From Entrepreneurial Practice to Entrepreneurship Education: A Situated Experiential Framework for Critical Digital Literacy Development

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Abstract

This research explores how entrepreneurs develop critical literacy to manage the complexities of modern digital information environments. Drawing on qualitative interviews with local and immigrant business owners in Finland, the study identifies that while formal training provides structure, most entrepreneurs develop these essential skills through self-directed, practice-based learning. Entrepreneurs value education when it is practical, context-sensitive, timely, and directly applicable to their venture, industry, and stage of development. Based on these findings, the study proposes a Situated Experiential Framework for Critical Digital Literacy, linking a recurring entrepreneurial learning cycle with the situational dimensions that shape the critical literacy practices and development. The framework contributes to higher-education entrepreneurship programs by suggesting that critical literacy should be embedded in specific business problems and environments rather than taught only as a transferable technical skill.

Keywords: *critical literacy, information literacy, digital literacy, literacy development, literacy training, entrepreneurs, digital information, digital environment, entrepreneurial education, higher education*

ISSN 2991-9371

1. Introduction

Entrepreneurship education prepares learners to identify opportunities, make decisions under uncertainty, and navigate abundant, fragmented, and uneven-quality digital information [1]-[4]. Future entrepreneurs need not only access information about markets, customers, competitors, technologies, regulations, and financing, but also to evaluate its credibility, interpret its relevance, and apply it to particular business contexts [5]-[7]. These capabilities can be understood through the concept of critical literacy (CL). In this study, critical literacy encompasses information and digital literacy in digital environments and emphasizes the critical understanding of information environments and appropriate action within them [8], [9], [10]. Critical literacy is therefore relevant not only to entrepreneurs' current business activities, but also to the design of entrepreneurship education intended to prepare learners for information-intensive professional practice. Existing research has emphasized the need to incorporate information and digital literacy into entrepreneurship education and training programs [2]-[3]. Studies have also associated such education with entrepreneurial competence, readiness, and intention [11-12]. However, much of this literature focuses on students, educational interventions, or program outcomes. Less attention has been paid to what higher-education entrepreneurship programs can learn from practicing entrepreneurs' experiences of developing critical literacy through everyday business activity. As a result, two important gaps remain. First, although prior work establishes the importance of critical literacies, limited attention has been paid to how entrepreneurs develop CL and enact it in practice [13]-[14]. Second, while training is frequently proposed as a practical implication in the literature, entrepreneurs' own perspectives on the relevance and expectations of CL training remain underexplored. By examining these gaps, this study aims to understand how entrepreneurs develop CL and to translate the empirical results into implications for the design of higher-education entrepreneurship programs. The study, therefore, addresses the following research question: *How do entrepreneurs develop critical digital literacy, and how can their learning experiences and perceptions of formal training inform the design of higher-education entrepreneurship programs?*

2. Literature Review

Researchers generally agree that critical literacy does not develop in isolation. It is shaped by the environment in which people encounter information and by what they need to do with that information. Bawden [15], for example, views literacy as a context-dependent capability rather than a fixed set of technical skills. Choi et al. [16] similarly describe information literacy as "learning how to learn." From this perspective, people need to understand the expectations of their field, the resources available to them, and the situation in which information will be used before they can decide whether it is reliable, relevant, or useful. Critical literacy, therefore, develops as people learn to make sense of information within particular social, professional, and digital settings [17]-[19], [26]. This view is consistent with practice-based approaches to information behaviors. Jarrahi and Thomson [20] argued that information practices emerge through people's interactions with their environment. Lloyd's [21] concept of "literacies of

information" further develops this idea by showing that people become information-literate through participation in what she calls "information landscapes." Within these landscapes, individuals gradually learn which sources, activities, forms of knowledge, and ways of knowing are recognized as useful or trustworthy. This learning involves both individual interpretation and shared understanding. People draw on their own experiences, but they also learn from others' practices, expectations, and judgments. In entrepreneurship, this kind of learning is often closely connected to everyday practice. Politis [31] conceptualizes entrepreneurial learning as the transformation of prior experience into knowledge that informs subsequent entrepreneurial action. Entrepreneurs regularly face unfamiliar problems, incomplete information, and changing digital tools. As a result, they may develop CL by trying different approaches, comparing sources, seeking advice from others, and learning from the consequences of their previous decisions. Reviewing research on experiential learning in entrepreneurship education, Motta and Galina [32] found that experiential approaches can support the development of entrepreneurial skills and competencies. Studies have linked the development of CL with lifelong learning [14], [22]. Formal education may provide useful concepts and methods, but practical judgment is often built over time through problem-solving, experimentation, interaction, and reflection. Entrepreneurial education research also showed that entrepreneurs' CL are better developed through practical tasks than through general instruction alone [2], [4].

3. Methodology

This study employs a qualitative research design, using semi-structured interviews with entrepreneurs in Finland. By doing so, the study examines how entrepreneurs developed their critical literacy (CL) capabilities over time, and how training such capabilities is perceived. The design of the interview questions was guided by the study's research questions to examine the development of CL in information-seeking activities and also collect entrepreneurs' perceptions of the role of training in CL development [23]. This study includes both native Finnish and immigration entrepreneurs to highlight the shared experiences among business owners with different background but operating within the same Finnish entrepreneurial environment. We recruited our interviewees through the snowball sampling method in which initial participants referred others from their networks [24]. The initial referral process resulted in an excess number of Vietnamese entrepreneurs, thereby, this group became the focal immigrant cohort of this study. The interview candidates were selected based on these criteria: (i) they are either native Finnish or Vietnamese immigrants living in Finland; (ii) they must own or co-own a business in Finland, which includes both sole traders and various forms of business entities. The final sample included 19 entrepreneurs. The interview lasted approximately 90 minutes via Zoom or Google Meet. The interview length provided a comprehensive exploration of the research questions. The interviews are conducted mainly in English. On rare occasions, Vietnamese words or expressions were used to facilitate the discussions. Each interview was audio-recorded (with consent) and transcribed. Ethical transparency was maintained, with participants fully informed about data handling. Table 1 presents the demographic information of the participants.

Category	Immigrant Entrepreneurs
Number Of Respondents	n=19.
Location	Helsinki (n=12); Turku (n=4); Tampere (n=1); Joensuu (n=1); Hyvinkä (n=1).
Gender	Female (n=8); Male (n=11).
Age	28–34 years (n=7); 35–44 years (n=10); 45 years and above (n=2).
Educational Level	High school graduate (n=4); Bachelor's degree (n=8); Master's degree (n=7).
Language Skill	English (n=19); basic to intermediate Finnish (n=4); native Finnish (n=9).
Business Sector	Architecture photography (n=1); Education (n=1); Farming (n=1); Fashion (n=1); IT[1]/Educational game design (n=5); Marketing (n=4); Music (n=2); Real estate (n=2); Recycling (n=1); Restaurant (n=1).
Business Type	Limited Company (n=11); Sole trader (n=7); Still deciding (n=1).
Operational Duration	Less than 1 year (n=3); 1-5 years (n=8); more than 5 years -10 years (n=5); more than 10 years (n=3).

Table 1. Demographic information of the respondents

´We began the data analysis by cleaning the data to remove extraneous words and noise that might have been inadvertently captured during transcription. Vietnamese interview sections were translated where necessary to improve the readability and the translation is confirmed by the interviewees. The qualitative data collected from the interviews were uploaded to NVivo 15 for systematic organization. We followed Braun and Clarke's [25] six-phase framework for thematic analysis. Coding was conducted by one researcher under the supervision of the research supervisor. The analysis was inductive, and no predefined codebook was used. Initial codes were developed from participants' responses and iteratively reviewed and refined as the analysis progressed. Related codes were subsequently grouped into subthemes and broader themes, which were repeatedly checked against the coded extracts and the full dataset for coherence and consistency. Coding decisions and the developing thematic structure were discussed with the supervisor throughout the analytical process. The study also followed established criteria for qualitative rigor, including credibility, transferability, dependability, and confirmability [30] (see Table 2).

Credibility was supported by grounding the analysis closely in participants' own accounts of their entrepreneurial experiences and information practices.
Transferability was supported by providing contextual information about the study setting, participant groups, and business backgrounds. This allows readers to assess whether and how the findings may be relevant to other entrepreneurial or digital information contexts.
Dependability was supported by documenting the research process, including participant recruitment, interview procedures, transcription, coding, and theme development. This provided a clear record of how the data was collected and analyzed.
Confirmability was supported by maintaining a close connection between the data and the interpretations presented. Codes and themes were reviewed against the interview extracts, and representative quotations were used to ground the findings in participants' accounts. Reflexive attention was also given to the researcher's role in interpretation, with supervisory discussions used to check and refine analytical decisions.

Table 2. Strategies for Establishing Trustworthiness in Data Analysis

4. Results

4.1 Entrepreneurs' Critical Literacy Development

Participants described two main pathways through which they developed critical digital literacy: mixed learning, which combined formal education with practical experience, and predominantly self-directed learning. Nine of the 19 participants followed a mixed pathway, while the remaining participants relied mainly on learning through everyday entrepreneurial practice. Participants following a mixed pathway referred to university education, entrepreneurship workshops, incubator programs, and professional or industry-specific courses. Some believed that formal education had helped them organize their approach to information and navigate complex information environments more efficiently. Interviewee 15 explained that information seeking was often included in the training they attended: "*Every time I participate in training, a part of it is about finding information on that topic*." Interviewee 3 similarly noted that training could reduce confusion and wasted effort when dealing with numerous information sources, *"There are so many sources... it can be very confusing... without proper training and knowing how to search properly, you waste a lot of time and still don't find the right answers.*"

Training was also considered useful for developing the ability to interpret and apply information. Interviewee 9 explained that professional education had taught her not only how to access data, but also how to analyze reports and apply their findings to business decisions. Incubator and start-up programs were valued for similar reasons by other interviewees. In addition to providing information, they helped participants identify reliable sources, avoid information overload, and gain access to relevant professional networks. However, the influence of formal education varied across participants. Some reported that previous courses had contributed little to their everyday information practices. Interviewee 1, for example, found that university courses focused more on formal research methods than on the information problems she

encountered in her business. Interviewee 17 also reported that attending several courses had not substantially changed his established ways of working. This issue seems to be often connected to a perceived mismatch between the courses' content and the practical demands of running a business. Furthermore, participants described developing their abilities through repeated searching, trial-and-error, problem-solving, and continuous interaction with digital information. Interviewee 6 explained how this process had gradually shaped both his searching and evaluation practices: "I've *gained experience from doing research and Google search…I list out what the problem is, identify the problem or the topic that I want to have information about, and then just list out the keywords, try those keywords on Google, and get the information I need. [To validate the information], I go to a website and see how the information is distributed… do they have a source, what year is it from, who is the author… I've gained this through experience… just trying keywords on Google and finding what I need."*

Participants refined their understanding through interaction with peers, professional networks, and online communities. These interactions helped them clarify uncertain information, compare interpretations, and validate whether information was applicable to their situation. Interviewee 3, for example, emphasized the value of speaking with "people who have done the same thing," describing this as the "*best conversation*" because it allowed him to ask an "*unlimited number of questions*." Similarly, Interviewee 8 explained that trust-based communities were valuable because meeting members in person helped her identify "*like-minded people*" with whom she could exchange knowledge and even develop business relationships. These networks are used for validation or to produce shared interpretation, not merely to collect information. Interviewee 11 observed a growing culture of collaboration among entrepreneurs, "*CEO level, directors, and business owners, we tend to collaborate more…. We have talked about, for example, this concept type of thing, and other people have looked at our numbers and said that we have an idea what to do with you"*. For many participants, learning was triggered by an immediate business need. Interviewee 4 described learning as something that occurred "only when I have a demand to find the answer." Similarly, other participants emphasized that their literacy was largely self-developed through practice and experience, describing how they had *"pretty much learned everything by [themselves]"* (Interviewee 16) and how they had developed their approach *"through years of experience,"* with a focus on fact-based decision-making (Interviewee 14). Across both learning pathways, experiential and self-directed learning played a central role. For those who valued formal education, learning remained closely linked to experimentation, especially when encountering emerging technologies. Interviewee 9 explained that using tools such as ChatGPT required active experimentation, repeated questioning, and critical refinement of the output before it could be applied. This suggests that engagement with a new digital tool does not automatically produce literacy. Rather, CL develops through the iterative process in which entrepreneurs actively learn from their experiences.

4.2 Perceptions of Training for Developing CL

In this study, participants expressed different views about the essentials of formal education for developing CL. Some regarded training as necessary, others were skeptical, and several believed its usefulness was conditional. These views were shaped not only by participants' general attitudes toward education, but also by their previous training experiences and the extent to

which the content was relevant to their business activities. A group of participants highlighted the role of training in improving information practices. Particularly, it provides guidance and support for more structured approaches to information searching. It is particularly helpful for entrepreneurs to avoid time-consuming trial-and-error processes. As Interviewee 15 explained, training helped him to "*save a lot of time*", enabling them to perform tasks that would otherwise be difficult without "*tips and training in that space*". Similarly, Interviewee 3 emphasized that training can help individuals "*search better and more efficiently… and validate the information*". Participants also suggested that training could introduce them to more effective information-seeking methods. As Interviewee 12 noted, although his skills were largely self-developed, he believed others "have done much better" and expressed willingness to learn from structured courses. Entrepreneurs' view on the necessity of formal training is presented from Interviewee 9's statement: "*I always believe that a person without good education, we don't know how to do a piece properly…. And when you don't know, you make it wrong, you have to take more time to research again, do everything again, and it may be wrong again. So, I think that training and knowledge are really needed.*". Interviewee 15 also emphasized the importance of training when comparing it to self-learning practices, *"Self-learning is not always a very good way to learn everything, especially you might not even know what you should be looking for, what kind of information you should be looking for"*. In contrast, several participants perceived training as unnecessary, particularly those who relied heavily on experience-based approaches. For example, Interviewee 17 stated that they could manage information "*quite well… no problems at all*," relying on the structure of online information environments. Similarly, Interviewee 18 expressed skepticism about the relevance of training, arguing that general courses would not address his specific needs and that he could "*do it myself*", or strongly rejected the idea of training, as Interviewee 4 explained, "*…only when I have a question in mind… otherwise I am not interested*." These responses suggest that skepticism was not always directed toward learning itself. Instead, participants often questioned whether formal education offered sufficient value for the time and effort required. Meanwhile, some of them present a more neutral view, suggesting that the value of training depends on timing, relevance, and individual needs. In particular, they consider that training is more useful for early-stage entrepreneurs than for those with more experience. Interviewee 7, for example, noted that training can be helpful "*when you're starting your business…and without any starting point"* to understand unfamiliar concepts and navigate information for the first time.

Meanwhile, others questioned the time and effort constraints given the demands of running a business, as Interviewee 2's remark, "*So even I know that I will learn something, but then is that worth spending one day studying it? I see the value, but still I always have other important stuff to do, and to focus on the day and the time is limited.*" Participants' expectations of future education were shaped particularly by relevance, practicality, and time efficiency. Training was seen as more useful when it addressed a specific industry, business stage, regulatory issue, or current information needs. Interviewee 14 summarized the importance of timing by stating, "*If training is not useful at the moment, it's forgettable.*" Opportunities for interaction were another valued feature. Some participants viewed training not only as a source of knowledge but also as a setting for meeting peers, discussing information problems, and developing possible collaborations. As a result, participants generally preferred flexible, topic-specific, and practice-oriented formats rather than standardized courses. Interviewee 15 explained: "*It should be divided into different topics, and we learn about how to find the proper information and then discuss or share our experience of how you get information…because different topics require different types of information sources, and the way I seek information is different based on the topic."*

5. Discussion

This study examines how entrepreneurs develop critical digital literacy through everyday business practice and how they perceive formal training intended to support their development. The study shows that CL is enacted through self-directed, experiential learning or a mixed approach merging self-directed and training-guided learning. CL development is a contextual and practice-based process. Entrepreneurs actively acquire CL skills through trial-and-error, problem-solving, and real business challenges [13]-[14], [22]. Entrepreneurs in this study also reveal the role of the information environment in shaping their CL development, as they employ different tactics to overcome challenges and exploit the advantages of each environment [17]-[18], [21]. The information environment was therefore not merely the background to learning. It acted as an informal curriculum that continuously presented entrepreneurs with problems, feedback, risks, and opportunities. Such findings suggest that the importance of CL development lies in both "learning by doing" and in understanding the conditions under which experience becomes critical judgment [14], [16], [22]. Furthermore, the findings reveal the social dimensions of CL development, as it often depends on interactions with social networks, such as observing peers' discussions, seeking peers' validation, and participating in collaborative environments. It is also material because information is accessed through tools, platforms, documents, analytics systems, financial records, and digital media [17], [20], [21]. However, entrepreneurs' accounts in this study challenge the discussion on the importance of training for the development of CL. Although some of them acknowledged that training helped them structure and improve their methods for finding information, and adopt new technologies [4], [11]. They still favor self-directed study over official training and question the need for training for their personal and entrepreneurial growth. The main concern entrepreneurs have is the content of the training, whether it matches their needs and is worth the effort and time spent. Choi [26] identified a tension between information literacy as a set of transferable competencies and context-specific practice; this study clearly leaned more toward context-specific practice among entrepreneurs. Entrepreneurs expect the training to reflect real-world situations, and, through practice, they can easily apply it to their business practices and outcomes. Generally, this study's findings argue that CL cannot be reduced to a stable set of searching, technical, or evaluation skills that can be transferred unchanged across situations [12]-[13], [19]. Participants' accounts show that judgments about reliability and usefulness depend on the type of business problem, the source of information, the industry, the venture stage, and the consequences of acting on the information. What counted as an appropriate source or method in one situation did not necessarily work in another. Based on these findings, this study proposes a Situated Experiential Framework for examining the development of Critical Literacy and informing designs for the literacy courses in Entrepreneurship Education (Figure 1). The framework integrates two related dimensions of entrepreneurial learning. The inner layer represents the recurring process through which entrepreneurs develop critical judgment. The outer layer identifies the situational conditions that shape this process and influence whether experience becomes meaningful learning. These dimensions emerged inductively from recurring patterns across the interviews. Table 3 illustrates how the two layers of the proposed framework are grounded in the coded interview data by linking each component to representative codes and participant extracts.

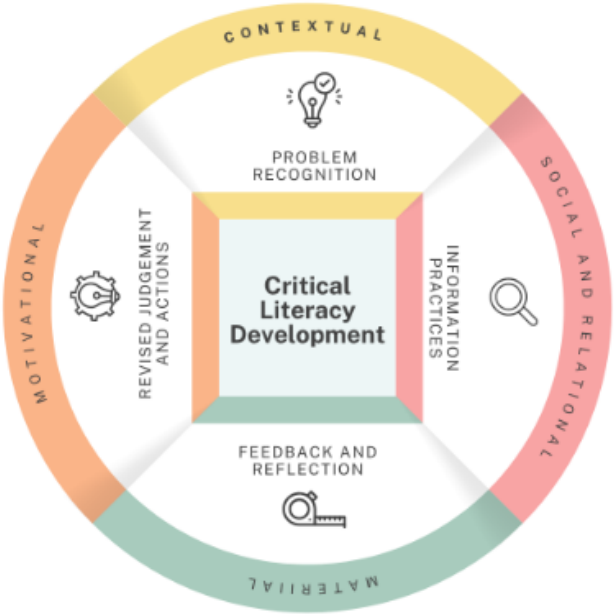


Figure 1. Situated Experimental Framework of Critical Literarcy Development

The entrepreneurial learning process begins when an entrepreneur encounters a specific information problem. This is followed by information practices, like information seeking, source comparison, contextual interpretation, and the application or testing of information through action [11]-[13]. The outcomes of the decision provide feedback, prompting reflection, and finally revision of previous judgments and actions. Through repeated engagement in this cycle, entrepreneurs gradually learn which sources are credible, which information is relevant, how to adapt information to a particular context, and what risks may result from acting on it [14, 18, 20-21, 27, 31-32]. However, experience does not automatically produce critical literacy. The cycle is shaped by contextual, social, material, and motivational conditions [8-10, 17, 21]. Judgments depend on the industry, location, venture stage, and nature of the business problem. They are also developed through interaction with peers, mentors, professional communities, and other trusted actors. At the same time, information practices are shaped by the surrounding environments and emerging technologies. It is also need-driven and becomes especially meaningful when entrepreneurs face immediate decisions with practical consequences.

Dimensions	Illustrative Codes from the Analysis	Representative Quotes
Experiential Process		
Problem Recognition	problem identification, verifying stakeholders (customers, employees, partners), planning business strategy, business operations (legal, forming the business, taxation), monitoring the market	*"I list out what the problem is, identify the problem or the topic that I want to have information about" (Interviewee 6)* *"We search on the internet for Google, supplier, or partners, or clients, customers. We try to keep on track of what's happening and try to find business opportunities that way."* (Interviewee 17)
Information Practices	keywords, source transparency, information filtering, cross-checking, cross-checking, background research, balancing online and offline information	*"It's also very important to use the right keyword when searching for information... [to] get the right information."* (Interviewee 6) *"I would cross reference to see if the things that the person is talking about or the company is talking about is roughly the same as other people are talking about"* (Interviewee 15) *"I tried to search from the website first, but sometimes the language is hard to understand, so I need to call. But luckily my accountant and her company is providing mostly the info for those."* (Interviewee 16)
Feedback and reflection	direct working experiences, testing, prior knowledge	*"After I test the advice and I see the good result, and it's confirmed that the group is trustable. This is a feedback loop for you to get the information, so just test information and then go back for more information*". (Interviewee 8) *[Information from the governmental website] is quite detailed, though it does not give me a full picture. The full picture comes from my experience more. That means, to start a business, what kinds of stuff I need to do. It is already on my mind before I get the information from the government." (Interviewee 9)*
Revised judgements and actions	contextual application, analytical use, learning by doing	*"It was difficult because we did not have a lot of experience reading legal information, for example, and it was difficult. We had to think about it a lot, and we had to ask for help from the tax agency, for example. But nowadays, it's a lot easier when I have years of experience reading this kind of legal information, and we also have better sources to ask for help if we need for help."* (Interviewee 15)
Situational Conditions		
Contextual	Finnish information environment, hidden information, endorsement, contextual application	*"In Finland, everything is really transparent in terms of legal information and contact points. So, they always have contact with the main people who are responsible for that area."* (Interviewee 10) "There is no such a fake news going on or misleading news going on that try to manipulating the users/ audiences." (Interviewee 14)
Social and relational	networking, community of knowledge, peer validation, referrals, interactive knowledge exchange, endorsement	*"The bigger connections you have, then the more people that could solve the problem"* (Interviewee 2) *"Reference was the main source, from my network or friends. I had a couple of entrepreneurial friends, and I ask a reference from my accountant and lawyer"* (Interviewee 14)
Material	time-consumption, easy access, Google or website algorithms	"I have other important stuff to do during the day. So, yeah, I know that I will learn something there. But then that's worth spending one day studying it. It's a different story." (Interviewee 2) *"Google also nowadays has changed their algorithm that is so much helpful and easier to reach to the right information very quickly as well."* (Interviewee 11)
Motivational	type of task, urgency of information need, personal learning style, personal responsibility,	*"I don't think that it's for me. Because I'm the person that I'm only have the urge [to learn new thing] when I'm facing trouble."* (Interviewee 4) *"It depends very much on the topic... if I need help with legal matters...* [or]*... growing the business and marketing...* the responsibility still lies with me and whatever decisions I make after they give the legal counsel" (Interviewee 15)

Table 3. Dimensions and representative quotes of the framework

In entrepreneurship education, this framework suggests that students should be given opportunities to move through the learning cycle while working in realistic, contextual conditions. Programs should incorporate real-world information problems, updated digital tools, feedback, and structured reflection. Formal education can therefore add value not by replacing experiential learning, but by making it more systematic, more critically informed, and less dependent on costly trial-and-error.

6. Conclusion

Theoretically, this study contributes to the entrepreneurial education that CL functions as an antecedent and an outcome of entrepreneurial daily operations. Entrepreneurs need CL in order to search for, evaluate, interpret, and use digital information effectively for their daily tasks. At the same time, they develop CL through repeated engagement with information tasks and information environments [17]-[18], [20]. CL, therefore, should be understood as a part of the entrepreneurial lifelong learning process [3], [14], [22]. Extending this perspective, CL development is co-constructed with the information environment, linking individual-level practices with broader system-level dynamics [17]. The proposed Situated Experiential Framework captures this process by linking the entrepreneurial learning cycle with the situational dimensions that shape it. The framework therefore bridges CL as a general competence and as a context-specific practice, while providing also potential approach for entrepreneurial educators to design and market their CL development programs. The finding also raises the tension between the effectiveness and attractiveness of training to entrepreneurs. While entrepreneurs with prior training experience tend to view training as valuable for developing their literacy, those who relied primarily on self-directed learning tend to express more ambivalent attitudes toward training. This indicates a potential gap in the perceived usefulness of training among this group. This suggests that program designers and educators critically consider how they market their program and to what audiences they are targeting [1]-[2], 12]. They should take into account what motivates or even demotivates entrepreneurs to participate in training and thus design the training structure that better addresses entrepreneurs' needs, expectations, and requirements [4]. For example, entrepreneurs in this study value the convenience of the study in terms of time and are also interested in the opportunity to network through such events. Educators can also consider including a measurement for the CL training outcomes suggested by Detlor et al. [1]. These can be reflected across multiple layers, including psychological (e.g., confidence and awareness), behavioral (e.g., the ability to apply skills), and benefit outcomes (e.g., improved ability to locate, evaluate, and create information). This framework provides a useful basis for evaluating entrepreneurship training by linking program design to measurable learning outcomes. Incorporating such an evaluative approach may enhance the attractiveness of training and encourage greater engagement among entrepreneurs once it shows that the potential benefits outweigh the opportunity cost of participation. Furthermore, CL is also actively enacted through the information environment. This suggests that while users need to develop the ability to function well, it also assigns the responsibility for support to policymakers, platform designers, and information providers. It is important to design the structures, rules, and practices that protect the information environment through transparency and ethical governance.

This study also presents several limitations that open avenues for future research. Empirically, we acknowledge the limitations of the study, which specifically addresses the immigration of only one group, i.e., Vietnamese entrepreneurs in Finland. The use of a snowball sampling method may also introduce selection bias, potentially limiting the diversity of perspectives captured. Furthermore, our study focuses on shared patterns between the two cohorts. We did not explicitly examine the role of demographic factors, such as gender, age, educational background, or business sector, though these factors have been shown to influence information behaviors in other studies [27]-[28]. Future research should therefore broaden the scope of the study and include more diverse immigrant groups to better understand how cultural, sectoral, and demographic factors shape CL development. As the study emphasizes the role of the information environment, the future study should consider extending its scope also to other countries where the information environment is less institutionally guarded and generally different from Finland. A comparative study should also be conducted to examine how demographic factors influence entrepreneurs' development of CL. Additionally, the entrepreneurial CL development process is likely to develop alongside entrepreneurs' business activities, digital experiences, and changing environments. A cross-sectional approach, which captures entrepreneurs' accounts of CL practices at a single point in time, may therefore lead to a misperception of how these practices evolve over time [29]. In addition, the findings rely on self-reported perceptions, which may not fully reflect actual practices. We also acknowledge our personal subjectivities and potential biases in the process of collecting, organizing, and analyzing the data in this dissertation. Furthermore, this study recognized the tension between formal training and experiential learning. This raises questions about whether the offer of formal training adequately aligns with entrepreneurs' expectations and conditions. Future research, therefore, should compare entrepreneurs who participate in formal training with those who primarily develop CL through everyday business practice, thus studying how different learning pathways would eventually influence the application and outcomes of CL practices.

7. Acknowledgements

The authors gratefully acknowledge the generous financial support provided by Liikesivistysrahasto for the research, and the Åbo Akademi University Foundation for participation in this conference.

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