

# ENTREPRENEURIAL LEARNING IN VENTURE ACCELERATION PROGRAMS

## Abstract

**Purpose** – This study aims to better understand experiential learning processes of entrepreneurs in the context of venture acceleration programs.

**Design/methodology/approach** – A qualitative research design was employed based on interviews as the primary data source. The data was inductively analysed following the Gioia methodology (e.g. Gioia, Corley and Hamilton, 2012).

**Findings** - We build on experiential learning theory to generate an inductive, process-focused model that explores the learning dynamics that venture acceleration programs can. In our model, we identify three catalysts that trigger processes of experiential learning, and two contingencies that alleviate the effect of the catalysts on learning outcomes. Our findings suggest that the potential of venture acceleration programs to be effective learning environments is pending on the presence and quality of these catalysts and contingencies.

**Originality/Value** – The findings provide novel insights of how coordinated, fixed-term programs organised to accelerate the venture process trigger entrepreneurial learning among participants, thereby offering a deeper understanding of the learning dynamics in this setting.

**Keywords:** Entrepreneurial learning, acceleration programs, experiential learning, entrepreneurship

**Paper type:** Research paper

## INTRODUCTION

A characteristic feature of entrepreneurial ecosystems in advanced knowledge-based economies is the important role attributed to venture acceleration programs. The past decade has seen a significant increase of such programs, where innovation policies at regional, national and supra-national levels have fuelled a growing ecology of organisations that design and offer coordinated, fixed-term programs aimed at accelerating the start-up process (Carayannis et al.,

2018; Wright & Drori, 2018). As such, today there is a highly diverse set of different educational acceleration programs that provide entrepreneurs with specialised help in strengthening their product and market offers, identifying promising customer segments, and securing resources including financial capital (Isabelle, 2013; Pauwels et al., 2016; Goswami, Mitchell & Bhagavatula, 2018).

In this paper, we aim to develop the scholarly understanding of entrepreneurial learning in the context of venture acceleration programs. Many aspiring entrepreneurs progress through one or several such fixed-term programs as a means to enhance the capabilities of their start-ups. However, there is to date little research that explores entrepreneurial learning in this particular context. Rather, the bulk of research on entrepreneurial learning have been highly focused on individualistic approaches (Wang & Chugh, 2014) with an interest in studying the cognitive processes whereby entrepreneurs acquire data, information, skills or knowledge (e.g., Politis, 2005; Corbett, 2007; Holcomb et al., 2009). There is a growing number of entrepreneurship studies acknowledging collective processes of learning where shared rules and procedures accumulate through social interaction (e.g., Pittaway & Cope, 2007; El-Awad, Gabrielsson & Politis, 2017), however, this stream of research does not explicitly address how the coordinated and time-compressed context that characterises acceleration programs feeds the learning process. Thus, we know very little about the learning dynamics that emerge and unfolds in these settings.

In this article, we adopt a qualitative approach to develop an inductive, process-focused model that explores how venture acceleration programs influence entrepreneurial learning among participants. Because experiential approaches have been found to be helpful in understanding entrepreneurial learning (e.g., Wang & Chugh, 2014) we turn to experiential learning theory (e.g., Kolb, 1984; Politis, 2005; Corbett, 2007) as a way of understanding the dynamics in the learning process that venture acceleration programs can facilitate. Based on this reasoning and logic, we address two primary research questions: (a) How are experiential processes of entrepreneurial learning triggered in venture acceleration programs?; and (b) How do critical states that entrepreneurs bring with them into the program influence the experiential learning process?

Through our inductive research involving face-to-face interviews with 21 participants, and complemented with observations at program events as well as multiple sources of secondary data, we make three contributions to literature and research on entrepreneurial learning. First,

we contribute to entrepreneurial learning research by elucidating how coordinated, fixed-term programs organised to accelerate the venture process trigger entrepreneurial learning among participants. Second, we contribute to the growing area of research that investigates venture acceleration programs by offering a deeper understanding of the experiential learning dynamics operating in this setting. Third, we contribute to research on entrepreneurial ecosystems by highlighting the potential role of non-formal entrepreneurship education as effective learning environments for entrepreneurs.

The rest of the article is structured as follows. In the next section we present literature and research on entrepreneurial learning with an emphasis on experiential learning theory. In this section we also review research that has looked at the specificities of venture acceleration programs and the learning that take place in this context. Thereafter, we present our inductive research methodology, followed by a discussion of our analysis and findings. The article ends with implications for theory, practice and future research.

## **LITERATURE REVIEW**

### **Entrepreneurial learning**

The learning process of entrepreneurship has long been emphasised as a key factor for the survival and success of new ventures (Deakins & Freel, 1998; Rae, 2000; Young & Sexton, 2003; Cope, 2005). It is through learning that aspiring entrepreneurs develop and grow, both personally by advancing their own self-concept and personal skill-set (Rae & Carswell, 2000; Gabriellsson & Politis, 2015), as well as organisationally by the elaboration of firm-level routines and capabilities (Brockman, 2013; El-Awad et al., 2017).

Approaches and definitions of entrepreneurial learning vary in the literature (Wang & Chugh, 2014). In this article, we embed our reasoning and logic in experiential learning theory (e.g., Kolb, 1984; Politis, 2005; Corbett, 2007) since we seek to understand the dynamics surrounding the learning processes of entrepreneurs. Learning is in this theory conceptualised as the creation of knowledge by the transformation of experience (Kolb, 1984, p. 41), and the learning process is typically depicted as starting with an experience and the need to understand that experience (Kolb & Kolb, 2005). A core tenet is that knowledge is resulting from the combination of grasping and transforming experience, where grasping refers to the process of taking in information, while transforming is how the learner interprets and act on that information. Grasping consists of two dialectally opposing modes: 'concrete experience' where the learner

immerses concrete reality, and 'abstract conceptualisation' where the learner uses symbolic representation (“thinking about”). Transforming, on the other hand, consists of two dialectally opposing modes: 'active experimentation' where the learner jump right in and start doing things, and 'reflective observation' where the learner distances from the experience to reflect on what happens. The learning process is driven by the integration of these dual dialectics, and tensions are resolved in iterations of movement back and forth between the opposing modes. The whole process is portrayed as an idealised learning cycle where the learner continually forms (and reforms) ideas and solutions to problems via engaging in action, experience and reflection.

From this stance, entrepreneurial learning can be understood as a process of grasping and transforming experience, which trigger and energise the experiential learning process (Politis, 2005). Successful completion of the process stimulates knowledge creation, skills formation, and inquiry among entrepreneurs (Corbett, 2007; Gabrielsson & Politis, 2015), all of which may generate personal satisfaction, motivation and self-development. At the same time, entrepreneurial learning arise in a social or relational environment (Pittaway & Cope, 2007; El Awad et al., 2017), which means that it cannot be separated from the contexts in which it occurs (Taylor & Thorpe, 2004; Harrison & Leitch, 2008). This reasoning suggests a two-layered interaction, where the learner and the immediate learning environment are interdependent and largely intertwined (e.g., Kolb, 1984, p. 34; Lans et al., 2008). In this respect, the next section will review literature on venture acceleration programs to provide a theoretical basis for exploring the experiential learning process of entrepreneurs in this specific context.

### **Venture acceleration programs**

Venture acceleration programs are intensive, highly structured, and temporally compressed programs of enterprise-oriented training and networking that offer non-formal entrepreneurship education to specific cohorts of ventures. The feature that most clearly defines these programs is their limited duration (Cohen & Hochberg, 2014; Miller & Bound, 2011; Pauwels et al., 2016). Empirical studies show significant variation in the total length of venture acceleration programs, however the most common duration is about three months with a smaller portion of the total length typically committed to in-residence time (Casasnovas & Bruno, 2013; Cohen, 2013; Wright & Drori, 2018). The typical participants are nascent entrepreneurs, where the program is designed to accelerate the process of moving the venture from one stage of development to the next by means of coaching, networking events and seminars. The acceleration process is in this respect characterised by “pressure and discipline” (Miller &

Bound, 2011), where participants are provided with a basic coordinated program structure in which to work, but also expectations to make progress within a given timeframe.

The growing literature on accelerators suggests that fixed-term acceleration programs have great potential to be effective learning environments for entrepreneurs. Typical learning outcomes expressed in the literature (e.g., Stross, 2012; Baird, Bowles & Lall, 2013; Isabelle, 2013; Cohen & Hochberg, 2014; Miller & Bound, 2011; Pauwels et al., 2016; Gabrielsson et al., 2018) seem to circle around three overarching competence areas; (1) communicating with critical stakeholders, (2) configuring the venture project, and (3) constructing and developing entrepreneurial identity. The first area refers to learning how to effectively communicate with critical stakeholders, such as investors, customers, suppliers, and convincing them to conduct business with the firm (e.g., Kale & Ardit 1998; Guercini & Milanesi, 2016). The second area refers to learning how to effectively configure the entrepreneurial project into a rent-generating business by coordinating activities, developing operational routines, and developing trust and cooperation among organisational members (e.g., Guercini & Milanesi, 2016). The third area refers to learning how to construct and develop the entrepreneurial identity and to think “entrepreneurially” (e.g., Donnellon, Ollila & Middleton, 2014). The three learning outcomes are summarised in Table 1.

> Insert table 1 about here <

While past studies have been strong in identifying typical learning outcomes that venture acceleration programs may offer, i.e. the 'what' of learning, there has been much less attention in the literature to 'how' such learning evolves and develops. Notable exceptions are Cohen (2013) and Levinsohn (2015) who both have addressed issues of learning related to venture acceleration programs. In her study of technology accelerators in North America, Cohen (2013) use insights from the organisational learning literature to explain the accelerator process. Her findings suggest that entrepreneurs' learning is stimulated by their peers, and not only by their perception of fellow entrepreneurs as colleagues, but also by the motivation generated by perceiving them as competitors. Moreover, she finds that acceleration programs speed up venture development by encouraging entrepreneurs to delay ‘doing’ until they have created a coherent strategy, thus emphasising the importance of reflection in the learning process.

Furthermore, Levinsohn (2015) explores the learning of social entrepreneurs in accelerators in Scandinavia. In the study he finds that characteristics and dynamics of the accelerator cohort

have a significant impact on the learning, with industry heterogeneity being a key stimulus. Moreover, entrepreneurial learning is enhanced when the participants are at a similar stage of venture development. As such, the findings suggest that entrepreneurial learning in acceleration programs is more a product of co-creation than effective program design. In our study, we use these theoretical insights to better understand the experiential learning process of entrepreneurs related to the context of venture acceleration programs.

## **RESEARCH METHODS**

### **Research setting**

Our study focuses on the learning processes of entrepreneurs who have participated in a venture acceleration program in Southern Sweden. The acceleration program has been part of a government-funded project aimed at developing and internationalizing local start-ups. The acceleration program was managed by a team connected to a platform for developing strong creative ideas together with academia and industry at the Ideon Science Park close to Lund University.

The project in which the acceleration program was embedded in has been conducted in five steps. Step 1 was as a proactive phase where the project team together with an international advisory team, scouted up business ideas and start-ups. In total, 76 entrepreneurs applied for the acceleration program and presented their business ideas for the project and the advisory team. Step 2 involved team building exercises and stress tests of the business ideas. Step 3 focused on the acceleration program, where 21 of the start-ups that passed step 2 participated in a one-week high-intensity education involving coaching, networking events, and seminars. Step 4 primarily constituted a demo day, where 11 projects selected out of those start-ups undergoing the one-week-program, pitched their business ideas for a larger audience of corporate managers, investors, seasoned entrepreneurs and academics. This step also included pitch and media training. Step 5 focused on those start-ups that only participated in steps 1 and 2 above by offering them additional support to make the business idea mature for an international market. All education efforts and communication have been conducted in English. The individual coaching offered during steps 1- 4 has also primarily been conducted in English.

### **Data collection**

The primary source of data used in this study is semi-structured interviews, where multiple rounds of in-depth face-to-face interviews have been conducted with all 21 lead entrepreneurs

who participated in the one-week intensive education program. These included early-stage interviews focusing on descriptive issues, followed by post-process interviews with a specific emphasis on entrepreneurial learning outcomes. A description of all venture projects and lead entrepreneurs is presented in table 2. Data collection was conducted during April to September 2017. The interviews were conducted both during their early participation in the project as well as after they completed the whole process, more specifically the first three months following the demo day. To gain a dynamic and socially complex understanding of entrepreneurial learning related to the context of venture acceleration programs, we supplemented the interviews with field observations, media documentation, and written reports. This enabled a solid contextual understanding, since the authors followed the entrepreneurs during the whole program, from screening through acceleration. The use of multiple data sources also helped in developing a nuanced and vivid understanding of the research setting and in triangulating data for enhanced validity and reliability (Jonsen & Jehn, 2009).

>Insert table 2 about here <

We reviewed literature and research on entrepreneurial learning and venture acceleration to inform the overall research problem. A semi-structured interview guide was designed to gather focused data. Specifically we asked our informants about their backgrounds, status of their ventures, mentoring, educational seminars, experiences within the acceleration program, and their overall perception of the learning generated from the program. The semi-structured character of the interview guide helped us focusing on core concepts in entrepreneurial learning literature, but also opening up for free-flowing discussions that allowed respondents to expand on topics of interest. The interview guide was presented and discussed at two occasions before put into use; one with a scholar having expertise in the field, and one with a practicing entrepreneur who pre-tested the interview guide. The fourth author conducted all the interviews. They lasted between 60 to 90 minutes, and were transcribed directly after the interviews.

### **Data analysis**

The process of analysing the data followed an interpretative logic following the approach described by Gioia, Corley and Hamilton (2012). The previously reviewed literature was consulted again with a confirmatory/disconfirmatory purpose. Thereafter, we focused on novel insights emerging from the data to extend the existing literature. Data from all 21 interviews was used to inductively codify and categorize emerging aspects. The author team took complementary roles in the analysis process to iterate between informants' views and the

higher-level perspective necessary for informed theorizing. The third author, who remained close to informants' views during the analysis, led the inductive coding of data. The second author took more of an "outsider" perspective to provide focus and closure in relation to key emerging constructs and their links to extant theory. The first author was sequencing between both roles and engaged in debriefing sessions during the analysis process to maintain focus and clarity.

We used NVivo software to increase transparency and establish a comprehensive data structure (Bazeley & Jackson, 2013). Following Gioia et al (2012), we engaged in an informant-centric first-order analysis by looking for evidence of entrepreneurial learning in the data, and identifying first-order concepts related to accounts shared by the informants. Thereafter, the first-order concepts were compared in order to find patterns, both similarities and differences. The first-order concepts were subsequently reduced to a manageable number, consisting of recurrent phrasal descriptors. The first-order concepts were then used as inputs for a more researcher-centric second-order analysis focused on theoretical themes and tentative relationships. During this process we also considered how the first-order order concepts could be organized consistently with extant theory, understood in terms of aggregated dimensions (Gioia et al., 2012). The resulting data structure of first-order concepts and second-order themes, along with their corresponding aggregate dimensions are depicted in Figure 1 and 2.

## **RESULTS AND DISCUSSION**

Our analysis generates an inductive, process-focused model that explores the learning dynamics that venture acceleration programs can facilitate. The model is based on the identification of a set of aggregated dimensions, titled catalysts, that trigger experiential learning processes, and a set of aggregated dimensions, titled contingencies, that alleviate the effect of the catalysts on learning outcomes. The aggregated dimensions that comprise the foundation of our model are depicted in figure 3. In the following sections, we describe the dynamics of entrepreneurial learning that emerge from the inductive analysis.

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### **Catalysts - situations triggering experiential learning**



The emerging data structure highlights three types of catalysts that trigger experiential learning processes in acceleration programs: affective motivation, constructive feedback and peer atmosphere.

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*Affective motivation.* Affective motivation involves the emotionally laden drivers that energize participants to engage in the learning process. As shown in Figure 1, two second-order themes underlie affective motivation: a) emotional bonding, and b) inspirational support. A characteristic feature of participating in the acceleration program was the development of emotional bonds with other participating entrepreneurs. Moreover, many entrepreneurs felt it was emotionally strengthening with others showing enthusiasm and commitment to their own venture (Miller & Bound, 2011; Cohen, 2013). This sense of belonging to a community of practitioners is emphasized by one of the informants in the following way:

*“The ambience was really good, even though we are actually competing against each other... We just feel like we are really close, even though we are not doing the same things, we understand each other... we have similar problems and we face the same challenges. I felt like I am not alone anymore...” (Venture project Clean)*

The affective motivation inspired participants to perceive and grasp new information, both by using sensation as well as symbolic representation as guide. This duality fuels iteration of movements back and forth between concrete experience and abstract conceptualization, thus accelerating the learning process (Kolb, 1984; Politis, 2005). In this respect, the acceleration program very much resembles a community of practitioners (e.g., Lave & Wenger 1991), where the participants receive expressions of appraisal and empathy, thus motivating and inspiring each other to work in entrepreneurial ways (i.e., Rae, 2000). Therefore, we suggest:

***Proposition 1:*** Affective motivation is a facilitating condition for entrepreneurial learning in acceleration programs by triggering and strengthening the grasping dimension in the experiential learning process.

*Constructive feedback.* Constructive feedback, provided by coaches, mentors and advisers in the accelerator program, involves impactful triggering processes stimulating the experiential learning process of participating entrepreneurs. As shown in Figure 1, three second-order

themes underlie constructive feedback: a) challenging of perspectives, b) reflective dialoguing, and c) encouraging appraisal. Challenging of perspectives refers to coaches and mentors providing feedback during one-to-one sessions, and potential investors sharing their points of views. Informants mentioned that this form of feedback broadened their perspectives of how to do things, thus challenging themselves and their business ideas. One of the informants described this form of feedback as follows:

*“The discussion I had with one of the investors and a few with the coaches challenged me in a good way. It is hard to explain how that has affected me - they added another dimension to the things I am doing.” (Venture project Beta)*

Reflective dialoguing involves interactive discussions where participating entrepreneurs receive questioning feedback that stimulates reflection. This form of feedback does not involve specific guidelines for action, but rather triggers processes of reflective thinking (e.g., Mezirow, 1990) that inspire participants to think differently about their behaviours and practices. One of the informants explained the reflecting dialogue as an eye-opener that caused direct changes in how to think about pricing of their offering:

*“We got a lot of feedback from mentors, and other people that we talked to, that this is a very high-end service. Therefore, our pricing should be completely different. We were looking at it based on costs plus a limited profit margin business model. [After the feedback] ...we changed to premium pricing.” (Venture project Kappa)*

Encouraging appraisal involves positive feedback such as receiving appreciation or positive comments on what works well. The feedback creates a sense of confirmation in the actions taken by the participant entrepreneurs, thus nourishing their self-efficacy (McGee et al., 2009). This often resulted in a re-assurance that strengthen their belief in their business ideas, entrepreneurial teams, and venture projects. One informant described the feedback as follows:

*“They gave us good feedback about our company... making us more confident to go forward, and then gradually organize crowdfunding. We just have to find the right packaging... because such things are very expensive. We are not there yet, however, that has been a very good thing that the accelerator helped us with.” (Venture project Treat)*

Overall, the analysis suggests that constructive feedback feed the learning process by triggering personal reflections on what has happened, as well as opening up for doing or trying out things anew. In this respect, the constructive feedback increase iterations of movement back and forth between reflective observation and active experimentation, thus accelerating the learning via the transformation of experience into knowledge (Kolb, 1984; Politis, 2005). We therefore suggest:

**Proposition 2:** Constructive feedback is a facilitating condition for entrepreneurial learning in acceleration programs by triggering and strengthening the transforming dimension in the experiential learning process.

*Peer atmosphere.* Peer atmosphere involves activities, values and concerns that participants produce and share with each other, and which feed into the learning process. As shown in Figure 1, two second-order themes underlie peer atmosphere: a) social aspirations, and b) collaborations. Social aspirations emerge from observations of other teams' development, and by comparing one's own venture progress with others as a form of benchmarking process. This process is much in line with social learning theory suggesting that entrepreneurs model their behaviour after similar others (Bandura, 1986). In addition, the participants engage in on-going collaborations by working with other teams while solving similar problems and receiving help when finding solutions. These forms of collaborations allow tapping into collective experiences of opportunities and obstacles in the venture process, thus enabling the development of self-learning skills (Pittaway et al., 2009). One informant described the perception of peer atmosphere as follows:

*"I was impressed by the candidates and companies selected (to the program), especially the ones selected for the higher level; the accelerator week and the action day. There was a lot of positive feedback back and forth among the candidates. ...and I was really lucky that I got along very well with Sofie (a peer founder), we sat together a lot and she is super professional. She is good in what she does, and having her as a (collaborating) partner helped me a lot."* (Venture project Junior)

The experience of the peer atmosphere, however, varied among participants depending on both the frequency and quality of interactions. Some participants were highly engaged in creating and developing productive relationships, while others were more individualistic and detached due to personal issues or competing commitments outside the program. In addition, our data

demonstrates that a peer atmosphere strengthen the subjective experience of affective motivation, as well as expanding the effectiveness of constructive feedback in the experiential learning process. In this respect, building a supportive peer atmosphere stimulate learning dynamics within the program by amplifying the triggering effects of affective motivation and constructive feedback on the grasping and transforming of experience. Therefore, we suggest:

***Proposition 3:*** A supportive peer atmosphere in acceleration programs amplifies the magnitude and effectiveness of affective motivation and constructive feedback in the experiential learning process.

### **Contingencies – critical states facilitating learning outcomes**

Each of the catalysts discussed above stimulates experiential learning by setting of the grasping and transforming of experience into knowledge, which in the context of the study refers to program-specific learning outcomes such as communicating with critical stakeholders, configuring venture project, and constructing entrepreneurial identity. The effects of the catalysts on learning outcomes are however mitigated by two critical states: entrepreneurial exposure and program-venture fit. We labelled these critical states ‘learning contingencies’ as they refer to eventualities that impact and alleviate learning outcomes.

> Insert Figure 2 about here <

*Entrepreneurial exposure.* Our data suggest that entrepreneurial exposure mitigates the effects of triggering events on the experiential learning process. As shown in Figure 2, two second-order themes underlie this critical state: a) cognitive preparedness, and b) embeddedness. Cognitive preparedness result from prior start-up experience and completion of entrepreneurship education, and implies that the participant is open for insights that could be applied and adapted in the venture development process (Corbett, 2007; Williams Middleton & Donnellon, 2014). Embeddedness encompasses familiarity with the surrounding entrepreneurial ecosystem, and having personal networks with entrepreneurial role models.

Interestingly, our analysis suggests that the effect of entrepreneurial exposure is not linear but takes the shape of an inverted u-shape. In this respect, having high or low levels of entrepreneurial exposure seems to mitigate the learning process by lowering the effects of triggers on learning outcomes. One informant described the problems of having a low level of entrepreneurial exposure as follows:

*“I didn’t have any background, people spend four years studying businesses and maybe they know all of that... some stuff was at a level that was too high.” (Venture project Maxi)*

At the same time, another informant described the following with respect to higher levels of entrepreneurial exposure:

*“For me, it wasn’t a bigger impact as somebody else, I had already worked a year on my idea with feedback from my teachers and classmates every single day.” (Venture project Junior)*

Another informant expressed the effect of higher compared to lower entrepreneurial exposure in the following way:

*“I think when being brand new and just starting out, you are probably not open to get all information and all ideas. And if you have been doing it [entrepreneurship] for too long, you have heard everything before, and then you are not paying enough attention.” (Venture project Beta)*

Overall, our data suggest that moderate levels of entrepreneurial exposure strengthen the informants’ aptitude and preparedness for developing learning outcomes in the program. Higher and lower levels of entrepreneurial exposure, on the other hand, seem to reduce the effects of triggering events on learning outcomes. Therefore, we suggest:

**Proposition 4:** Entrepreneurial exposure influence the experiential learning process by mitigating the effect on learning outcomes in acceleration programs, where both high and low levels of entrepreneurial exposure imply a stronger mitigating effect.

*Program-venture fit.* Program-venture fit explains whether the intersection between what the program offers and the needs and development stage of the venture (e.g., Klofsten, 2005; Yencken & Gillin, 2006). As shown in Figure 2, four second-order themes related to the development stage of the venture underlie this critical state: a) product/concept maturity, b) investment readiness, c) broadening competence pool, and d) market exploitation. A good fit between the program and the venture enable participants to more readily apply insights and ideas to accelerate their projects. One informant described the program-venture fit as follows:

*“You should be really certain that you want to go forward with your business, because the program is basically adapted to people that have made up their mind about this... I think you should probably have come a bit further... I was still in a stage that was too early. I should have been one, or even two steps ahead.” (Venture project NetOn)*

Another informant stated the following:

*“I think it was pretty good experience because we were in the right stage for the program. It [the program] was really optimized for very early stage venturing. We weren’t even called a start-up, but we were on the idea phase... it fitted us very well and gave us a lot.” (Venture project Gamma)*

Overall, our data suggest that the fit between the acceleration program and the venture mitigates the effects of triggering events on the experiential learning process. Participants who were entering the program with stronger program-venture fit were more likely to develop learning outcomes that were accelerating their projects, while participants with weaker program-venture fit were expressing much fewer learning outcomes. Following this reasoning, we suggest:

**Proposition 5:** Program-venture fit influences the experiential learning process by mitigating the effect on learning outcomes in acceleration programs, where weaker program-venture fit implies a stronger mitigating effect.

## CONCLUSIONS

In this article, we build on experiential learning theory to understand (a) how experiential processes of entrepreneurial learning are triggered in venture acceleration programs, and (b) how critical states that entrepreneurs bring with them into the program influence the experiential learning process. Placing the learning process of entrepreneurs in the context of acceleration programs allowed us to explore how entrepreneurial learning emerges and develops within this specific context. Interviews with 21 entrepreneurs, complemented with observations of program sessions and multiple sources of secondary data, informed our inductive, qualitative analysis.

Our findings generate an inductive, process-focused model that explores experiential learning dynamics in venture acceleration programs. Specifically, our findings suggest that experiential learning is triggered via three catalysts: affective motivation, constructive feedback, and peer atmosphere, by influencing the participants' grasping and transforming of experience. Further, two contingencies alleviate the effect of the catalysts on learning outcomes among participants': prior entrepreneurial exposure, and program-venture fit. Overall, these findings contribute to theory on the processes that facilitate entrepreneurial learning in venture acceleration programs.

### **Implications for research and practice**

We believe our article offers three primary contributions for research. First, we extend theory and research on entrepreneurial learning by developing an inductive, process-focused model that explores how acceleration programs trigger entrepreneurial learning among participants. Past research on entrepreneurial learning has to a large extent adopted individualistic approaches, while paying little attention to the learning situation and how entrepreneurial learning develops in social or relational environments. There is also little research that has addressed entrepreneurial learning in non-formal entrepreneurship education. In this respect, our findings elucidate how processes of experiential learning emerge and unfold in the interface between the entrepreneur and the acceleration context.

Second, our findings add to the emerging area of research that has started to explore venture acceleration programs (e.g., Pauwels et al., 2016; Wright & Drori, 2018). Although the primary unit of analysis in this article is the learning of the individual entrepreneur, our findings recognise the powerful influence of the acceleration context on this learning. Moreover, by making the individual's experience a primary focus in our analysis we are able to identify both affective and conative triggers of learning in the acceleration process. In this respect, the findings offer a deeper understanding of the learning dynamics at play in these settings.

Third, by highlighting the potential role of acceleration programs as entrepreneurial learning environments our findings add to the emerging stream of research on the emergence, dynamics and management of entrepreneurial ecosystems (e.g., Carayannis et al., 2018). The notion of such ecosystems directs attention towards how society can design enterprise-oriented training and networking as to foster and support high-potential entrepreneurship. In this respect, our findings deepen our understanding of how non-formal entrepreneurship education, organised to speed up the venture process for specific cohorts of ventures, may complement and possibly overlap with other efforts and initiatives implemented in enterprise support systems.

In addition, our article offers contribution to practice. First of all, the findings identify affective motivation, constructive feedback, and the perception of a peer atmosphere as catalysts that trigger processes of experiential learning. Accelerator managers can use these theoretical insights to design their acceleration programs as to stimulate and foster conditions that support entrepreneurial learning. Moreover, our findings identify entrepreneurial exposure and program-venture fit as two critical contingencies that alleviate the effect of the catalysts on entrepreneurial learning outcomes. As such, the effectiveness of acceleration programs depends on both the needs of the learner as well as the development stage of the venture.

### **Limitations and future research directions**

Our study has some notable limitations. First, our study was conducted in Sweden, a country with strong support structures for aspiring entrepreneurs and a relatively well-developed entrepreneurial ecosystem. Further research in other geographical settings may thus be necessary to understand the potential effects of the surrounding institutional environment on entrepreneurial learning processes in acceleration programs. Second, we have relied on interviews as our primary source of qualitative data in our analysis. While this has been in line with our intention to stay as close a possible to the lived experience of the informants, we also acknowledge that the data run the risk of being susceptible to social desirability bias (e.g., Duffy et al., 2005). For this reason, we recommend that researchers critically examine our research and findings, and we also encourage conducting similar studies analysing complementary sources of primary data, such as observations and questionnaires.

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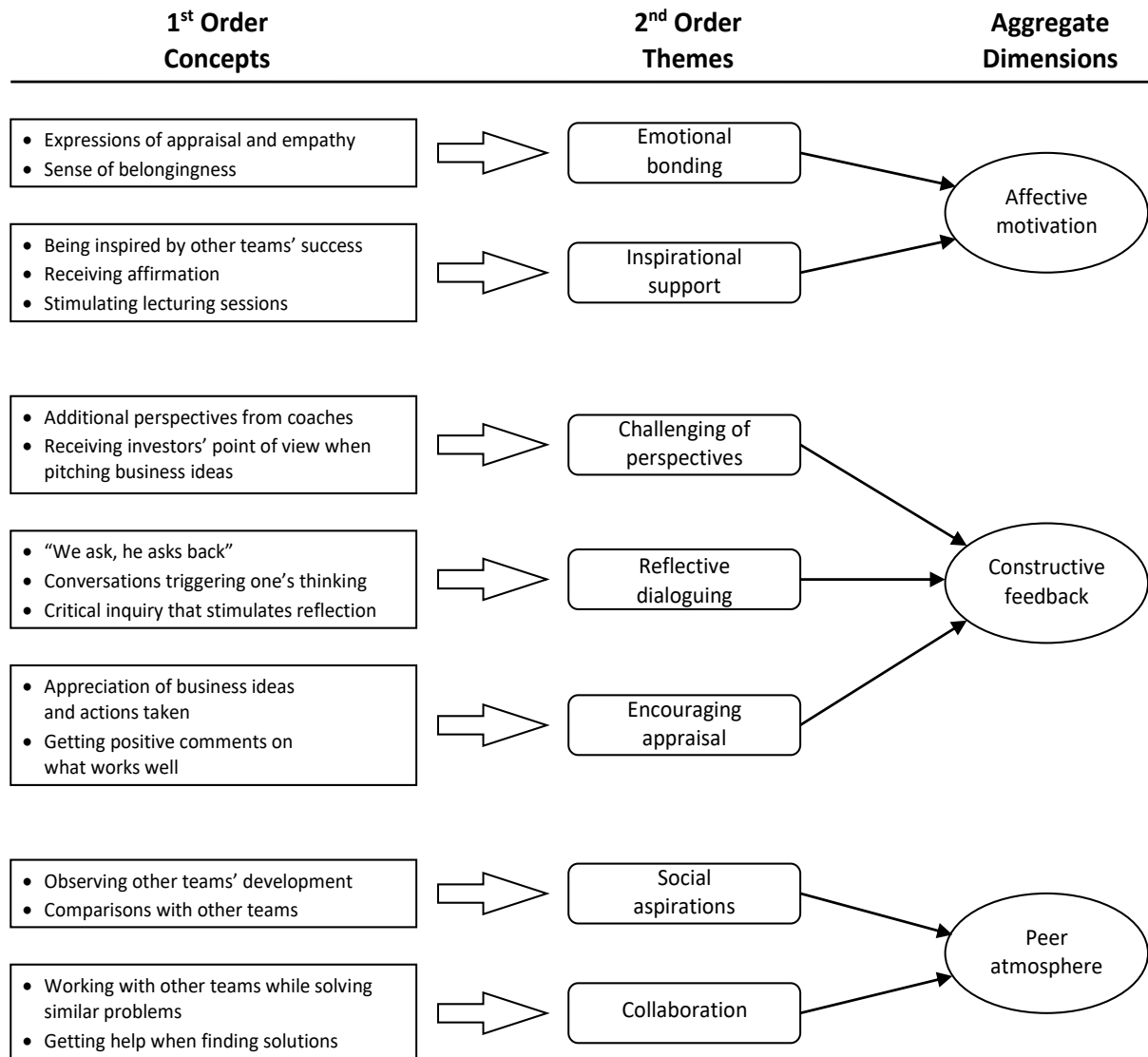
**Table 1: Learning outcomes in venture acceleration programs**

<b>Learning outcomes</b>	<b>Examples</b>
Communicating with critical stakeholders	Establishing external network ties, targeting specific stakeholder groups, using special kinds of vocabulary for attracting attention and building legitimacy.
Configuring the venture project	Segmenting markets, targeting and positioning the product, making financial projections, budgeting, clarifying roles among team members.
Constructing entrepreneurial identity	Developing awareness about own values and beliefs, creating self-confidence, internalising and incorporating socially held behavioural expectations into the self-concept, expanding personal feelings of engagement and support.

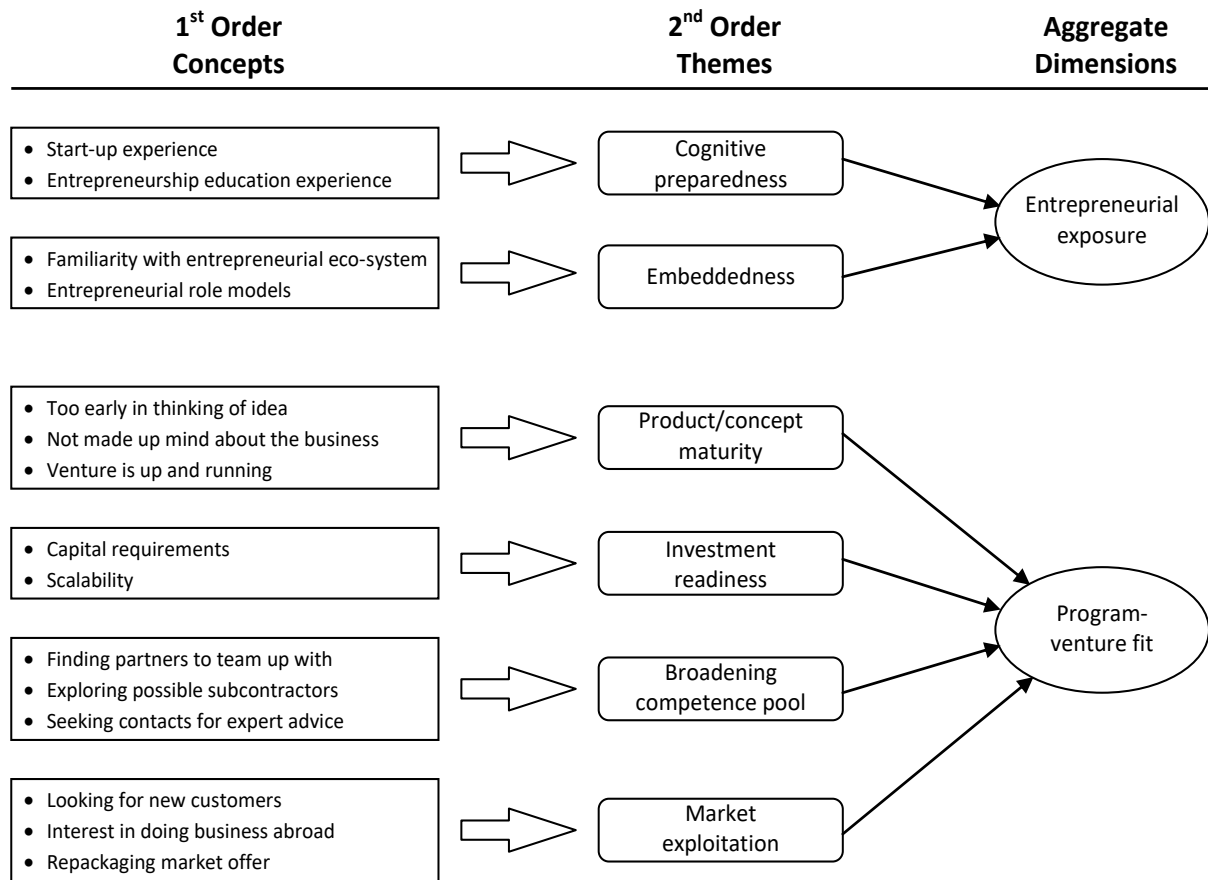
**Table 2: Description of venture projects and lead entrepreneurs**

Venture project	Business type	Industry/ domain focus	Stage of product/ solution development	Team size when joining the program	Start-up experience - lead entrepreneur	Entrepreneurship education - lead entrepreneur	Going concern (2018)
Alpha	B2B/products B2C/products	Robotics and welfare technology	Early/ prototype	1	No	No	Yes
Beta	B2C/products B2B/products	Interior design products	Late/live	6	Yes	No	Yes
Clean	B2C/products	Clothes made of recycled materials	Late/live	1	Yes	No	Yes
Delta	B2C/products	Innovative board games	Late/live	4	Yes	Yes	No
Engage	B2C/products	Garment carriers for active lifestyle users	Intermediate/ beta	2	No	No	Yes
Fashion	B2C/products	High fashion exclusive street outfits	Intermediate/ beta	2	Yes	No	Yes
Gamma	B2B/services	Spectral analysis of satellite data for farmers	Early/idea	2	Yes	No	Yes
Hydra	B2C/products	Transmedia and virtual reality games	Early/idea	1	Yes	No	Yes
Intact	B2B/product B2B/services	Digital products and services	Early/ prototype	2	Yes	No	Yes
Junior	B2C/products	Entertaining products for children	Early/ prototype	1	No	Yes	No/ on hold
Kappa	B2C/services	Travel planning services based on genealogical research	Intermediate/ beta	3	No	Yes	No/ on hold
Lambda	B2B/services	Digital marketing services	Early/ prototype	4	No	No	Yes
Maxi	B2C/products B2B/products	Custom-made audio equipment	Intermediate/ beta	1	No	No	Yes
NetOn	B2C/services	Digital services	Early/ idea	2	No	No	No
Omega	B2C/services	Children clothes renting out services	Late/live	1	n.a.	No	No/ on hold
Pixel	B2B/product	Information technology	Early/idea	1	No	No	No
Quality	B2C/products	Eco-friendly clothes for kids	Early/idea	1	No	Yes	Yes
Road	B2B/services	Neuromeric and biometric methodology for management decision- making	Early/ prototype	2	No	No	Yes
Star	B2C/services	Personal development consultancy	Early/idea	2	No	No	No
Treat	B2C/products	Ecological skincare products	Late/live	3	Yes	No	Yes
Unit	B2B/products	Business services within digitisation and product development	Early/ prototype	2	Yes	No	Yes

**Figure 1: Data structure for catalysts – situations triggering experiential learning processes**



**Figure 2: Data structure for contingencies – critical states facilitating learning outcomes**



**Figure 3: Process model of entrepreneurial learning in venture acceleration programs**

