helped them get out of their comfort zone and to

learn more about their work style. Finally, students appreciated the value of this opportunity, sometimes by motivating their future studies and placing them into a better perspective, sometimes by serving as a bridge between their academic studies and the business world, and sometimes even by receiving employment offers from the same start-up company upon completion of the placement period.

Overall, students' experiences with the course have been overwhelmingly positive. In teaching evaluations, close to 95% of participating students indicated they mostly or to a great deal agree to recommend the course to other students (corresponding to 4 and 5 scores on a 5-point Likert scale, respectively). Similarly, over 80% of students indicated in their course evaluations their agreement, either mostly or to a great deal, with the fact that the course stimulated their thinking about the world. Working intimately with early-stage start-ups provided students with an unparalleled opportunity for self-discovery. As many students indicated in their final oral presentations and written reports, working within an entrepreneurial environment offered them an insiders' perspective on what entrepreneurship is like. While for most students, such experiences served as either confirmation or encouragement to consider working in a start-up environment in their future professional life, for other students such experience resulted in an emerging recognition that working in a dynamic, high-pressure, and at times uncertain working environment, is not compatible with their own working style. Whether leaving with a sense of compatibility or incompatibility with the start-up world, students acknowledged the value of their learning experience, a lesson learned experientially.

CONCLUSION

It is commonly stated that entrepreneurship is not a spectator sport. This sentiment is confirmed by the adoption of experiential learning by entrepreneurship education programs worldwide. There is a gap to be filled, however, between the traditional classroom-based learning *about* entrepreneurship and the contemporary start-your-business approach for teaching *through* entrepreneurship. In this paper, an intermediate approach for entrepreneurship education utilizing work-integrated learning pedagogy was described, based on a successful implementation at the University of Toronto. Through their participation in supervised placements with early-stage start-up companies, a pedagogy termed supervised-EWIL (sEWIL), students benefit from learning experientially in an authentic real-world entrepreneurial working environment, fulfilling the learning objectives of learning *through* entrepreneurship. They essentially get an insider's look into start-up companies, yet without the risks and very large time investment of starting their own venture. Students who participated in the sEWIL program indicated gaining an awareness of their attitudes towards entrepreneurship, one that is founded on their own lived experience, rather than external sources with their biases and hypes. Students also recognized their preferences for working environments, whether entrepreneurial or traditional. Using sEWIL pedagogy, students not only developed an understanding of entrepreneurship, they also gained the experience to judge their aptitudes for working in such environments and their interests to seek such opportunities in the future.

It is important to understand that an sEWIL course such as the one presented in this paper depends on, and must contribute to, a local entrepreneurship ecosystem. Local start-up companies provide the working environment and direct supervision that is essential for a WIL pedagogy. In turn, entrepreneurs benefit from the contributions made by students and the course staff, leading to a win-win situation. The presence of the students allows start-up companies to develop their team management skills, for which they benefit from the guidance of course staff. Both students and start-

up companies grow as a result of the synergy that is created by the relationship between the university and the start-up community.

ACKNOWLEDGEMENTS

An early form of this work was previously presented at the EWO (Experiential and Work-Integrated Learning Ontario) & CEWIL (Co-operative Education and Work-Integrated Learning Canada) Professional Development Conference & Symposium in Ottawa, Canada on June 19th, 2019.

REFERENCES

- Andrade, A., Chopra, S., Nurlybayev, B., & Golab, L. (2018). Quantifying the impact of entrepreneurship on cooperative education job creation. *International Journal of Work-Integrated Learning*, 19(1), 51-68.
- Bogart, N. (2014, November 5). From e-transportation, to virtual reality health care: How Toronto is fostering high-tech start-ups. *Global News*. <https://globalnews.ca/news/1653639/from-e-transportation-to-virtual-reality-health-care-how-toronto-is-fostering-high-tech-start-ups/>
- de Villiers Scheepers, M. J., Barnes, R., Clements, M., & Stubbs, A. J. (2018). Preparing future-ready graduates through experiential entrepreneurship. *Education + Training*, 60(4), 303-317. <https://doi.org/10.1108/ET-11-2017-0167>
- Dhliwayo, S. (2008). Experiential learning in entrepreneurship education. *Education + Training*, 50(4), 329-340. <https://doi.org/10.1108/00400910810880560>
- Fayolle, A. (2018). Personal views on the future of entrepreneurship education. In A. Fayolle (Ed.), *A research agenda for entrepreneurship education* (pp.127-138). Edward Elgar Publishing.
- Haase, H., & Lautenschläger, A. (2011). The 'teachability dilemma' of entrepreneurship. *International Entrepreneurship and Management Journal*, 7(2), 145-162. <https://doi.org/10.1007/s11365-010-0150-3>
- Ibrahim, A. B., & Soufani, K. (2002). Entrepreneurship education and training in Canada: A critical assessment. *Education + Training*, 44(8/9), 421-430. <https://doi.org/10.1108/00400910210449268>
- Kay, J., Ferns, S., Russell, L., Smith, J., & Winchester-Seeto, T. (2019). The emerging future: Innovative models of work-integrated learning. *International Journal of Work-Integrated Learning*, 20(4), 401-413.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
- Krueger, N. F., Jr. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. *Entrepreneurship theory and practice*, 31(1), 123-138. <https://doi.org/10.1111%2Fj.1540-6520.2007.00166.x>
- Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship theory and practice*, 29(5), 577-597. <https://doi.org/10.1111%2Fj.1540-6520.2005.00099.x>
- Lahm, R. J., Jr., & Little, H. T., Jr. (2005). Bootstrapping business start-ups: Entrepreneurship literature, textbooks, and teaching practices versus current business practices? *Journal of Entrepreneurship Education*, 8, 61-73.
- Malach, S. E., & Malach, R. L. (2014). Start your own business assignment in the context of experiential entrepreneurship education. *Journal of Higher Education Outreach and Engagement*, 18(1), 169-186.
- Mason, C., & Arshed, N. (2013). Teaching entrepreneurship to university students through experiential learning: A case study. *Industry and Higher Education*, 27(6), 449-463. <https://doi.org/10.5367%2Fihe.2013.0180>
- McDermott, K. (2017, June 20). 8 key takeaways from Techno 2017. StartUp HERE Toronto. <https://startupheretoronto.com/partners/uoft/impact-centre/8-key-takeaways-techno-2017/>
- Mirkovic, T., Plant, C., & Veletanlić, E. (2019). *Entrepreneurship and innovation education at Canadian Universities*. Impact Centre, University of Toronto.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International small business journal*, 25(5), 479-510. <https://doi.org/10.1177%2F0266242607080656>
- Pittaway, L., & Edwards, C. (2012). Assessment: Examining practice in entrepreneurship education. *Education + Training*, 54(8/9), 778-800. <https://doi.org/10.1108/00400911211274882>
- Pretti, T. J., Parrott, P., Hoskyn, K., Fannon, A. M., Church, D., & Arsenault, C. (2020). The role of work-integrated learning in the development of entrepreneurs. *International Journal of Work-Integrated Learning*, 21(4), 451-466.
- Robinson, P., & Malach, S. (2004). Multi-disciplinary entrepreneurship clinic: Experiential education in theory and practice. *Journal of Small Business & Entrepreneurship*, 17(4), 317-332. <https://doi.org/10.1080/08276331.2004.10593327>
- Sá, C., Kretz, A., Sigurdson, K. (2014). *The state of entrepreneurship education in Ontario's Colleges and Universities*. Higher Education Quality Council of Ontario.
- Sá, C. (2018). What does success look like for entrepreneurship education? *International Journal of Chinese Education*, 7(2), 193-206. <https://doi.org/10.1163/22125868-12340097>
- Shah, A. (2017, February 8). The role for the Humanities and Social Sciences in product driven startups. *Entrepreneur India*. <https://www.entrepreneur.com/article/288893>

- Stirling, A., Kerr, G., Banwell, J., MacPherson, E., & Heron, A. (2016). *A practical guide for work-integrated learning: Effective practices to enhance the educational quality of structured work experiences offered through colleges and universities*. Higher Education Quality Council of Ontario.
- Vincett, P. S., & Farlow, S. (2008). "Start-a-Business": An experiment in education through entrepreneurship. *Journal of Small Business and Enterprise Development*, 15(2), 274-288. <https://doi.org/10.1108/14626000810871673>
- Wielemaker, M., Gaudes, A. J., Grant, E. S., Mitra, D., & Murdock, K. (2010). Developing and assessing university entrepreneurial programs: The case of a new program in Atlantic Canada. *Journal of Small Business & Entrepreneurship*, 23(4), 565-579. <https://doi.org/10.1080/08276331.2010.10593502>
- Women Entrepreneurship Knowledge Hub. (2020). *The state of women's entrepreneurship in Canada 2020*. Diversity Institute, Ryerson University.
- Zhu, A. (2014, November 9). Taking your research from bench to bedside. *The Varsity*. <https://thevarsity.ca/2014/11/09/taking-your-research-from-bench-to-bedside/>

The International Journal of Work-Integrated Learning
gratefully thanks the sponsors of the Special Issue on
the practice and research of cooperative education and
work-integrated learning in the Canadian context



UNIVERSITY OF
WATERLOO

WORK  **LEARN**
INSTITUTE


CEWIL
CANADA

Co-operative
education and
work-integrated
learning



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, entrepreneurship, 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.



EDITORIAL BOARD

Editor-in-Chief

Dr. Karsten Zegwaard

University of Waikato, New Zealand

Associate Editors

Dr. Judene Pretti

University of Waterloo, Canada

Dr. Anna Rowe

University of New South Wales, Australia

Assoc. Prof. Sonia Ferns

Curtin University, Australia

Senior Editorial Board Members

Dr. Bonnie Dean

University of Wollongong, Australia

Dr. Phil Gardner

Michigan State University, United States

Prof. Denise Jackson

Edith Cowan University, Australia

Assoc. Prof. Ashly Stirling

University of Toronto, Canada

Emeritus Prof. Janice Orrell

Flinders University, Australia

Emeritus Prof. Neil I. Ward

University of Surrey, United Kingdom

Copy Editors

Yvonne Milbank

International Journal of Work-Integrated Learning

Diana Bushell

International Journal of Work-Integrated Learning

Editorial Board Members

Assoc. Prof. Erik Alanson

University of Cincinnati, United States

Prof. Dawn Bennett

Curtin University, Australia

Mr. Matthew Campbell

Queensland University of Technology, Australia

Dr. Craig Cameron

Griffith University, Australia

Dr. Sarojni Choy

Griffith University, Australia

Prof. Leigh Deves

Charles Darwin University, Australia

Mr. David Drewery

University of Waterloo, Canada

Assoc. Prof. Michelle Eady

University of Wollongong, Australia

Assoc. Prof. Chris Eames

University of Waikato, New Zealand

Dr. Jenny Fleming

Auckland University of Technology, New Zealand

Assoc. Prof. Wendy Fox-Turnbull

University of Waikato, New Zealand

Dr. Nigel Gribble

Curtin University, Australia

Dr. Thomas Groenewald

University of South Africa, South Africa

Assoc. Prof. Kathryn Hay

Massey University, New Zealand

Ms. Katharine Hoskyn

Auckland University of Technology, New Zealand

Dr. Sharleen Howison

Otago Polytechnic, New Zealand

Dr. Nancy Johnston

Simon Fraser University, Canada

Dr. Patricia Lucas

Auckland University of Technology, New Zealand

Dr. Jaqueline Mackaway

Macquarie University, Australia

Dr. Kath McLachlan

Macquarie University, Australia

Prof. Andy Martin

Massey University, New Zealand

Dr. Norah McRae

University of Waterloo, Canada

Dr. Laura Rook

University of Wollongong, Australia

Assoc. Prof. Philip Rose

Hannam University, South Korea

Dr. Leoni Russell

RMIT, Australia

Dr. Jen Ruskin

Macquarie University, Australia

Dr. Andrea Sator

Simon Fraser University, Canada

Dr. David Skelton

Eastern Institute of Technology, New Zealand

Assoc. Prof. Calvin Smith

University of Queensland, Australia

Assoc. Prof. Judith Smith

Queensland University of Technology, Australia

Dr. Raymond Smith

Griffith University, Australia

Prof. Sally Smith

Edinburgh Napier University, United Kingdom

Prof. Roger Strasser

University of Waikato, New Zealand

Prof. Yasushi Tanaka

Kyoto Sangyo University, Japan

Prof. Neil Taylor

University of New England, Australia

Ms. Genevieve Watson

Elysium Associates Pty, Australia

Dr. Nick Wempe

Primary Industry Training Organization, New Zealand

Dr. Theresa Winchester-Seeto

University of New South Wales, Australia

Dr. Karen Young

Deakin University, Australia

Publisher: Work-Integrated Learning New Zealand (WILNZ)

www.wilnz.nz