

Mentoring Fit, Social Learning, and Venture Progress During Business Incubation

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We explored how incubated entrepreneurs conceptualize mentoring, and how mentoring affects venture progress. This qualitative study involved semi-structured interviews with 18 entrepreneurs incubated in four Canadian BIs. Interview data was transcribed and analyzed using NVivo software. The conceptual model suggests that the 'fit' between entrepreneur's needs and the provided mentoring services matters to the outcomes of business incubation. Mentoring fit is conceptualized along three dimensions: content, quality, and availability. When fit is high, incubated entrepreneurs learn important lessons directly and vicariously from mentors. But when fit is low, it is inadequate to support social learning and will not have positive effects.

Keywords: entrepreneurial learning, mentoring, coaching, business incubation, startups, qualitative research

INTRODUCTION

Since the first business incubator (BI) was founded in 1959, BIs have become a global phenomenon and now number close to ten thousand worldwide (Bhatli, 2016). Defined as organizations that support the establishment and growth of new businesses by providing entrepreneurs with tangible resources (e.g., space and equipment) and intangible resources (e.g., coaching) during a flexible incubation period (Hausberg and Korreck, 2018), BIs are widely viewed as an important mechanism supporting entrepreneurial activity and economic development (Etzkowitz, 2002; Hackett and Dilts, 2004; Albort-Morant and Ribeiro-Soriano, 2016). Thus, BIs have become important elements of the entrepreneurial ecosystem at the local, regional, and national levels (Autio et.al., 2014; Spigel, 2017; Spigel and Harrison, 2018), alongside complementary organizations such as research/science parks, accelerators, and technology transfer centres (Good et.al., 2019; Morales-Gualdrón, Gutiérrez-Gracia, and Dobón, 2009; Yusof and Jain, 2010).

BIs can take a variety of different forms, as evidenced by the numerous typologies (Nicholls-Nixon and Valliere, 2019; Grimaldi and Grandi, 2005; Barbero et.al., 2012; Barbero, et.al., 2014) that characterize their heterogeneity along dimensions such as ownership, stakeholders, strategic focus, incubation process, performance outcomes, etc. A recent comprehensive review of the business incubation literature identifies

common patterns in the suite of business support services provided: programming, coaching/mentoring, monitoring, networking, administrative support (Hausberg and Korreck, 2018). Yet research aimed at providing theoretical understanding of how these services add value to entrepreneurs, and empirical examination of how their design influences incubation outcomes has been slow to emerge (Ahmad and Thornberry, 2018; Cohen et al., 2019).

Prior literature suggests that learning by entrepreneurs increases the performance of their ventures (Beckman and Barry, 2007; Rae, 2005; Taylor and Thorpe, 2004; Vargas, Lloria, and Roig-Dobón, 2016) and mentoring has been associated with entrepreneurial learning in the context of business incubation (Cope, 2005). Thus it is generally assumed that coaching/mentoring services contribute to the development of the incubated venture vis-à-vis the transfer of knowledge - that mentors have something of value to teach, and that entrepreneurs are willing and able to learn and apply it. In the context of this study, the terms 'mentor' and 'coach' are interchangeable. We use the term 'mentor' for the remainder of the paper and define a mentor as "someone who provides guidance, support, knowledge, and opportunities for someone less experienced, usually during a time of transition in the less experienced person's career" (Ncube and Washburn, 2010).

Our qualitative study of incubated entrepreneurs builds on this line of inquiry by exploring how entrepreneurs perceive mentoring and how mentoring affects their incubation outcomes. The theoretical model emerging from our research suggests that the *fit* between entrepreneur's needs and the mentoring services provided is a significant antecedent to successful learning and subsequent venture progress.

Drawing on social learning theory (Bandura, 1971; Cope, 2005, 2011; Cope and Watts, 2000, Sullivan, 2000; Harrison and Leitch, 2005; Karatas-Ozkan, 2011; Watson, McGowan, and Cunningham, 2018; Soetanto, 2017; Williams Middleton et al., 2019; Ekanem, 2015), we propose that the fit between entrepreneur's needs and the provision of mentoring encompasses three dimensions: the *content* being conveyed by the mentor (what), the *interpersonal relationship* with the entrepreneur (who, how), and the *availability* of the mentor when needed by the entrepreneur (when). In addition to the direct effects of these three components on fit and learning, we also identify interaction effects among them.

Thus, our study responds to the call for theory-building incubation research (Hausberg and Korreck, 2018; Nicholls-Nixon, Valliere, and Hassannezhad, 2018) by proposing an explanatory model of how mentoring services affect incubation outcomes vis-à-vis creation of a relationship that supports social learning between the mentor and entrepreneur. In explaining how these dimensions of mentoring fit and their interactions influence social learning and venture progress, our research suggests promising avenues for future inquiry. It also has important implications for incubator management: establishing a roster of in-house and external mentors is necessary, but not sufficient for the support of social learning. In order for substantive learning to occur, attention must be paid to the factors that affect fit between the entrepreneur's needs and the provision of mentoring during business incubation.

The remainder of this paper proceeds as follows. We review relevant literature in two subsections: Theoretical underpinnings of entrepreneurial learning, and prior research that has examined mentoring and learning in the context of business incubation. Next, we describe the methods we employed to sample and analyze the mentorship perspectives of incubated entrepreneurs. Then, we use these insights to propose a grounded model that develops the concept of mentoring fit and explicates the interrelationships between fit, social learning, and incubation outcomes. Finally, we discuss the implications of this model, its limitations, and opportunities for future research.

LITERATURE REVIEW

As a foundation for our qualitative study, the following literature review addresses the theoretical underpinnings of entrepreneurial learning, and provides an overview of how the topic of learning and mentoring has been examined in the unique context of business incubation.

Theoretical Underpinnings of Entrepreneurial Learning

Prior research has established that entrepreneurial learning occurs in a variety of different contexts, such as new ventures engaged in strategic experimentation after initial launch (Nicholls-Nixon, Cooper, and Woo, 2000), owner-managed small firms navigating their strategic space (Jones, Macpherson, and Thorpe, 2010), small and medium sized enterprises pursuing growth (Macpherson, 2005; Macpherson and Holt, 2007), and established organizations undertaking strategic renewal (Macpherson and Jones, 2008).

Theories of learning fall into three broad categories: behavioral learning, cognitive learning, and situated learning (Greeno, Collins, and Resnick, 1996). Behavioral learning involves making associations and learning new skills. It works best in well-organized environments with routines to follow. Cognitive learning on the other hand entails reasoning, problem solving, and planning tasks. It often involves reorganization of concepts already in the individual's understanding. Situated learning occurs through the active participation in group activities through interaction with others. It occurs in an environment when individuals participate with others in social/group settings to foster confidence (vicarious reinforcement) in their learning. Situated learning often occurs from people of different social or cultural backgrounds (Corbett, 2005). Social learning theory, which has often been called a bridge between behaviorist and cognitive learning theories, explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences (Bandura, 1971).

Research on entrepreneurial learning has drawn upon each of these theoretical perspectives and emphasized how 'experiential learning' contributes to the development of entrepreneurial competence. Experiential learning includes learning from past experiences (positive or negative) and learning from participation and from the experience of others (imitative learning) (Wang and Chugh, 2015; Kolb, 1984; Corbett, 2005). Learning from negative experiences (failure) has also been the focus of research attention in the context of entrepreneurial learning. What specifically is learned from a failure depends on what the entrepreneur blames for the failure (Walsh and Cunningham, 2017) and how they receive feedback from their mentors (Stambaugh and Mitchell, 2018).

Vicarious reinforcement and imitative learning are central tenets of social learning theory. Direct reinforcement cannot account for all types of learning; rather people can learn new information and behaviors by watching other people. Observational learning (modeling) is an element of social learning that is used to explain a wide variety of behaviors (Bandura, Ross, and Ross, 1963).

Social learning theory fills the gap between behaviorist and cognitive learning theories because it encompasses attention, memory, and motivation (Bandura, 1971). Attention requires being together for observation, and interpersonal attraction that draws and keeps this attention. Various factors increase or decrease the amount of attention paid which includes distinctiveness, affective valence, prevalence, complexity, and functional value. Retention is remembering what you paid attention to. It includes symbolic coding, mental images, cognitive organization, and symbolic rehearsal. It requires forming memories by encoding into images or readily utilizable verbal representations, and mental rehearsal. Reproduction is reproducing the image including physical capabilities, and self-observation of reproduction. It requires motoric performance, which entails having complete knowledge of the required actions, ability to conduct each of these actions, and ability to obtain cues or otherwise monitor self-performance. Intention is having a good reason to imitate. It includes motives such as past (traditional behaviorism), promised (imagined incentives) and vicarious (seeing and recalling the reinforced model). It requires reinforcement and motivation of positive incentives for performing the behaviour in response to the stimulus (Bandura, 1971).

Social learning can be direct or indirect (Bandura, 1971). Direct learning occurs in the process of personal experience and programming, and transforming past experience into knowledge. In the case of entrepreneurial learning, for example, enterprising individuals develop their entrepreneurial knowledge throughout their professional experiences (Politis, 2005). Learning from experience has two basic dimensions—acquisition (grasping) and transformation. Acquisition corresponds to the "experience" itself, while transformation is considered equivalent to "experientially acquired knowledge" (Kolb, 1984). In contrast, indirect learning occurs through vicarious experience of peers, mentors and coaches. It has been observed that learners tend to adopt the performance standards of exemplary role models, and subsequently

develop these into self-reinforcement guidelines for their own performance (Bosma et.al., 2012; Hoffmann, Jung, and Malchow-Moller, 2015).

Mentoring and Learning During Business Incubation

Researchers are starting to see application of social learning theory in the entrepreneurial incubation context. Cope's dynamic learning perspective (e.g., Cope, 2011; Cope and Watts, 2000; Cope, 2005) features three factors: temporal phases, critical experience processes, affective relationships. Cope (2005) asserts that entrepreneurial learning from a *content* perspective involves five broad areas including: learning about oneself, learning about the business, learning about the environment and entrepreneurial networks, learning about small business management, and learning about the nature and management of the relationships (Cope, 2005). Incubators have different plans and programs to provide training and consultancy on each of these dimensions to the entrepreneurs, and mentors have a significantly important role in providing the learning content in the incubators.

Empirically, Rae conducted thematic discourse analysis of in-depth interviews with three entrepreneurs in the UK creative industries (Rae, 2005). The resulting model highlights personal and social emergence, contextual learning, and the negotiated enterprise. From a process perspective of entrepreneurial learning, the first step in the process of becoming an entrepreneur is being recognized as an enterprising person. The process of personal and social emergence as an entrepreneur is mostly built through narrating 'autobiographical stories' which are related to the individual's family background, their experiences, and future aspirations. The second stage of the process is contextual learning which is constructed through participation in network of people with related experiences in the community and industry.

Business incubators generally, and their mentors particularly, have a significant role in providing this sharing and networking environment for the entrepreneurs. However, this doesn't mean that the ventures are enacted by one person alone. Learning takes place through interactive exchanges with others within and outside the enterprise. Nascent entrepreneurs that are in the early stages of their ventures in business incubators, are surrounded by a community of entrepreneurs and mentors that assist them in the overall performance of their early-stage ventures (Rae, 2005).

Focusing on the importance of social capital and using the basic dimensions of social capital including relational, structural, and cognitive aspects, Fang et al. later proposed and empirically tested a model that focuses on relationship quality, utilization of knowledge referrals, and shared cognition as critical factors that tenants need to seriously consider for better entrepreneurial performance. (Fang, Tsai, and Lin, , 2010). The model illustrated how tenants in incubators can improve their performance through their social capital with their incubator. Social capital can be helpful in raising motivation leading to higher learning orientation which is positively related to tenant's performance. The authors collected survey data from 101 new ventures tenants in Taiwanese incubators. The results of their study indicated that the tenants in the incubation program could considerably improve their knowledge, performance, and managerial capabilities by leveraging relationships with the incubators. This study was limited to three dimensions of social capital, but other theories can be applied to justify the learning mechanisms that occur in incubation context.

Audet and Couteret's exploration model delves deeper into the relationship: mentor characteristics, entrepreneur characteristics, and relationship attributes (Audet and Couteret, 2012). The authors evaluated the success of the coaching initiative along three dimensions: including the change in entrepreneur's behaviour, attitude, and knowledge; goal achievement; and coaching relationship satisfaction. The study involved qualitative interviews of six mentored ventures from a single incubator in Quebec comprising three ventures with successful outcomes, and three ventures with unsuccessful outcomes (as identified by the incubator director). The cases were selected on the basis of two criteria: the venture's stage and the success achieved. The findings of the study suggested that coaching relationship success is associated with a set of 'winning conditions', namely entrepreneurs' open attitude to change and commitment to the relationship, the coach's empathy, credibility, and knowledge; and the quality of their interactions.

Entrepreneurs maintain social relations with mentors where learning and influence are seen to emerge as part of an ongoing negotiated process within a complex network of domestic, voluntary, commercial and professional relations (Taylor and Thorpe, 2004). In their relations, the mentor's level of engagement and

level of directedness affect the quality of learning in a way that a mentoring style with low directivity and high involvement produces the best results (St-Jean and Audet, 2013).

Mentoring has proven to have a positive impact on the performance and skills development of novice entrepreneurs (St-Jean and Audet, 2012; St-Jean, 2011; Gemmell, 2017). Entrepreneurial self-efficacy can be reinforced by the mentor's training (St-Jean, Radu-Lefebvre, and Mathieu, 2018; St-Jean and Tremblay, 2020), but learning from mentors depends on goal orientation and similarity of the entrepreneur and mentor (St-Jean et al., 2018). Entrepreneurial intention (Baluku et al., 2019), entrepreneurial attitudes (St-Jean and Mathieu, 2015), entrepreneurial identity (Rigg and O'Dwyer, 2012), and opportunity recognition (Ozgen and Baron, 2007), are among other entrepreneurial attributes that can benefit from mentorship. However, St-Jean and Tremblay (2020) showed that learning about opportunity spotting depends on goal orientation and the duration of the mentoring relationship (St-Jean and Tremblay, 2020).

In sum, prior literature suggests that the relationship between mentoring and incubation outcomes is complex; well-intentioned instruction from mentors may not necessarily translate into improved performance. Moreover, it is important to recognize that 'learning asymmetries' - differences in the way entrepreneurs learn (Corbett, 2007) - may also affect the benefits they derive from mentoring. Drawing on social learning theory, our qualitative study takes the entrepreneur's perspective to explore how mentoring benefits entrepreneurs during business incubation. Specifically, we ask two interrelated research questions: How do incubated entrepreneurs conceptualize mentoring? And how does mentoring affect venture progress during business incubation?

From a theory-building perspective, these questions are both relevant and timely (Whetten, 1989) because there is growing interest in understanding how the design of incubation services, such as mentoring, affects entrepreneurial learning and incubation outcomes. Our study offers new insights about the nature of this relationship.

METHODS

This study employed grounded theory building (Glaser and Strauss, 1967), based on semi-structured qualitative interviews of entrepreneurs who have experienced the mentorship services of BIs. Grounded theorizing is the appropriate method for our research questions because there is very little research or information regarding this subject area, and our goal is the creation of theory that is faithful to the reality of mentoring, makes sense to incubated entrepreneurs, fits the incubation context, adequately describes relevant concepts and relationships, and may be used to guide action (Boychuk Duchscher and Morgan, 2004).

Sample

We interviewed 18 entrepreneurs associated with four different BIs based at major Canadian universities in 2019. The entrepreneurs were either currently being incubated or had recently graduated (within the previous 18 months). The respondent entrepreneurs were all working on the launch of new ventures in the industry domains of the participating BIs (these were primarily non-technology based, and included BIs focused on media, fashion, and social ventures).

Participants were initially recruited via campus posters. Additional participants were obtained through snowball recruiting of other incubator tenants from the initial group. Table 1 provides a description of the demographic makeup of the sample.

TABLE 1
DESCRIPTION OF PARTICIPANTS

| | |
|-----------------------|--|
| Age | range 20-60 years, mean 30 years |
| Gender | 56% female, 44% male |
| Start-up experience | 56% with previous start-up experience, 98% novice founders, 2% serial founders |
| Incubation experience | 50% with prior incubation experience, 39% having parallel incubation |
| Education | 72% university educated, 33% with business education |

n = 18

Interviews were approximately 40 minutes in length and were conducted with individuals in a private location on campus. Interviews were conducted by pairs of researchers, and were recorded and later transcribed for analysis. A semi-structured interview guide was employed, which ranged in topics from their general expectations and broad actual experiences with incubation, to the specific positive and negative aspects of any coaching and mentoring services they received through the BI. In total, over eleven hours of entrepreneur commentaries were captured.

Analysis

Open coding proceeded iteratively with the development and refinement of emergent categories as more interviews were analyzed. This converged on eleven codes: five related to different aspects of the content provided by the mentor (its quality, connection to networking, customization to lifecycle, customization to industry, and connection to work products of the venture), two related to the availability of mentoring (suitability of timing, and organizational logistics of meeting), and four related to the interpersonal relationship between individual mentors and entrepreneurs (motivation provided, sharing of personal information, commitment to the relationship, and a sense of mutual accountability). The transcribed interviews were coded by two members of the research team using these 11 codes, with inter-rater reliability of over 90%. Table 2 summarizes the final coding employed for this study.

TABLE 2
DESCRIPTION OF EMERGENT CODING

| | | |
|--------------|--------------------------|---|
| Content | Advice quality | The mentor is knowledgeable in topics relevant to the success of the venture. |
| | Access to network | The mentor connects the entrepreneur to their professional networks. |
| | Lifecycle stage | The content is suitably tailored to the lifecycle stage of the new venture. |
| | Industry-specific | The content is suitably specific to the industry and market context of the new venture. |
| | Creation of deliverables | The mentor directly assists in the creation of work products for the venture, or just advises from the sidelines. |
| Availability | Timing | Meetings with mentor are of sufficient frequency and duration to provide entrepreneur with enough timely access. |
| | Logistics | Meetings with mentor are easy to schedule and coordinate. |
| Relationship | Motivation | Mentor provides entrepreneur with encouragement and personal support. |
| | Personal sharing | Mentor models open sharing of relevant personal stories, beyond direct business facts. |

| | |
|----------------|---|
| Commitment | Mentor demonstrates emotional investment in the entrepreneur, including sustained connection over time. |
| Accountability | Mentor follows up and holds entrepreneur accountable for past commitments. |

The trustworthiness of the results obtained in this qualitative study can be assessed on four dimensions (Guba, 1981). The truthfulness of our results can be assessed in terms of credibility (akin to internal validity). In this study we confirmed the plausibility of our analysis by confirmatory checks with members of our respondent group. The applicability of our results can be assessed in terms of transferability (akin to external validity and generalizability). This study featured purposive sampling interviews with both current and graduated entrepreneurs, and from many different BIs, which helps to minimize the potential for local or situational biases. The consistency of our results can be assessed in terms of dependability (akin to reliability). This study employed frequent reflexive memoing and team meetings to discuss the process and to challenge emerging interpretations of the data. And the neutrality of our results can be assessed in terms of confirmability (akin to objectivity). This study employed multiple interviewers and coders to provide triangulation and mitigate potential investigator bias. On this basis, we suggest that the results of the study can be reasonably trusted.

RESULTS

Within each category we found respondent evaluations to be of three valences. Most common are comments identifying perceived benefits of the mentoring that was provided. We noted 54 specific examples of these positive comments. Next are neutral expressions of desire for types of mentoring that were not provided. We noted 38 examples of this. Least common, but still observed, were negative comments about aspects of mentoring that were perceived to be detrimental by the respondent entrepreneurs. We noted 13 examples of such comments. Below we provide illustrative examples of these comments, according to valency and the high-level categories provided in Table 2.

Perceived Benefits of Mentoring

Generally, our respondents reported favourable opinions of the mentoring that they received through their business incubation experience. Every respondent provided examples where the experience had been specifically beneficial to them – either to the development of the venture they were working on, or to their own personal development as entrepreneurs.

With respect to the benefits of mentoring, the respondents most frequently commented on the benefits of the specific content that was provided. Thirty-four specific comments of this type were recorded. Some were focused on the helpful quality of advice given:

“It’s been really helpful for us because you’re talking with advisors that have professional experience directly involved with mission-based organizations... They’re able to help you pretty immediately... It was a huge benefit for us to find somebody that was willing to advise us in areas that we were just over top of our heads.” – Respondent 2852110

“None of us wanted to get involved in telling the [supply partner] what to do. But he was quite happy to tell me what to do... I didn’t know how to make them profitable, and [mentor] did. He had a lot of advice about consolidating, and he would say ‘if this one’s not making money, drop it’.” – Respondent 284130

Others were focused on the access given to helpful networks:

“They’ve given us access to pretty successful entrepreneurs who bring a totally different perspective to what type of advice you get.” – Respondent 243111

“[Mentor] introduced me to a few people as well as including one investor who made a small investment. It wasn’t a crazy thing. But it was more formal mentorship meeting that turned into something more.” – Respondent 225131

A few recognized the helpful way in which the content had been customized to the needs of their specific venture.

“If something comes up and there’s another coach with another area of expertise that you need...they’ve got people involved in government or in business modelling, financial modelling... It’s all based on whatever expertise that you need.” – Respondent 2852110

“[Mentor] went to get me from amateur status to professional status. And he did a lot of work on our annual reports... So that was very helpful. He worked with me very closely... [on] income for sales. We tried to find out which ones are profitable and which ones weren’t.” – Respondent 284130

Beyond the beneficial content of the received mentoring, the respondents also frequently commented on aspects missing from the logistics of the mentoring process – the organization and coordination of meetings, and the frequency and duration of meetings. Eight specific comments of this type were recorded. For example,

“[Mentors] are always available. They’re so wonderful in terms of ‘hey, book a meeting anytime if you need anything’... I’ve only had one one-on-one session with the two of them together, but they’re always available – even on a Friday if I have a question.”
– Respondent 2841110

“Well I just met him last month, and I’m meeting him again this week. We’re trying to get together every two or three weeks because he’s a great mentor.” – Respondent 2283111

“They have someone fully dedicated for the first four months to make sure that you’re meeting with all these people.” – Respondent 2242111

Finally, the respondents also commented on some positive interpersonal aspects of the relationship they had with mentors – positive energy and sense of accountability. Ten specific comments of this type were recorded. For example,

“He understands where I’m at, and he sure has experience. He’s been there and gone through the same steps that I have. And he’s eager, too. He wants to see you succeed, which is really great because... he is a very busy man but he always has time and energy in a positive way to share with me. And he’s concerned about my dream moving forward... It’s just so positive.” – Respondent 2283111

“I had two really great coaches. They are awesome. They really push me.” – Respondent 285110

“He kind of kept me going so I was able to really keep chipping away.” – Respondent 241111

Perceived Gaps/Omissions of Mentoring

Although all respondents found considerable benefit in their mentoring experience, most felt that the service that had been provided was incomplete in some way. They spoke of additional assistance and guidance they expected and would have liked to have received, but that was not made available to them. They therefore experienced challenges and needs for which their mentors were either unable or unwilling to assist.

With respect to the perceived gaps or omissions of mentoring, the respondents most frequently commented on additional content that was needed. Twenty-seven specific comments of this type were recorded. For example,

“It would be really great if we had more female entrepreneurs come in and talk about what it’s like to be a female entrepreneur... working with male co-workers and the clients talking to the male co-worker and not even acknowledging that they were there.” – Respondent 285110

“They are not experts on everything. So all of the technology side of my business is absolutely not happening within the incubator because that’s not their strength. All that has come from the outside.” – Respondent 243111

“You have to seriously consider what’s going to happen if it doesn’t work out. I think you’re taught not to do that because it’s like admitting that you might fail. When, in reality, you’re going to do a lot worse if you don’t have that figured out.” – Respondent 225131

Beyond this additional desired content, the respondents also frequently commented missing aspects to the logistics of the mentoring process – the organization and coordination of meetings, and the frequency and duration of meetings. Seven specific comments of this type were recorded. For example,

“There should be some tools or ways to have access more easily to mentors, because we have lots of good mentors [associated with the incubator], but we don’t know any of them. We don’t know if they have time for us or not. Or we don’t know in what field they can help us. I think it could be better.” – Respondent 25825111

Finally, seven respondents also commented on missing interpersonal aspects of the relationship with mentors. For example,

“My mentors in [the incubator] are very business-focused, as it should be... But my mentor outside of [the incubator] is really emotionally supportive... She also asked me about my health, my mental health, emotionally.” – Respondent 285110

“I think it’s nice to be able to talk to people here and there. But to have one person or may two people that are championing what you’re doing, and are there for you, and don’t see you as a one-off I think helps more. It’s a closer relationship... It might have been good to have more of a dedicated coach or something.” – Respondent 291110

“You talk to [the incubator mentor] one time, typically for an hour, and then you’re on to another mentor. So the idea of being met by someone who’s in the industry or a longer-term mentorship period – that would be useful.” – Respondent 292111

Perceived Harms of Mentoring

Somewhat surprisingly, several respondents reported negative experiences or aspects of their mentoring. With respect to the perceived detriments of mentoring, the respondents most frequently commented on questionable content that was provided. Six specific comments of this type were recorded. For example,

“Lots of [mentors] want to see their passion project become their full-time job. And that’s not really something aligned with our personal values. So when [mentors] are like ‘you should be doing this so you can get ads, or be doing that so you can be bigger!’... it doesn’t fit us. So there was some disconnect on that level because we aren’t a traditional business where we are trying to get a bunch of investors... It is sometimes difficult to understand what our goals are.” – Respondent 293120

“Us being older, and us having business experience outside of the entrepreneurial experience, some of our advisors were like, ‘Why are you pitching this kind of business, with this kind of price tag associated with it?... Are you drunk? They’re never going to go for this’. [But customers] did end up going for it. There is a bit of a sense of ‘don’t reach for the stars’ in those conversations.” – Respondent 2852110

Beyond the content of the received mentoring, four respondents also commented on problems with the logistics of the mentoring process – the organization and coordination of meetings, and the frequency and duration of meetings. For example,

“The mentors that we want are very busy, we cannot hire them to be our mentor full-time, and the mentors that are half-time are not useful for us... We couldn’t find a mentor who is good enough for us at the moment, who has some free time to supervise us.”
– Respondent 25825111

Finally, four respondents commented on some unsatisfactory or problematic interpersonal aspects of the relationship with mentors. For example,

“[Mentor] wasn’t as good as [previous mentor]. She treated you more like a baby... I was actually slapped on the wrist by [mentor]... like I wasn’t part of team or the networking.”
– Respondent 284130

“Maybe looking at us more so as a student, versus people who have had worldly business experience previously... there was a bit of a sense of ‘who do you think you are, doing that?’... [Mentors should] just expect the best from your ventures. And if you’re going to create these opportunities, don’t limit the potential of them. Allow people to really grow and flourish – or fall on their face, which is cool too because that’s important.”
– Respondent 2852110

DISCUSSION

The comments provided by our respondents highlight the potential importance of mentoring to incubated entrepreneurs. When delivered effectively, the advice and guidance of mentors can help entrepreneurs to learn important lessons, not only through their own direct experience, but also vicariously through the experiences of those advising them. But this learning can only occur when there is an effective fit between the provision of mentoring and the entrepreneur’s needs. On this basis we propose the concept of mentoring fit as a precursor to learning and performance by entrepreneurs in BIs. When fit is high, mentoring is successful, vicarious social learning occurs effectively, and the new incubated ventures benefit. But when fit is low, mentoring does not have these positive effects.

The first dimension of fit is the quality of relevant information that the mentor has. This comes from their past experience. The mentor must possess knowledge, skills, and attitudes that can be beneficial to the entrepreneur in dealing with the challenges of launch and venture growth. The conveyed information ('what') must be both accurate and relevant to the circumstances of the entrepreneur. Entrepreneurs cannot learn from mentors who do not have any experience or knowledge to share, whose information is mistaken or otherwise incorrect, or whose information is only valid and relevant in circumstances unlike those currently faced by the entrepreneur.

The second dimension of fit is the relationship quality, which must be sufficient to permit clear communications between mentor and entrepreneur; the parties must be able to hear and understand each other. Challenges to this clear understanding can arise from two sources: the specific individuals involved ('who'), and the communication mechanisms being employed ('how'). Problems we observed with 'who' include insufficient shared background knowledge, incompatible world views or assumptions, incompatible vocabularies, and even simple language/accent issues. Problems we observed with 'how' include interpersonal style conflicts, bad chemistry, and imputations of bad faith.

The third dimension of mentoring fit is availability ('when'). In the presence of high-quality content and an effective communications relationship, there must still be sufficient time available to communicate all the relevant material, and that time must be spent effectively. Meetings between mentor and entrepreneur must be long enough for full discussion and understanding of the topic material. And they must be frequent enough (whether regular and periodic meetings or ad hoc on-demand) that the entrepreneur can learn the needed new content while it is still needed and relevant to whatever venture challenge has arisen. This timing and frequency is also influenced by the choice between proactive anticipatory problem avoidance, or reactive problem solving. Finally, the medium (face-to-face or electronic) and format of the meeting (synchronous discussion or asynchronous exchange of messages) must also be suitable to the topic being discussed and the current relationship quality (e.g., sensitive personal issues, early in the mentorship when relationship quality may still be low).

We therefore propose that content, relationship quality, and availability are the three primary dimensions of mentoring fit (and therefore of social learning from mentoring, and consequent venture performance). But our results appear to support more than just these conclusions. They further point to a new observation: that these three driving factors interact with each other.

First, we observed an effect of relationship quality on content. A positive relationship quality expands the potential scope of mentoring content. For example, the presence or development of a positive and trusting relationship can lead the entrepreneur to reveal to the mentor their personal needs (not just the venture needs) – such as psychic or emotional challenges in need of personal support. The positive relationship quality can also lead the mentor to greater willingness to advise in this area of expanded content scope.

Secondly, we observed an effect of relationship quality on availability. A positive relationship quality can also lead the mentor to be willing to invest more time in the mentoring relationship (e.g., meeting more often, or meeting for longer durations) and to make greater effort to be helpful to the entrepreneur (e.g., tapping resources or doing additional research to be able to provide a better quality of advice, or offering improved responsiveness to entrepreneur queries).

Finally, we observed a reciprocal effect of availability on relationship quality. Increased availability and contact between the mentor and the entrepreneur can lead to changes in their relationship quality. Usually this was seen to be positive – learning how to communicate with each other more effectively, and developing greater trust in each other. But it was also sometimes seen to have a negative effect – learning to dislike each other, or developing frustration due to repeated unsatisfactory interactions.

FIGURE 1
MENTORING FIT, SOCIAL LEARNING, AND VENTURING PROGRESS
DURING INCUBATION

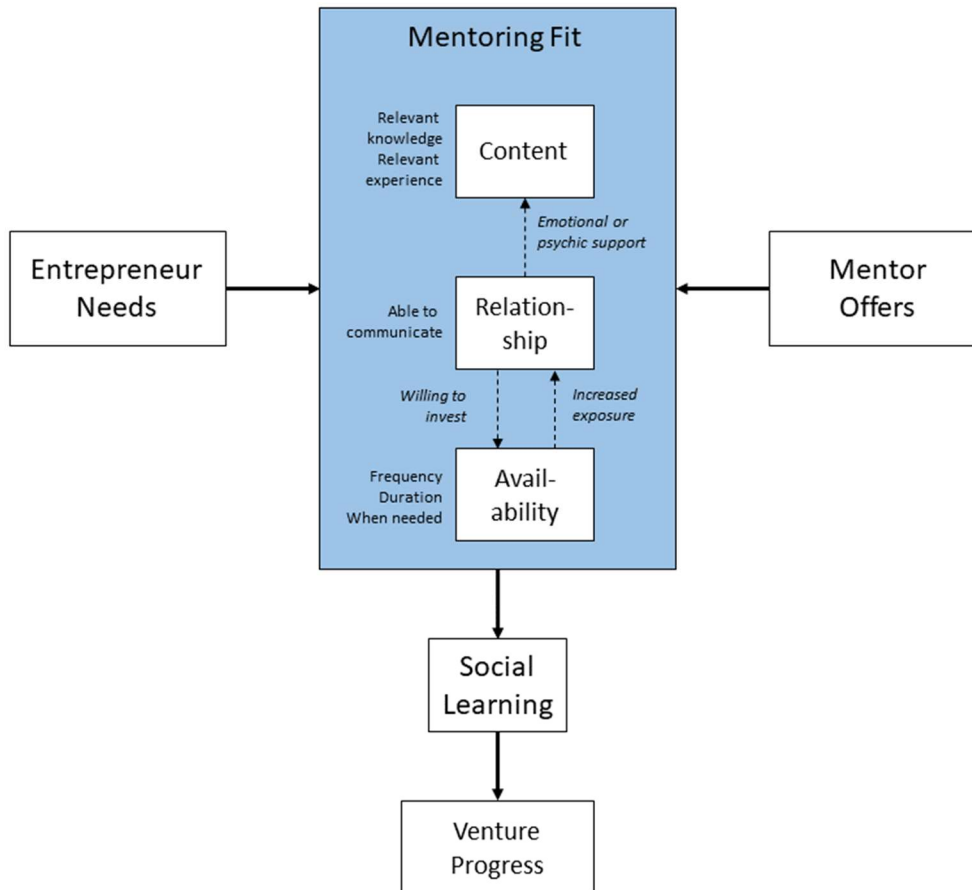


Figure 1 provides a model or graphical representation of the influences we propose from this analysis. Fit enables the entrepreneurs to learn vicariously from the experience of their mentors. And this learning helps to improve the performance of their new ventures. They learn to make positive moves (seize opportunities) they might have overlooked, or to avoid mistakes they otherwise would have made.

“That was a huge benefit for us to find somebody that, was willing to advise us in areas that we were just...over top of our heads and we weren’t necessarily sure how to tackle things”. Respondent C2852110

“When you get so close to something at some point you feel like you know all the answer, but then somebody looking from the outside-in will be able to challenge your perspective a lot more, that happened a lot.” Respondent 285110

These benefits occur when there is good fit – when the mentor’s content is of high quality and relevance, when the relationship between mentor and entrepreneur is of high quality, and when there is sufficient availability. When there is poor fit, entrepreneurs do not learn vicariously from their mentors. At the least, the mentoring effect may be neutral – entrepreneurs may fail to make these positive moves (miss opportunities) or to avoid these mistakes because they did not learn this from their mentors. But worse, with

poor fit there is potential for mentoring to have a negative value. Entrepreneurs may make mistakes or avoid positive moves specifically at the behest of their mentors.

There are many different failure modes whereby mentorship may not develop good fit, and therefore learning would not occur successfully. The content being taught by the mentor may be wrong or irrelevant (such as when the advice doesn't fit their case, e.g., Respondent 293120). Or some important and relevant content may be missing (such as when they tell the entrepreneurs 'what' to focus on but they don't tell 'how' to do it. Respondent C2425110 and 225131).

Alternatively, the mentorship may fail because there is poor relationship quality due to an inability to communicate effectively (such as when a respondent mentioned "*I was actually slapped on the wrist by a coach...you know like, that I wasn't part of the team or the networking*" Respondent 284130). Or the poor relationship quality may be due to bad interpersonal chemistry (such as when "*they think they have been treated like a baby*" Respondent 284130). Finally, the mentorship may fail due to insufficient availability: there is too little contact, or the contact is mistimed and not available when most needed (such as when *the mentors are needed, they are not available and they are very busy* Respondent 25825111).

Our conceptual model has important practical implications for incubator managers. It suggests that the provision of mentoring services is a design choice that can be managed by BI directors and these choices have implications for the performance of entrepreneurs and their incubated ventures. Specifically, the results of our study suggest that establishing a roster of mentors is necessary, but not sufficient for providing a platform to support vicarious learning by entrepreneurs. Incubator managers must also consider ways to assess the mentoring needs of entrepreneurs, on a case-by-case basis, so that they are matched with a mentor who has knowledge and experience suited to addressing their challenges. Moreover, our model suggests that managing the availability of mentor resources is an important function of incubator managers. Asking mentors to make a specific time commitment to the incubator and/or the entrepreneurs to whom he/she is assigned, and managing the allocation of entrepreneurs to mentors, could help to increase their accessibility during the incubation period. Finally, it is important to recognize that assigning an entrepreneur to a mentor does not guarantee that the match will be successful. The relationship between entrepreneur and mentor is idiosyncratic and develops over time, either positively or negatively. While it is not unusual to ask mentors to report on the progress of the entrepreneurs they are advising, it is important to consider whether entrepreneurs should also be asked to provide feedback on their mentors. Such practices could help to identify and ameliorate problem situations where relationship quality is negatively affecting vicarious learning.

Limitations

While the concept of fit emerging from our study offers new insights about how mentoring creates value for incubated entrepreneurs, it is important to acknowledge the limitations of the research which may influence the veracity and generalizability of our findings. First, our data is based on entrepreneurs' perceptions, not objective measures of mentorship effectiveness or venture performance. Future research is needed to operationalize and empirically examine the associations proposed in our model. Second, there is potential for specification error in the proposed model that would need to be considered in future theoretical and empirical research. For example, mentoring fit may include more than the three dimensions identified in this paper. Moreover, the proposed connection between mentoring fit and learning may be influenced by other factors not included in our model, and there may be uncontrolled variance factors that affect successful learning by entrepreneurs (e.g., culture, individual traits). Third, the data used in this study is drawn from a small non-representative sample and may be subject to selection biases, which raise issues about generalizability to other business incubation contexts, e.g. STEM UBIs, non-university BIs, and differences between male and female entrepreneurs that may influence the results.

Future Research Directions

Recent research by Cohen et.al. (2018, 2019) suggests that accelerator design choices matter to the benefits of participation. Our study builds on this line of inquiry by focusing on the perceived value of mentoring from the entrepreneur's perspective and drawing upon social learning and relationship factors to

explain how the design of mentoring services affects these perceptions in the context of business incubation. In this way it contributes to prior incubation literature (Hausberg and Korreck, 2018; Hackett and Dilts, 2004), which has assumed that mentoring is beneficial to entrepreneurs without explaining how the design of mentoring services (e.g., dimensions of mentoring and their interrelationships) and degree of fit between the mentor and entrepreneur affect the outcomes of mentoring (vis-à-vis creation of conditions that support vicarious learning).

Clearly, further empirical and theoretical research is needed to develop the model proposed in this paper. Replication studies in different incubation contexts could enrich our understanding of the dimensions of mentoring that are conducive to social learning in different populations of incubated entrepreneurs, the contingencies that affect these dimensions, and their implications for conceptualizing mentoring fit as an antecedent to social learning. Exploration of theoretical lenses that complement social learning, such as social capital, trust theories, bounded rationality, and self-efficacy could contribute to the development of a more holistic understanding of why, how, and under what conditions mentoring contributes to venture development and personal development during business incubation.

CONCLUSION

This qualitative study explored entrepreneurial learning in the context of business incubation. The conceptual model emerging from this work provides deeper insight about how incubated entrepreneurs conceptualize mentoring, and how mentoring affects their progress. Specifically, our findings suggest that incubator managers can facilitate social learning by making conscious choices in the delivery of mentoring services that enhance the potential for fit between the entrepreneurs' needs and the provision of mentoring services. We hope this study provides a useful foundation for future theory-driven inquiries into the design of mentoring and other entrepreneurial development services.

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REFERENCES

- Ahmad, A.J., & Thornberry, C. (2018). On the Structure of Business Incubators: De-coupling Issues and the Mis-alignment of Managerial Incentives. *The Journal of Technology Transfer*, 43(5), 1190–1212. <https://doi.org/10.1007/s10961-016-9551-y>
- Albort-Morant, G., & Ribeiro-Soriano, D. (2016). A bibliometric analysis of international impact of business incubators. *Journal of Business Research*, 69(5), 1775-1779.
- Audet, J., & Couteret, P. (2012). Coaching the entrepreneur: features and success factors. *Journal of Small Business and Enterprise Development*, 19(3), 515-531.
- Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43(7), 1097-1108. doi:10.1016/j.respol.2014.01.015
- Baluku, M.M., Leonsio, M., Bantu, E., & Otto, K. (2019). The impact of autonomy on the relationship between mentoring and entrepreneurial intentions among youth in Germany, Kenya, and Uganda. *International Journal of Entrepreneurial Behavior & Research*, 22(2), 170-192.
- Bandura, A. (1971). *Social Learning Theory*. General Learning Press, New York.
- Bandura, A., Ross, D., & Ross, S.A. (1963). Vicarious reinforcement and imitative learning. *The Journal of Abnormal and Social Psychology*, 67(6), 601.

- Barbero, J.L., Casillas, J.C., Ramos, A., & Guitar, S. (2012). Revisiting incubation performance: How incubator typology affects results. *Technological Forecasting and Social Change*, 79(5), 888 - 902.
- Barbero, J.L., Casillas, J.C., Wright, M., & Garcia, A.R. (2014). Do different types of incubators produce different types of innovations? *Journal of Technology Transfer*, 39(2), 151-168.
- Beckman, S., & Barry, M. (2007). Innovation as a learning process: embedding design thinkin. *California Management Review*, 50(1), 25-56.
- Bhatli, D. (2016). *Top University Business Incubators 2015-2016*. UBI Global Benchmark Report, Stockholm, UBI Global.
- Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). Entrepreneurship and Role Models. *Journal of Economic Psychology*, 33(2), 410-424. doi:10.1016/j.joep.2011.03.004.
- Boychuk Duchscher, J.E., & Morgan, D. (2004). Grounded theory: Reflections of the emergence vs. forcing debate. *Journal of Advanced Nursing*, 48(6), 605-612.
- Cohen, S., Bingham, C., & Hallen, B. (2018). The role of accelerator designs in mitigating bounded rationality in new ventures. *Administrative Science Quarterly*, 64(4), 810-854.
- Cohen, S., Fehder, D.C., Hochberg, Y.V., & Murray, F. (2019). The design of startup accelerators. *Research Policy*, 48(7), 1781-1797.
- Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory & Practice*, 4(29), 373-397.
- Cope, J. (2011). Entrepreneurial learning from failure: an interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), 604-623.
- Cope, J., & Watts, G. (2000). Learning by doing—an exploration of experience, critical incidents and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behavior & Research*, 6(3), 104-124.
- Corbett, A. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*, 22, 97-118.
- Corbett, A.C. (2005). Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship Theory and Practice*, 29(4), 473-491.
- Ekanem, I. (2015). Entrepreneurial learning: Gender difference. *International Journal of Entrepreneurial Behavior & Research*, 21(4), 557-577.
- Etzkowitz, H. (2002). Incubation of incubators: Innovation as a triple helix of university-industry-government network. *Science and Public Policy*, 29(2), 115-128.
- Fang, S.C., Tsai, F.S., & Lin, J.L. (2010). Leveraging tenant-incubator social capital for organizational learning and performance in incubation programm. *International Small Business Journal*, 28(1), 90-113.
- Gemmell, R.M. (2017). Learning styles of entrepreneurs in knowledge-intensive industries. *International Journal of Entrepreneurial Behavior & Research*, 23(3), 446-464.
- Glaser, B., & Strauss, A.L. (1967). *The discovery of grounded theory: strategies for qualitative research*, Aldine Publishing, New York.
- Good, M., Knockaert, M., Soppe, B., & Wright, M. (2019). The Technology Transfer Ecosystem in Academia. An Organizational Design Perspective. *Technovation*, 82, 35–50.
- Greeno, J.G., Collins, A.M., & Resnick, L.B. (1996). Cognition and learning. In D.C. Berliner & R.C. Calfee (Eds.), *Handbook of educational psychology* (pp. 15-46) MacMillan, New York.
- Grimaldi, R., & Grandi, A. (2005). Business incubators and new venture creation: An assessment of incubating models. *Technovation*, 25(2), 111-121. doi:10.1016/S0166-4972(03)00076-2
- Guba, E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Education Technology Research & Development*, 29(2), 75-91.
- Hackett, S., & Dilts, D. (2004). A systematic review of business incubation research. *The Journal of Technology Transfer*, 29(1), 55-82. doi:10.1023/B:JOTT.0000011181.11952.0f
- Harrison, R.T., & Leitch, C.M. (2005). Entrepreneurial learning: researching the interface between learning and the entrepreneurial context. *Entrepreneurship Theory and Practice*, 29, 351–371.

- Hausberg, J.P., & Korreck, S. (2018). Business Incubators and Accelerators: A Co-Citation Analysis-Based, Systematic Literature Review. *The Journal of Technology Transfer*, 23(3), 474-499
- Hoffmann, A., Junge, M., & Malchow-Møller, N. (2015). Running in the Family: Parental Role Models in Entrepreneurship. *Small Business Economics*, 44(1), 79-104.
- Jones, O., Macpherson, A., & Thorpe, R. (2010). Learning in owner-managed small firms: Mediating artefacts and strategic space. *Entrepreneurship & Regional Development*, 22(7-8), 649-673.
- Karatas-Özkan, M. (2011). Understanding relational qualities of entrepreneurial learning: towards a multi-layered approach. *Entrepreneurship & Regional Development*, 23, 877-906.
- Kolb, D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Macpherson, A. (2005). Learning to grow: Resolving the crisis of knowing. *Technovation*, 25(10), 1129-1140.
- Macpherson, A., & Holt, R. (2007). Knowledge, learning and SME growth: A systematic review of evidence. *Research Policy*, 36(2), 172-192.
- Macpherson, A., & Jones, O. (2008). Object-mediated learning and strategic renewal in a mature organization. *Management Learning*, 39(2), 177-201.
- Morales-Gualdrón, S.T., Gutiérrez-Gracia, A., & Dobón, S.R. (2009). The entrepreneurial motivation in academia: a multidimensional construct. *International Entrepreneurship and Management Journal*, 5(3), 301-317.
- Ncube, L.B., & Washburn, M.H. (2010). Strategic collaboration and mentoring women entrepreneurs: A case study. *Academy of Entrepreneurship Journal*, 16(1), 71.
- Nicholls-Nixon, C., & Valliere, D. (2019). A Framework for Exploring Heterogeneity in University Business Incubators. *Entrepreneurship Research Journal*. <https://doi.org/10.1515/erj-2018-0190>.
- Nicholls-Nixon, C., Cooper, A., & Woo, C. (2000). Strategic experimentation: Understanding change and performance in new ventures. *Journal of Business Venturing*, 15(5), 493-521.
- Nicholls-Nixon, C., Valliere, D., & Hassannezhad, Z. (2018). A typology of university business incubators: Implications for research and practice. In C. Costa, M. Oliveira, & M. Amorim (Eds), *Proceedings of the 13th European Conference on Innovation and Entrepreneurship* (pp. 535-543). Reading, England: Academic Conferences and Publishing International.
- Ozgen, E., & Baron, R.A. (2007). Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums. *Journal of Business Venturing*, 22(2), 174-192.
- Politis, D. (2005). The process of entrepreneurial learning: a conceptual framework. *Entrepreneurship Theory & Practice*, 4(29), 399-424.
- Rae, D. (2005). Entrepreneurial learning: A narrative-based conceptual model. *Journal of Small Business and Enterprise Development*, 12(3), 323-335.
- Rigg, C., & O'Dwyer, B. (2012). Becoming an entrepreneur: researching the role of mentors in identity construction. *Education + Training*, 54(4), 319-329.
- Soetanto, D. (2017). Networks and entrepreneurial learning: coping with difficulties. *International Journal of Entrepreneurial Behavior & Research*, 23(3), 547-565.
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*. doi: 10.1111/etap.12167
- Spigel, B., & Harrison, R. (2018). Toward a process theory of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, 12, 151-168.
- Stambaugh, J., & Mitchell, R. (2018). The fight is the coach: creating expertise during the fight to avoid entrepreneurial failure. *International Journal of Entrepreneurial Behavior & Research*, 24(5), 994-1015.
- St-Jean, E. (2011). Mentor functions for novice entrepreneurs. *Academy of Entrepreneurship Journal*, 17(1), 65-79
- St-Jean, E., & Audet, J. (2012). The role of mentoring in the learning development of the novice entrepreneur. *International Entrepreneurship and Management Journal*, 8(1), 119-140.

- St-Jean, E., & Audet, J. (2013). The effect of mentor intervention style in novice entrepreneur mentoring relationships. *Mentoring & tutoring: Partnership in Learning*, 21(21), 96-119.
- St-Jean, É., & Mathieu, C. (2015). Developing attitudes toward an entrepreneurial career through mentoring: The mediating role of entrepreneurial self-efficacy. *Journal of Career Development*, 42(4), 325-338.
- St-Jean, É., & Tremblay, M. (2020). Mentoring for entrepreneurs: A boost or a crutch? Long-term effect of mentoring on self-efficacy. *International Small Business Journal*, 38(5), 424-448
- St-Jean, E., Radu-Lefebvre, M., & Mathieu, C. (2018). Can less be more? Mentoring functions, learning goal orientation, and novice entrepreneurs' self-efficacy. *International Journal of Entrepreneurial Behavior & Research*, 24(1), 2-21.
- Sullivan, R. (2000). Entrepreneurial learning and mentoring. *International Journal of Entrepreneurial Behavior & Research*, 6(3), 160-175.
- Taylor, D.W., & Thorpe, R. (2004). Entrepreneurial learning: A process of co-participation. *Journal of Small Business and Enterprise Development*, 11(2), 203-211.
- Vargas, N., Lloria, M.B., & Roig-Dobón, S. (2016). Main drivers of human capital, learning and performance. *The Journal of Technology Transfer*, 41(5), 961-978.
- Walsh, G.S., & Cunningham, J.A. (2017). Regenerative failure and attribution. *International Journal of Entrepreneurial Behavior & Research*, 23(4), 688-707.
- Wang, C.L., & Chugh, H. (2015). Entrepreneurial learning: past research and future challenges. In *Entrepreneurial learning* (pp. 11-44). Routledge.
- Watson, K., McGowan, P., & Cunningham, J.A. (2018). An exploration of the Business Plan Competition as a methodology for effective nascent entrepreneurial learning. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 121-146.
- Whetten, D. (1989). What constitutes a theoretical contribution? *Academy of Management Review*, 14(4), 490-495.
- Williams Middleton, K., Padilla-Meléndez, A., Lockett, N., Quesada-Pallarès, C., & Jack, S. (2019). The university as an entrepreneurial learning space: The role of socialized learning in developing entrepreneurial competence. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 887-909.
- Yusof, M., & Jain, K.K. (2010). Categories of university-level entrepreneurship: A literature survey. *International Entrepreneurship and Management Journal*, 6(1), 81-96.