Work-integrated Reflective Learning and Business Outcomes Among College Graduates

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DOI: https://doi.org/10.54337/ecrpl25-10921

Abstract

Entrepreneurship is a key driver of economic development, and higher education plays a pivotal role in nurturing entrepreneurial potential. Multiple studies have examined the relationship between students' entrepreneurial intentions and various individual and entrepreneurship support factors. However, relatively little attention has been paid to the role of work-integrated reflective learning in entrepreneurship and its relationship with other support factors, particularly in relation to the longevity of the entrepreneurial activities of the business programme's graduates. The aim of this research is to investigate which educational factors related to work-integrated reflective learning along with individual factors of students predict the sustainability of entrepreneurship one year after graduation among alumni of the short-cycle professional higher education program in Micro, Small, and Medium Enterprise Management at the College of Business Administration (CBA) in Latvia. Survey data were collected from 67 graduates who completed the programme between 2019 and 2023. The data were analyzed using logistic regression analysis. The results show that two factors – entrepreneurial experience prior to studies and the perceived usefulness of business development skills acquired through work-integrated learning – significantly increased the likelihood of graduates maintaining an active business one year after graduation. Among the two, previous entrepreneurial experience emerged as the strongest predictor. The results provide important insight into how to support new entrepreneurs effectively during the initial years of their ventures. The findings may be useful for educational

institutions in improving professional higher education programmes in entrepreneurship, especially in the design of internship programmes.

Keywords
Work-Integrated Learning, Reflective learning, Entrepreneurship development, Mentoring, Internship program, Professional higher education.

Introduction

The job market is changing fast due to the shift to a green and digital economy and the rise of new technologies. These changes are putting pressure on each country's competitiveness, growth, and sustainability goals. Therefore, entrepreneurship education has become an increasingly important component in promoting economic growth and innovation on a global scale. It aims to equip individuals with the knowledge to create and develop businesses within a dynamic market environment and provides fundamental foundations for understanding the business environment, acquiring market research skills, and identifying new market opportunities. As a result, young entrepreneurs can more effectively develop business ideas and execute them based on sound strategies.

The European Commission has been instrumental in promoting entrepreneurship education. In 2016, it introduced the European Entrepreneurship Competence Framework (EntreComp) to enhance the entrepreneurial capacities of European citizens and organizations (The European Commission, 2016). The framework creates a shared understanding of the knowledge, skills, and attitudes needed to become an entrepreneur. The role of education, particularly short-cycle professional higher education, is to develop these skills in students. EntreComp provides a valuable reference point for structuring work-integrated learning (WIL) and mentorship as practical and personalized approaches to building entrepreneurial competence. Through real-world learning experiences and guidance from experienced mentors, students can actively apply and strengthen the competences defined by EntreComp, such as creativity, taking initiative, working with others, and managing uncertainty. These approaches bridge the gap between theory and practice and are essential for embedding entrepreneurial thinking in education.

This article explores the role of entrepreneurship education and, more specifically, work-based learning supported by mentorship in the entre-

preneurial success of former students. Using theoretical perspectives and empirical findings, this study aims to explain how entrepreneurship education promotes business development, resulting in broader economic and social growth.

Work Integrated Learning and Its Approach in the Entrepreneurship Education

Work-Integrated Learning (WIL) continues to gain importance in higher education, linking academic curricula with real-world application. Experiential learning is increasingly acknowledged as the preferred approach in entrepreneurship education, emphasizing students' engagement with real-world experiences (Eisenstein et.al., 2021). WIL is defined as a pedagogy that "purposefully places students in a real or simulated working environment, as part of the students' academic activities" and that has a "focus on a real-world, well-defined working environment for them to interact with and to reflect upon" (Eisenstein et.al., 2021, p. 414). WIL equips students with practical skills and real-life knowledge, thus addressing gaps between theoretical learning and the dynamic demands of business workplaces. WIL is founded on closely integrating university studies with workplace practice to facilitate the application of academic knowledge in professional settings (Smith & Worsfold, 2015). It allows students to engage with their future work environments while developing generic professional skills that enhance their employability (Patrick et al., 2008). However, integrating WIL into academic curricula presents significant challenges, particularly in aligning assessments with the varied requirements of external workplace environments.

WIL plays a transformative role in enhancing graduate employability in future workplaces. Employability encompasses a diverse set of skills and abilities. Smith and Worsfold (2015) argue that work-ready students possess a variety of skills and abilities that make them immediately employable. Consequently, WIL has the potential to develop entrepreneurship in students already aspiring to become entrepreneurs while also inspiring entrepreneurial thinking in those who may not have previously considered this career path (Pretti et al., 2020). Programs like supervised entrepreneurial WIL (sEWIL) allow students to experience dynamic, early-stage start-up environments, providing a rich context for learning entrepreneurial skills while contributing directly to business outcomes

(Eisenstein et al., 2021). This context sets WIL pedagogy apart from most other experiential learning approaches.

Young generations have especially benefited from structured programs, such as internships as part of entrepreneurial training. Such programs improve technical competencies and foster creative thinking, resilience and adaptability. Febrianti et al. (2023) highlight the efficacy of internships in helping students transition from academia to professional environments by fostering a deeper entrepreneurial mindset. Furthermore, Winborg and Hägg (2023) demonstrate how corporate development projects prepare students for corporate entrepreneurial roles. Under a corporate development project, students take ownership of both the project and the learning process. Consequently, students must be given the opportunity to influence the project's scope, methods, and outcomes.

Implementing WIL faces numerous challenges, including aligning expectations from all parties and ensuring program efficiency. Ajjawi et al. (2020) emphasize the frequent misalignment between workplace tasks and duties and academic assessments, which can diminish the value of the learning experience. C-19 pandemic has further exposed these challenges, necessitating innovative solutions such as virtual WIL experiences. However, these solutions often fail to replicate the interpersonal and social dynamics of in-person placements, crucial for soft skill development (Pretti et al., 2020).

Assessment practices in WIL have evolved over the last years to better reflect the development and requirements of a contemporary working environment. Ajjawi et al. (2020) propose authentic assessments that align closely with workplace scenarios, thereby increasing the relevance and applicability of academic evaluations. Tools like reflective journals and self-assessment frameworks encourage students to critically analyze their learning journeys, resulting in deeper professional growth (Eisenstein et al., 2021). Ajjawi et al. (2020) promote an innovative approach that sees assessment not just as a tool for evaluation but as a synthesis of theoretical knowledge and practical application. By fostering engagement between students, academic institutions, and industry professionals, educational programs can enhance the effectiveness and efficiency of WIL assessments.

Moreover, projects like entrepreneurial co-ops, where students work on their own start-ups, strengthen experiential learning. These assessments focus on real-world outcomes such as product-market fit and

business scalability, ensuring students gain practical entrepreneurial skills (Mian et.al., 2016). However, there are also drawbacks. While established companies operate in clearly defined physical spaces, new ventures are often launched in informal settings, such as homes or coffee shops (Eisenstein et al., 2021).

Additionally, supervised WIL programs, such as those described by Eisenstein et al. (2021), involve placing students within early-stage ventures under the guidance of experienced entrepreneurs. This enriches their understanding of start-up dynamics and builds critical skills in leadership and innovation. By participating in supervised placements with early-stage startups, a pedagogy known as supervised-EWIL, students gain experiential learning in a genuine entrepreneurial environment, achieving the learning objectives of learning through entrepreneurship (Eisenstein et al., 2021).

Research on learning and knowledge transfer highlights that individuals acting as brokers and intermediaries, such as mentors in incubators, play a vital role in fostering organizational learning (Assenova, 2020). When viewed through the lens of Kolb's (1984) experiential learning cycle, WIL provides concrete experience and active experimentation, while mentorship supports reflective observation and abstract conceptualization. Through this interplay, mentoring enables students to process workplace experiences more effectively, make informed entrepreneurial decisions, and develop self-efficacy. Mentorship is highly important in WIL programs, significantly enhancing the success and performance outcomes. Nabi et al. (2019) highlight the diverse role of mentors in entrepreneurship education, ranging from technical guidance to emotional support during critical decision-making periods. Assenova (2020) demonstrates how high-ability mentors improve revenue and profitability outcomes for mentees, especially in resource-constrained settings. Mentoring can assist entrepreneurs in applying new knowledge about operations and scaling for their ventures, enabling them to drive change and enhance business performance.

Reflective learning as crucial component of WIL

Reflection is a very important part of learning from experience. It is broadly defined as the process of consciously examining and analyzing events or experiences to draw lessons and add meaning to them (He-

lyer, 2015). By analyzing concrete events, individuals can understand the reasons behind and what to change in the future, thus avoiding repeating mistakes (Helyer, 2015). Reflective practice can be significantly enhanced through peer support or structured mentoring, where experienced students mentor less experienced students or workplace mentors provide guidance in a safe and open environment (Helyer, 2015).

In WIL, reflection acts as the bridge that transforms pure experience into meaningful learning, as emphasized by Kolb's (1984) experiential learning theory, which highlights reflective observation as the key stage where concrete experiences evolve into valuable educational insights.

Mentorship Role in Entrepreneurship Education

Mentorship can be helpful for young entrepreneurs willing to succeed in the business world. One of the most effective approaches involves pairing young entrepreneurs with experienced business professionals who provide strategic insights and practical advice to help them avoid costly mistakes (St-Jean, 2011).

A mentor is an individual with extensive expertise and knowledge in a particular field, including entrepreneurship (Memon et al., 2015). The cooperation between a young entrepreneur and an experienced entrepreneur is known as business mentoring. A mentor helps young entrepreneurs to develop their business by providing both professional advice and moral support (Diawati et al., 2023). Consequently, the role of mentorship in entrepreneurship education is becoming increasingly important.

Studies show that young entrepreneurs who receive mentor support gain significant benefits: improved cognitive learning, new skills and knowledge, business vision and recognition of opportunities (Ashan, 2017). In addition, students experience emotional learning (decrease of the feeling of loneliness, improvement of self-efficacy and self-awareness), next to establishing new contacts that can contribute to an increase in sales and profitability of the company (Bisk, 2002; Zvaigzne & Kotane, 2019; Wikholm et al. 2005).

Key Functions of Mentor

The mentor's functions have been analyzed in various studies (Pellegrini & Scandura, 2005; Scandura, 1992). They can be categorized into three

main groups: psychological support, career-related guidance and role modelling. Authors of the article have consolidated insights about mentor roles as described by St-Jean (2011) and Kubberød et al. (2018) in Table 1.

Table 1: Mentor's function groups

Function Group	Function	Description
Psychological functions	Reflector	Provides feedback on the business and personal development of the mentee.
	Reassurance	Helps the mentee to overcome difficulties, to relieve stress and to maintain perspective.
	Motivation	Encourages the mentee, helps to develop self-confidence and promotes perseverance.
	Confidant	A trusting relationship may develop into a friendship, offering emotional support.
Career-Related Functions	Integration	Promotes the mentee's integration into the business environment by facilitating connections with key contacts.
	Information support	Shares relevant information and helps to access resources.
	Confrontation	Challenges the mentee's ideas and beliefs to foster effective problem-solving.
	Guide	Enhances the mentee's awareness of problems and provides advice on solutions.
Role and model function	Model	Shares personal experiences to inspire the mentee and to provide valuable learning opportunities.

Note. Synthesized by authors based on: St-Joan (2011) and Kubberod et al. (2018).

Developing Effective Mentoring Programs in Entrepreneurship

To effectively develop mentoring programmes in higher education institutions, several key aspects should be considered, as highlighted in studies by Prastyaningtyas et al. (2023), Kubberød & Fosstenløkken (2018), and St-Jean (2011):

1. Relationship building between a mentor and a young entrepreneur – organizing regular meetings, promoting open communication and identifying the individual needs of young entrepreneurs.

2. Development of mentors' competencies – providing the mentors with sufficient knowledge and skills in entrepreneurship to effectively manage the mentoring process.

3. Implementation of a structured mentoring programme – educational institutions should ensure a clear and targeted mentoring system.

4. Involvement of mentors in business decision-making – helping young entrepreneurs to make strategically important decisions.

5. Recognition and evaluation of mentors – motivating and incentivizing mentors to continue to provide support to young entrepreneurs.

The role of mentorship in entrepreneurship education is becoming increasingly important, as it equips young entrepreneurs not only with practical knowledge but also contributes to emotional growth and professional development. Well-structured mentoring programs serve as a critical foundation for entrepreneurial success.

Role of Other Factors in Starting Successful Business During Studies

There are also additional factors that can influence business success, as documented in numerous scientific publications. For example, Turner (2015) highlights three key factors for business success: leveraging the owner's networks and utilizing the business as a platform for customer-to-customer interactions, overcoming initial challenges in business planning while adapting to ongoing changes, and establishing a distinct marketing position. Hodges et al. (2016) identifies five critical factors for the success of apparel-related entrepreneurs and small businesses: relationship-building, niche identification, resourcefulness, community engagement, and global awareness. Their findings suggest that entrepre-

neurship and small business education within apparel programs should emphasize developing students' entrepreneurial competencies in these areas. The influence of the university environment and the entrepreneurial-university ecosystem in shaping entrepreneurial attitudes and commitment is a well-researched topic. University support extends far beyond the academic activities, by providing specific support for businesses, including advisory services, capital investment provision and market entry support (Muscio, 2022).

In addition to external and institutional factors, individual-level factors – such as demographic characteristics, experiential background, and psychological traits may play a significant role in shaping students' entrepreneurial success. Demographic factors such as gender and age have been shown to influence entrepreneurial intentions and outcomes. Male students often report higher entrepreneurial intent, partly due to greater risk tolerance and self-confidence, while female students may be more influenced by mentoring and role models and face structural or perceived barriers (Wilson et al., 2007; Langowitz & Minniti, 2007). Sahinidis et al. (2021) found that age significantly influences entrepreneurial intention, with results showing an inverse relationship beyond the 26–34 age group. Furthermore, prior experience, whether through work, family business involvement, or past entrepreneurial projects, enhances practical skills, entrepreneurial self-efficacy, and opportunity recognition (Unger et al., 2011). These findings highlight the importance of experiential learning and tailored support in entrepreneurship education. As regards individual psychological factors, research shows that traits such as self-efficacy, internal locus of control, and proactive personality are positively associated with the intention to start and sustain a business (Rauch & Frese, 2007). These findings underline the importance of personal development and psychological preparedness in entrepreneurship education programs, particularly for students pursuing business ventures during their studies.

Based on the theoretical framework, the authors posed the following research question:

> *Which educational factors related to workplace-integrated reflective learning and individual factors of students predict business ownership one year after graduation among graduates of the CBA study*

programme "Management of Micro, Small, and Medium-Sized Enterprises"?

Method

Sample

The study sample consisted of 67 graduates of the CBA short-cycle professional higher education programme "Management of Micro, Small and Medium-sized Enterprises" who graduated between 2019 and 2023. The 2019 graduates were the first cohort to experience a revised entrepreneurship internship model at CBA that emphasised workplace-integrated reflective learning and introduced a requirement for students to register and develop their own business as part of their practical training, thus marking a shift in the programme's approach to entrepreneurship education. Graduates from 2024 were not included in the target group, as they had not yet reached the one-year post-graduation period required by the study design. No additional inclusion or exclusion criteria were applied. Thus, the target population of the study was 132 individuals all of whom were invited to participate. A total of 67 graduates responded, resulting in a response rate of approximately 51%.

The duration of their studies at the college was 2.5 years or 5 semesters. Throughout their studies students participated in an entrepreneurship internship, during which they were required to develop a business idea, officially registered an enterprise, and actively work on growing their enterprise. During the internship, each student was assigned a mentor and engaged in structured reflective activities, including creating and maintaining an internship diary, preparing and delivering internship presentations, and receiving feedback from both their mentor and peers.

Of the 67 participants, 55.2% were male (n = 37) and 44.8% were female (n = 30). The average age of respondents was 36.84 years (SD = 7.52). Graduation years of study participants were distributed as follows: 2019 – 14.9% (n = 10), 2020 – 23.9% (n = 16), 2021 – 19.4% (n = 13), 2022 – 26.9% (n = 18), 2023 – 14.9% (n = 10).

Data collection methods

To explore the predictors of active business ownership one year after graduation, a questionnaire was developed. It was based on a literature review and the study's conceptual model, focusing on work-based inte-

grated reflective learning, other forms of support, and individual factors among graduates of the CBA short-cycle professional higher education programme "Management of Micro, Small, and Medium-sized Enterprises." The questionnaire consisted of 31 questions grouped into four thematic sections: 1. General information, 2. Workplace-integrated reflective learning (WIL), 3. Other factors of support received, and 4. Business sustainability. 20 questions were used for quantitative data analysis due to their relevance to the research objective and question.

The dependent variable – active business ownership one year after graduating from CBA, was measured with a binary (yes/no) question whether the respondent was still actively pursuing economic activity with the business developed during his studies one year after graduating from college. The independent variables are presented in Table 2.

Table 2: Overview of independent variables used in the study

Factor group		Variable	Example item / Description	Scale
Educational factors	Workplace-integrated reflective learning factors	Perceived usefulness of WIL-acquired skills for business development	*To what extent did the skills acquired in Entrepreneurship Internship help you in developing your business?*	Likert (1–5)
		Perceived mentor roles: Reflector, Persuader, Motivator, Confidant, Integrator, Informational supporter, Confronter, Guide, Role model	Sample: *The mentor provided feedback on my business*	Likert (1–5)
		Perceived usefulness of reflection activities	Select 1-3 most helpful types of reflection: report writing, diary entries, preparation of presentation, presenting, receiving feedback from mentor and from fellow students	Yes/No per item

Factor group		Variable	Example item / Description	Scale
Educational factors	Other Support Factors	Networking	Used networking opportunities during studies	Yes/No
		Participation in contests and support programs	Participated in entrepreneurship-related initiatives	Yes/No
		External funding	Received additional business funding (e.g., grants, awards)	Yes/No
		Guest lectures/workshops	Attended entrepreneurship-related events	Yes/No
		Peer support	Used support from fellow students	Yes/No
Individual factors		Prior entrepreneurial experience	Had business experience before starting CBA studies	Yes/No
		Age	Self-reported age (in years)	Continuous
		Gender	Self-reported gender	Male/Female/ Other

Independent variables depicted in Table 2 were selected based on the conceptual framework and previous research, and they served as inputs in the subsequent correlation and regression analyses.

Procedure and data analysis

The survey was conducted in March 2025. The questionnaire was distributed via the platform Google Forms. A pilot test of questionnaire was conducted with a focus group of four students from various CBA graduation years and with differing levels of academic performance. After completing the survey, focus group participants took part in a reflection session on the Zoom platform, where they provided feedback on

the survey's length, clarity of questions, visual design, and suggestions for improvement.

After the refinement of the questionnaire, a survey link was distributed via email to all graduates of the CBA study programme Management of Micro, Small, and Medium-Sized Enterprises from the years 2019 to 2023 – a total of 132 potential respondents. The email with the survey link was sent centrally by the CBA Study Support Center, preceded by an SMS notification. To encourage participation and prompt responses, initial email and SMS notifications were followed up a few days later. One of the study authors personally called graduates using contact details provided by CBA and sent personalized reminder text messages inviting them to complete the survey. Some intended respondents could not be reached. Confidentiality was ensured throughout the survey process. Only the study authors had access to the responses, and no personally identifiable information was collected, thereby preserving anonymity of the respondents.

The data were analysed using IBM SPSS Statistics (version 26). Spearman correlation analyses were conducted to examine the relationships between variables, and a logistic regression analysis was performed to identify predictors of active business ownership one year after graduation.

Results

The dependent variable in this study was active business ownership (the continued operation of the business established during the study period) one year after graduation. Among the 67 respondents, 59.7% (n = 40) indicated their business was active at that point, while 40.3% (n = 27) reported it was not operational one year after graduation. Respondents' current engagement in entrepreneurship at the time of the survey was also examined: 50.7% (n = 34) indicated that the business established during the study period remained active, and 49.3% (n = 33) had discontinued the business started during their studies.

To determine which factors of workplace-integrated reflective learning, other forms of support received, and individual characteristics predict graduates' active business ownership one year after completing their studies at CBA, initial correlation analyses were conducted between the

dependent and independent variables. Statistically significant correlation results are presented in Table 3.

Table 3: Spearman correlations between active business ownership one year after graduation and factors of Workplace-Integrated Reflective Learning, other support received, and individual characteristics (N = 67)

Variable	1.	2.	3.
1. Active business 1 year after CBA graduation	1.00		
2. Perceived usefulness of WIL-acquired skills for business development	.42**	1.00	
3. Entrepreneurial experience prior to studies	.40**	.31*	1.00

Note. ** $p < .01$; * $p < .05$

The results show that active business ownership one year after college graduation is significantly associated ($p < .01$) only with two of the independent variables – with the workplace-integrated reflective learning factor "Perceived usefulness of WIL-acquired skills for business development" and the individual factor "Entrepreneurial experience prior to studies." Both factors were included in further analysis. Perceived mentor roles, perceived usefulness of reflection activities, support factors like networking, participation in grants, external funding, workshops and peer support, as well as gender and age were not significantly related to active business ownership one year after graduation and were not included in further analysis.

A logistic regression analysis was conducted to determine whether the workplace-integrated reflective learning factor "Perceived usefulness of WIL-acquired skills for business development" and the individual factor "Entrepreneurial experience prior to studies" predict active business ownership one year after college graduation. The assumptions of independent observations and a linear relationship between the independent variables and the logit were checked and met.

When both predictor variables were included in the model, they significantly predicted active business ownership one year after graduation, χ^2 (2, N = 67) = 19.38, $p < .001$. Table 4 where the odds ratios are presented, indicates that both "Perceived usefulness of WIL-acquired skills for business development" ($p = .013$) and "Entrepreneurial experience

prior to studies" ($p = .019$) significantly increase the likelihood of graduates continuing their business after college. Importantly, "Entrepreneurial experience prior to studies" emerged as the stronger predictor, with an odds ratio of 5.37, meaning that graduates with prior entrepreneurial experience were more than five times more likely to maintain their business after graduation compared to those without such experience. Meanwhile, "Perceived usefulness of WIL-acquired skills" was associated with an odds ratio of 2.52, thus doubling the likelihood of active business ownership post-graduation.

Table 4: Logistic regression predicting graduates' active business ownership one year after college graduation

Variable	B	SE	Odds ratio	p
Perceived usefulness of WIL-acquired skills for business development	.92	.37	2.52	.013
Entrepreneurial experience prior to studies	1.68	.71	5.37	.019
Constant	-3.55	1.41	0.03	.012

Though the initial correlation did not show statistically significant relationships between the dependent variable and other independent variables, it is worth noting that additional analysis revealed statistically significant associations ($p < .01$) between the factor "Perceived usefulness of WIL-acquired skills for business development" and all factors related to the perceived roles of mentoring. The results are presented in Table 5.

Table 5: Spearman correlations between graduates' perceived usefulness of WIL-acquired skills for business development and perceived roles of mentoring (N = 67)

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.
Perceived usefulness of WIL-acquired skills for business development	.41**	.40**	.49**	.36**	.37**	.35**	.36**	.37**	.36**

Notes. ** $p < .01$; 1. Mentor perceived as a reflector, 2. Mentor perceived as a persuader, 3. Mentor perceived as a motivator, 4. Mentor perceived as a confidant, 5. Mentor perceived as an integrator, 6. Mentor perceived as an informational supporter, 7. Mentor perceived as a confronter, 8. Mentor perceived as a guide, 9. Mentor perceived as a role model.

Since the perceived usefulness of WIL-acquired skills for business development was found to be a significant predictor of active business ownership in the regression model, the observed associations between this factor and the perceived roles of mentorship may indicate an indirect influence of mentoring on entrepreneurship, potentially mediated through the skills developed during WIL. Future studies are recommended to conduct mediation analysis to test this assumption and gain a more precise understanding of the indirect role of mentoring in the context of entrepreneurship education and business sustainability.

Conclusions and discussion

The study investigated which educational factors related to workplace-integrated reflective learning and individual factors of students predicted active business ownership one year after graduation from the CBA study programme "Management of Micro, Small, and Medium-Sized Enterprises". While several educational and individual factors were examined, authors of the study identified only two significant predictors of active business ownership: the perceived usefulness of WIL-acquired skills for business development and entrepreneurial experience prior to studies. Among these, previous entrepreneurial experience emerged as the

strongest predictor. Individuals who had entrepreneurial experience prior to enrolling in the college were more than five times more likely to be engaged in business one year after graduation. This finding supports previous research, which has shown that prior experience – whether gained through work, family business involvement, or past entrepreneurial activity – enhances practical skills, entrepreneurial self-efficacy, and opportunity recognition (Unger et al., 2011). Possibly, practical, real-world experience before formal business education reinforces knowledge gained during WIL. Also, graduates with prior business exposure may already possess entrepreneurial traits and attitudes which enhance their entrepreneurial success during and after business studies, for example, a study by Harris et al. (2007) concluded that the experiences gained from entrepreneurial exposure can be critically important to the development of positive attitudes towards entrepreneurship of business students. One practical way to build on these findings is by actively applying entrepreneurial experience during students' internships. This can include experience gained through student training companies, volunteer work in business environments, or projects related to economics or business. On the other hand, to better support the development of student entrepreneurs with different prior experience levels, it is essential to expand opportunities for peer mentorship where experienced students guide and support those who are just beginning their entrepreneurial journey – whether through one-on-one mentoring, group workshops, peer-led lectures, or open discussions. Additionally, tasks and assignments within WIL should be tailored to align with the experience and capabilities of each student. Differentiated learning ensures that both novice and advanced students are appropriately challenged and supported. Students with deeper knowledge in specific areas – such as accounting or marketing – can work alongside those who are still developing their expertise, and this collaboration can also extend beyond the program itself, with mentors from other study programmes stepping in to assist or even offer their services as part of a cooperative learning experience. These interactions create a dynamic learning environment where students benefit from each other's strengths.

Perceived usefulness of WIL-acquired skills was significantly associated with higher odds of active business ownership, doubling the likelihood, according to the regression model. These findings support previous research (e.g., Pretti et al., 2020), which emphasizes the importance

of experience-based and practice-oriented education in developing entrepreneurial skills and competencies. Therefore, higher education institutions should continue to strengthen WIL strategies, ensuring that students have opportunities not only to acquire theoretical knowledge but also to actively engage in real-world entrepreneurial situations. Such experiences provide a meaningful context for developing the skills necessary for successful entrepreneurship.

Other educational and individual factors – including the perceived usefulness of reflection activities, perceived mentor roles, support mechanisms such as networking, participation in grants or external funding, workshops, peer support, as well as gender and age – were not significantly related to post-graduation business ownership and were therefore not included in the regression model. Possibly, these factors influence business outcomes over a longer period than one year (having delayed effects) or through indirect pathways. Future studies could explore these factors using longer follow-up periods and models that explore indirect effects, such as mediation analysis or collecting data from graduates at several time points after graduation. Applying mixed methods design (e.g., supplementing surveys with in-depth interviews) could also help uncover more nuanced experiences that may be overlooked using the quantitative measures. Additionally, using more detailed response options (e.g., Likert scales instead of dichotomous items for support factors) may better capture the frequency and perceived impact of support mechanisms.

Authors note that additional correlation analysis revealed that all ten mentoring role indicators were significantly ($p < .01$) associated with the perceived usefulness of WIL-acquired skills for business development. This suggests that mentorship may have an indirect influence on graduates' active business ownership. Therefore, future studies might examine the potential mediators (e.g., perceived usefulness of WIL-acquired skills) in the relationship between mentorship and entrepreneurial outcomes among graduates. A possible indirect or mediated relationship suggested by these results, where mentorship enhances skill perception, which in turn influences business continuity, is consistent with notions by Nabi et al. (2019), who identify mentorship as a driver of both cognitive and emotional development in entrepreneurship education. Mentorship likely plays a key role in reinforcing reflective practices, building entrepreneurial confidence, and supporting skill transfer. Studying the

interaction between specific mentoring functions and WIL experiences could provide valuable insights for enhancing entrepreneurship education programs.

This study brings three key contributions to the literature on entrepreneurship education. First, it empirically links the perceived usefulness of WIL-acquired skills to the sustainability of entrepreneurial activity one year post-graduation – an area underexplored in prior research. Second, it addresses a gap in entrepreneurship education literature by focusing on graduates of a short-cycle professional program in Latvia which has been underrepresented educational context and thus adds geographic and institutional diversity to entrepreneurship studies. Third, the study introduces a replicable methodological framework for analysing the relationship between workplace-integrated reflective learning components and entrepreneurial outcomes, using a quantitative approach applied to post-graduation business continuation.

Several limitations should be considered when interpreting the results of this study. First, the relatively small sample size (N = 67) limits the generalizability of the findings to a broader population, including graduates of similar programmes in other contexts or countries. In addition, authors of the study acknowledge that work-integrated reflective learning is not a single, isolated input, but a complex experience cumulated and shaped by multiple interacting educational factors over time, such as mentoring, reflective activities and feedback, different support factors and individual factors, for example, female students may rely more on relational mentoring styles and benefit more from trust-based interactions. The multidimensional nature of work-integrated reflective learning makes it challenging to study using isolated indicators in studies with small samples. A larger and more diverse sample in future research would strengthen conclusions and improve the external validity of the results and allow for more robust analysis of interacting independent variables. Second, the study used a cross-sectional design, measuring entrepreneurial activity one year after graduation. Though this approach limits the ability to draw conclusions about causality, the aim of the study was not to establish causal relationships, but rather to identify predictors – factors that are statistically related to business ownership one year after graduation". A third potential limitation is the use of self-reported, retrospective evaluations of the usefulness of entrepreneurship skills as a predictor of active entrepreneurship. Respondents who were still running

a business may have been more inclined to rate these skills as useful, which could reflect their current experience and perception rather than provide objective evaluation. The data relied on self-assessments, which may be subject to social desirability bias or recall errors. A longitudinal study design – tracking graduates' entrepreneurial development over time – or incorporating objective skill assessments would help reduce these biases and address the mentioned limitations more effectively.

References

Ahsan, M., Zheng, C., DeNoble, A., & Musteen, M. (2017). From Student to Entrepreneur: How Mentorships and Affect Influence Student Venture Launch. *Journal of Small Business Management*, *56*(1), 76–102. https://doi.org/10.1111/jsbm.12362

Ajjawi, R., Tai, J., Le Huu Nghia, T., Boud, D., Johnson, L., & Patrick, C. (2020). Aligning assessment with the needs of work-integrated learning: The challenges of authentic assessment in a complex context. *Assessment & Evaluation in Higher Education*, *45*(2), 304–316. https://doi.org/10.1080/02602938.2019.1639613

Assenova, V. A. (2020). Early-stage venture incubation and mentoring promote learning, scaling, and profitability among disadvantaged entrepreneurs. *Organization Science*, *31*(6), 1560–1578. https://doi.org/10.1287/orsc.2020.1367

Bisk, L. (2002). Formal entrepreneurial mentoring: The efficacy of third party managed programs. *Career Development International*, *7*(5), 262–270. https://doi.org/10.1108/13620430210440082

Dean, B. A., Yanamandram, V., Eady, M. J., Moroney, T., O'Donnell, N., & Glover-Chambers, T. (2020). An institutional framework for scaffolding work-integrated learning across a degree. *Journal of University Teaching & Learning Practice*, *17*(4).

Diawati, P., Gadzali, S. S., Mahardhani, A. J., Irawan, B., & Ausat, A. M. A. (2023). Analysing the Dynamics of Human Innovation in Administration. *Jurnal Ekonomi*, *12*(02), 537–540. https://ejournal.seaninstitute.or.id/index.php/Ekonomi/article/view/1652

Eisenstein, E., Goh, C., & Istrate, M. (2021). Supervised work-integrated learning in entrepreneurship education: A practical framework. *Journal of Experiential Learning in Entrepreneurship*, *19*(3), 123–145.

Febrianti, E., Yulianto, E., & Nugroho, R. A. (2023). The impact of internships on entrepreneurial mindsets and career readiness. *International Journal of Entrepreneurship Education*, *27*(1), 56–72.

Harris, M.L., Gibson, S.G., & Taylor, S.R.(2007). Examining the Impact of Small Business Institute Participation on Entrepreneurial Attitudes. *Journal of Small Business Strategy*, *18*(2), 57–75. https://libjournals.mtsu.edu/index.php/jsbs/article/view/91/77

Hodges, N., Watchravesringkan, K., Yurchisin, J., Karpova, E., Marcketti, S., Hegland, J., & "Terry" Yan, R. N. (2016). An exploration of success factors from the perspective of global apparel entrepreneurs and small business owners: implications for apparel programmes in higher education. *International Journal of Fashion Design, Technology and Education*, *9*(1), 71–81. https://doi.org/10.1080/17543266.2015.1133719

Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. PrenticeHall.

Kubberød, E., & Fosstenløkken, S. (2018). Peer mentoring in entrepreneurship education: towards a role typology. *Education + Training*, *60*(7). https://doi.org/10.1108/ET-08-2017-0109

Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice*, *31*(3), 341–364. https://doi.org/10.1111/j.1540-6520.2007.00177.x

Memon, J., Rozan, M. Z. A., Ismail, K., Uddin, M., & Daud, D. (2015). Mentoring an Entrepreneur: Guide for a Mentor. *SAGE Open*, *5*(1). https://doi.org/10.1177/2158244015569666

Mian, S., Lamine, W., & Fayolle, A. (2016). Technology business incubation: An overview of the state of knowledge. *Technovation*, *50–51*, 1–12. https://doi.org/10.1016/j.technovation.2016.02.005

Muscio A., & Vallanti, G. (2022). The gender gap in Ph.D. entrepreneurship: How do students perceive the academic environment? *PLoS ONE*, *17*(4): e0261495. https://doi.org/10.1371/journal.pone.0261495

Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2019). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, *16*(2), 277–299. https://doi.org/10.5465/amle.2015.0026

Prastyaningtyas, E., Sutrisno, S., Soeprajitno, E., Ausat, A., & Suherlan, S. (2023). Analysing the role of mentors in entrepreneurship education: Effective support and assistance. *Journal on Education*, *5*(4), 14571–14577. https://doi.org/10.31004/joe.v5i4.2511

Patrick, C., Peach, D., Pocknee, C., Webb, F., Fletcher, M., & Pretto, G. (2008). *The WIL (Work Integrated Learning) report: A national scoping study*. Queensland University of Technology. https://eprints.qut.edu.au/216185/

Pellegrini, E. K., & Scandura, T. A. (2005). Construct equivalence across groups: an unexplored issue in mentoring research. *Educational and Psychological Measurement*, *65*(2), 323–335. https://doi.org/10.1177/0013164404268665

Pretti, T. J., Fannon, A.-M., & Church, D. (2020). The role of work-integrated learning in the development of entrepreneurs. *International Journal of Work-Integrated Learning*, *21*(4), 451–466. https://www.ijwil.org/files/IJWIL_21_4_451_466.pdf

Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, *16*(4), 353–385. https://doi.org/10.1080/13594320701595438

Sahinidis, A. G., Xanthopoulou, P. I., Tsaknis, P. A., & Vassiliou, E. E. (2021). *Age and prior working experience effect on entrepreneurial intention. Corporate & Business Strategy Review*, *2*(1), 18–26. https://doi.org/10.22495/cbsrv2i1art2

Scandura, T. A. (1992). Mentorship and career mobility: An empirical investigation. *Journal of Organizational Behavior*, *13*(2), 169–174. https://doi.org/10.1002/job.4030130206

Smith, C., & Worsfold, K. (2015). Unpacking the learning–work nexus: 'Employability' and the work-integrated learning context. *Education + Training*, *57*(3), 221–236.

St-Jean, E. (2011). Mentor functions for novice entrepreneurs *Academy of Entrepreneurship Journal*, *17*(1), 65–84. https://www.abacademies.org/articles/aejvol17no12011.pdf

Turner, J. S. (2015). *Success factors of small business owners* [Doctoral dissertation, Walden University]. Walden University ScholarWorks. https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=2858&context=dissertations

Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, *26*(3), 341–358. https://doi.org/10.1016/j.jbusvent.2009.09.004

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*(3), 387–406. https://doi.org/10.1111/j.1540-6520.2007.00179.x

Wikholm, J., Henningson, T., & Hultman, C. M. (2005). Demand for mentoring among new starters. *ICSB 50th World Conference*, Washington, DC. https://scottishmentoringnetwork.co.uk/assets/downloads/resources/demand-for-mentoring-support-from-new-starters.pdf

Zvaigzne, A., & Kotāne, I. (2019). Mentoring as one of the prerequisites for the development of the entrepreneurial environment. In *Environment. Technology. Resources. Proceedings of the 12th International Scientific and Practical Conference* (Vol. 1, pp. 359–363). Rezekne Academy of Technologies. https://doi.org/10.17770/etr2019vol1.4088