

Vicarious learning from entrepreneurial failure.

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Introduction

Entrepreneurship education (EE) has become a rising phenomenon across institutes of higher education in various corners of the world. Factors such as its association with economic growth, changes in the labour market, and the increased -sometimes rock star-like- popularity of contemporary entrepreneurs have contributed to the rapid rise in supply and demand of EE. Higher education institutions in the Netherlands have followed the same trend and included programs and minors in their curricula.

Conspicuously, most programs, courses and modules on offer focus on aspects of entrepreneurship related to the fostering of start-up, growth and success. However, adversity and failure are, in fact, more common than success (McGrath 1999, Gabrielsson, Politis 2009). Based on initial studies looking at the negative financial, social, psychological and inter-relational outcomes for both the entrepreneurs and society (Ucbasaran, Shepherd et al. 2013), it is surprising how little attention has been devoted to these topics inside EE. According to Gonul and Litzky (2019), failure can be part of the EE program when we can understand “*students’ motivations traits guiding their behaviour*” and their relation to their goals as entrepreneurs (p93). While adversity and failure may not be completely avoidable, learning how to *prepare for* and *deal with it* is likely to reduce the losses in a psychological, social and economic sense. As a result, the entrepreneur will be able to recover faster to re-embark on their entrepreneurial path (Shepherd 2004).

The lack of attention for entrepreneurial adversity, failure and recovery is likely caused by the positive rhetoric about entrepreneurship in media, in policy reports and in scholarly articles (Gonul, Litzky 2019) which influences educators when designing their courses to focus on the positive side of entrepreneurship while overlooking negative topics. Also, the absence of examples where failure is used in a learning process leaves educators without templates from which to model their own programs. Finally, educators seem to be struggling with the question of how to integrate lessons about failure in a way that does not actually reduce the entrepreneurial intentions of their students. For example, a colleague once commented the following after being invited, along with his students, to one of our sessions: “*my students are well on track with their business plan, talking to them about all the things that could go wrong, may scare them off from actually implementing their plans.*”

Yet, given the occurrence of failure in entrepreneurship, when students do not address it, they develop an incomplete and unrealistic picture of being entrepreneurs. Moreover, it prevents them from developing the necessary skills and tactics to deal with problematic situations and to reduce its associated costs.

Hence, we were encouraged to create a module that empowers students, rather than demotivate or scare them. One of our main concerns was to provide a close and realistic experience for students to learn from failure, but without having them live through entrepreneurial adversity and failure themselves during their courses. For instance, simulation games were considered as well as the use of fictive ventures with short-term goals in a controlled context. At the end, we opted for matching students with entrepreneurs who had (recently) experienced failure to learn from it; thus including vicarious learning in EE.

Vicarious learning is a form of individual learning that occurs through being exposed to and making meaning from another person's experience. As part of a larger project on entrepreneurial failure and recovery, we integrated a plug-in module into an existing experiential based program in which students have to set up their own real venture. Specifically, our module required students to interview a (previously) failed entrepreneur, and apply their reflection in their own prospective venture.

Taking a qualitative approach and based on the students' reflection reports, we sought to establish whether and how they were able to draw lessons learned from the entrepreneur's experiences and whether they translated these lessons into ideas for action in their own future ventures. To determine the influence of being exposed to failure on their own entrepreneurial motivations, we analysed the self-reported changes in their reflection and their intentions to engage in entrepreneurial activities themselves.

The rest of this paper is organized as follows. First, we link the brief review of the literature on entrepreneurial failure and recovery with the teaching practices used in EE. After that, we use the literature on vicarious learning as a framework to recognize the positive and negative sides about teaching students the topic of entrepreneurial failure and recovery. Next, we present a section about the methods of analysis, followed by a section of the results with illustrative quotes from the initial analysis. We conclude this paper with a discussion of these findings, recommendations for teaching and suggestions for further research.

Theoretical background

The discourse about entrepreneurship is heavily biased towards concepts such as start-up, growth and success. Only in recent years scientific studies started to devote more serious attention to the notion of failure in entrepreneurship. Scholars have for instance studies topics such as conceptualizations of failure (Jenkins, McKelvie 2016, Khelil 2016), the causes and consequences of failure (Ucbasaran, Shepherd et al. 2013, Ucbasaran, Westhead et al. 2010), failure attribution and sensemaking (Mandl, Berger et al. 2016, Mantere, Aula et al. 2013), and learning from failure (Yamakawa, Peng et al. 2015, Fang He, Sirén et al. 2017). In the popular literature, a rise in the attention for failure is notable too (Olaison, Sørensen 2014). Overall, the emphasis is placed on the need to find a learning process and how to deal with the psychological, social, and financial consequences of different types of failure in entrepreneurship (Mantere, Aula et al. 2013). Furthermore, these publications generally seem to be biased towards the failure of start-ups with fewer (personal) interests while neglecting what failure in the context of established small and medium-sized businesses where firm and personal failure are often much more intertwined.

A thorough review of the scientific and popular literature is beyond the scope of this paper but it is clear that the findings have yet to find their way to the (scholarly) debate about and practice of EE. In fact a literature search resulted in very few references for the combination of EE and failure with Shepherd's (2004) study on teaching students about grief recovery being one of the few notable exceptions. In his study he stressed the need to invoke emotion and urges educators to try and integrate the topics of failure by inviting guest speakers, reinterpret case studies in terms of failure and introduce role playing and or simulation games. Also, he called upon researchers to create relevant teaching materials and test the impact of implementing corresponding changes to the curriculum. Yet, over a decade later little evidence of progress

can found in the literature. If any, educators are transposing ideas from the popular press, introducing concepts such as “fail often but fail fast”, but providing their students with few tools to cope with it. Pedagogies that fully engage with failure are lacking but still needed to build authentic images and deeper understanding of entrepreneurship as experienced by those who pursue it.

Vicarious learning in entrepreneurial education

One of many types of pedagogies that have been used in EE is vicarious learning (Peterman, Kennedy 2003). Vicarious learning is a social form of learning in which individuals learn from (direct) observation of other people’s behaviour and its consequences for them (Bandura 1977). It enables them to learn from experience without actually having to go through a lengthy experiential process of trial and error themselves. This form of learning not only speeds up learning but also reduces the costs associated with experiential learning. One way in which vicarious learning can be organized is through internships in which students are provided with the opportunity to observe the behaviour of individuals and groups in their professional environment (Chou, Shen et al. 2017). In EE, such internships take the form of working for a start-up or a small and medium sized enterprise, where interactions with the founder / owners manager happen on a daily basis. Although students may be confronted with entrepreneurial failure while conducting an internships, such situations would be accidental rather than planned. Furthermore, based upon our own observations - it usually leads to the pre-emptive termination of the internship or a replacement of the student, either because the entrepreneur cannot or does not want to deal with the student during such circumstance and/or because program management fears the original learning objectives cannot be reached. Consequently, while being valuable for learning about entrepreneurship in general, internships might not offer the best way to teach students about failure and recovery in a structured manner.

Another way to induce vicarious learning is through the use of mentors and coaches. Indeed it is clear that mentors play a major role in shaping the development of novice entrepreneurs (St-Jean, Radu-Lefebvre et al. 2018). In EE, bringing in successful entrepreneurs into the classroom to share their story with student is already in use¹. There are educators in those projects who increasingly urge these entrepreneurs to share the ups and downs, thus touching upon the notion of failure. Besides bringing entrepreneurs into the classroom to tell their story, students can also be encouraged to go out and seek entrepreneurs who are willing to share their story on a more personal one to one basis or in a small group setting. Such setting goes in line with the process of learning from role models which is particularly relevant for nascent entrepreneurs (Fellnhöfer, Puumalainen 2017), such as university students.

A third mechanism to foster vicarious learning is personal storytelling. According to Myers et al. (2012), stories facilitate the development of intrinsic motivation and learner engagement because the story teller “*uses their whole selves, creating graphic descriptions, augmented by their use of nonverbal gestures and paraverbals, such as vocal tone and pitch, to paint mental pictures*” (p2). Storytelling furthermore offers a reciprocal learning experience as the student learns from the experience of the storyteller and conversely the storyteller gains novel insights as a result of the questions and sense making of the active listeners in the audience.

¹ For a detailed explanation of the existing resources being used, the website of the Federal Reserve Bank of Kansas City offers a detailed list: <https://www.kansascityfed.org/education/entrepreneurship>

Methodology

The study is part of a larger research project on failure and recovery conducted at a Dutch Higher Education Institution, in which we involve students from multiple entrepreneurship programs offered at this university. Each of these programs relies extensively on experiential learning pedagogies where students had to set up their own company as part of the package.

In that context, we developed a (plug-in) module on failure and recovery. The use of internships and/or the involvement of mentors with failure experience would be, in our view, very useful tools to enable students to vicariously learn from entrepreneurship about failure. However, due to factors such as time frame and curriculum design, we opted for the storytelling approach in this research. Accordingly, our module included a lecture, a workshop on how to conduct an interview, and an assignment. The assignment consisted in searching an entrepreneur who experienced an episode of failure, where most of the students looked in their own networks. Then, students interviewed that entrepreneur, transcribed the conversation and wrote a reflection report with the identification of the lessons learned as well the concrete steps to be taken in their own future venture. We provided an extensive toolbox in order to support the students performing this assignment, including relevant readings on the topic of entrepreneurial failure, guidelines on how to identify, select and approach a suitable entrepreneur and an interview protocol with structured open questions. Thus far, 291 students have taking part and we expect a similar number of students to participate for each of the remaining 2 years.

The module serves to three purposes: first, the collected stories become data for scientific research about the underlying processes and mechanisms associated with failure and recovery. Second, students reflect on the topic and are provided with tools to prepare for and deal with possible scenarios of failure for their own ventures. Third, the patterns in those stories become lessons for policy makers and professionals working with entrepreneurs in dire straits.

In line with the second purpose, the reflection reports of the students, consisting of between 1200 and 2200 words, provide us with a relevant source of information about their learning processes. Part of that reflection included a paraphrase of the core message that the entrepreneur shared with them, and the other part asked for a description of the steps that would be needed to prevent or learn from an event of failure. Those reports were anonymized to protect the identity of the student, the entrepreneur they interviewed, their networks and their companies; while the original files were archived respecting privacy-related procedures. We, then, drew a random subsample consisting of 81 students (all belonging to the first course in which we introduced the module) while we plan to include all participating students in the near future. The anonymized files were loaded into MAXQDA, where a shared project was created for the researchers to collaborate.

We used an inductive coding process related to three major categories: lessons learned, planned actions and meta-reflection.

- Lessons learned refer to the advice that the entrepreneur has shared with the student about managing company, running into problems and dealing with these; tips include a variety of issues ranging from the importance of seeking help sooner, the creation of financial safety nets and team composition.
- Planned actions referred to the students' translation of these lessons into concrete steps to implement in their own (prospective) venture in order to avoid failure or reduce the

associated costs. Examples of such planned actions included hiring a financial advisor or the intention to set aside a sum of money to deal with drops in demand.

- Meta reflection refers to the constant and continuous process of thinking, analysing, observing and reinterpreting activities and tasks (Mortari 2012, Abdel-Hack, Helwa 2014). Evidence thereof is sought in the comments made by students with respect to changes in their perspective of what entrepreneurship means after the interview; some example ideas refer to the value of networks, being resilient and or the importance of being prepared.

While one of the authors started to code the reflections based on these categories, a second author used a different approach and rated the quality of the reflections offered by the students in these three areas. For that purpose, a scale from 1-5 was used where 1 meant that reflections were absent, and 5 meant the reflections showed a high level of insight. Next, all three authors extensively discussed the results amongst each other leading to some minor changes and additions to the coding frame.

Results

Below we present the results of the analysis of the 81 reflection reports. We divide this section into the three main topics that were analysed, and we use quotes to illustrate the arguments.

Lessons Learned

When it comes to the lessons learned from the stories of the entrepreneurs it is clear that overall students seemed to be able to rephrase the lessons they have received from the entrepreneur. As one of the students indicated:

What I understood from the entrepreneur is that you need to be very alert to many aspects of entrepreneurship. Doing business is a matter of trial and error and you will encounter many setbacks but how you deal with these setbacks is important. You must learn from your mistakes and ensure that you do not make the same mistakes next time. (s1005)

Although the focus of the assignment was on the lessons learned from entrepreneurial failure, it is clear that many entrepreneurs did not only share lessons about failure but also about running a venture in general. It is also interesting to note that tips for daily life aspects were also connected to recovering from big mistakes in matters related to work, family or studies. At the same time, the issues conveyed in these lessons do seem to become more prominent in times of trouble.

From the initial analysis, there are certain topics that are mentioned more often than other. Network aspects play a central role where many others topics are connected, for example the formation of a team, the seek for help and the search of customers. Many of the entrepreneurs shared with the students concerns in the matter of team formation. Specifically, entrepreneurs told the students to pay attention to make explicit agreements regarding team roles and responsibilities and to communicate clearly and constantly with members of this team. As one student wrote in the report:

In case you set up a company with someone, it is important to make good agreements and to communicate well with each other. (s1034)

In fact a number of entrepreneurs have indicated that problems within the team were at the root of the problems and failures they had experienced. That lesson could be used by the curriculum that require students to set up a venture in a team as friendship ties and commonalities typically play in role in the formation of those teams, while complementarity in the available skills is not stressed.

In addition, multiple students indicate that as a result of the interview, they started to realize they need to enlarge their current contacts. They received tips about the importance to actively involve the network and seek its support.

Having a large and good network is very important. You can learn a lot from knowledgeable people within the market where you also want to make yourself known. I already enjoy talking to many people and getting to know many people. Networking is something I can do well. Through the interview with this entrepreneur I will do even more to expand my network, I think this will come in handy later. Especially if I will make contact with several entrepreneurs. I would like to learn from them what potential pitfalls and opportunities are. (s1036)

In another topic, many entrepreneurs shared lessons about financial aspects of starting and running a business. While several entrepreneurs point to the risk of overspending, the lessons do not correspond to earnings and profit related to bankruptcy or debt, but rather focus on the role of investment. Moreover, the financial aspect is also connected with the idea of networks and collaboration. So, to get external investment for their company, the lesson is to find someone who shares the same vision of the venture as is reflected in the quote of student 1020.

It was said often during the interview that you really have to pay attention to investors, who are fitting your company best and who can also offer you more than just financial support. (s1020)

Another lesson that the students picked up is related to work-life balance issues. Entrepreneurs have shared their lessons that spending time with their families is an important aspect. And that spending a lot of time in the venture is positive but, leaving time aside for personal matters provides a balance to grow personally. The quote of student 1044 exemplifies this idea:

To combine entrepreneurship with a family is something that I take with me from the story of the entrepreneur. My respondent indicates that he has "normal" working days which means that he has enough time for his wife and children. I am someone who would like to set up a large company but I also spare some time for personal matters. (s1044)

Finally, many students reflect on the fact that the entrepreneur has told them to be persistent and aim for a venture based on ideas and opportunities in which they can use their passion. Such view of entrepreneurship implies that feelings of attachment with the failure are being encouraged and a potential failure could have a larger personal impact in their life (Ucbasaran, Shepherd et al. 2013). Although this advice does not seem to be directly related to the notion of failure but to entrepreneurial activities in general. A number of reflection reports indicate that the need to do something you like becomes even more important when a venture enters dire straits and resilience and stamina are needed to continue. For instance, s1011 indicated:

He has also shared with me that doing something with passion is important. (s1011)

A quick glance of other lessons learned that we found in the reflection reports are summarized in Table 1.

Table 1 Lessons learned from failure

Seek help sooner	Use the network connections
Look for good contract and agreements	Keep good relation with employees
Value experience and knowledge	Pay attention to market research
Build of a safety net	Work hard
Stay in charge of what happens	Cherish values and honesty

In conclusion of the lessons learned, almost all students were able to draw ideas and rephrase them. Yet, the quality and level of concreteness of these lessons – as reformulated by the students – varied greatly. The average ‘grade’ we attached to the quality of the lessons learned resulted in a 2,72 with a standard deviation of 0,77. Only one student’s lessons learned section was evaluated with a 5 (meaning they showed a deep insight). Further analysis is however needed to draw out patterns to that can explain the differences observed.

Planned actions

Next, we also searched for evidence that the students are able to translate these lessons learned into plans for action related to the companies they are starting either as part of their curriculum assignment or that they plan to start in the future. Some students are able to translate the lessons to the venture they are preparing themselves but at different levels. Here, our analysis showed that most students struggled to translate lessons learned into concrete courses of actions for the short or medium term. Rather, as it is shown in the following quotes, most ‘plans’ are generic and the proposed actions have a loose immediate applicability.

*The way that I will prepare myself for possible setbacks is to always limit my risks.
(s1001)*

*I really should do something that I really like. And that you should not think only about the product, but also from the perspective of the needs of the market, so start a business when there is enough demand for it and not just because it is a good idea.
(s1002)*

Indeed, our ‘grading’ of the action plans resulted in a somewhat lower score of 2,65 for the quality and concreteness of the action plans (stdev = 0,74) with no student having been given an evaluative score of 5. One of the few concrete action to be implemented is actually related to hire an insurance in case of bad time:

From now onwards I will spend a lot of time on the people I know to look for opportunities. I will also cover my risks with insurance policies for myself and my staff. I will also create a financial safety net to support me. (s1003)

The previous quote connects the topic of finding the right people. For instance, the realization that they need to seek help in time when confronted with adversity, others also have ideas on who to turn to and how to approach them.

I can learn from his story that a large network can also be essential. (s1002)

Indeed the results show that many student plan to rely on their networks to solve their potential problems. What is clear from their reflection reports is that in general, these students consider their family and friends as the central actors in their network and that they will be most likely to turn to them. From the reflections, the figure of parents is the most named first-contact in case of need. The father is frequently named as the main contact persons to search for help, while the mother fewer times. The gender bias in the search for support was not expected to be observed at the beginning of the research and it provides clues about the key person in the recovery process.

I would prepare myself for setbacks by asking friends and family for help. (s1004)

I would ask for support to people in my future networks. I would leave family out but have them for mental support. I would ask for help to people from my future network, and especially from the close business relationships. But I prefer to solve everything by myself, without bothering others to deal with it. (s1009)

I would ask people for advice. I can think of my father (experienced entrepreneur), my mother (accountant), the bank, customers (ensuring for customer loyalty) etc. (s1037)

From our analysis, we could furthermore distinguish between two clearly defined groups depending on the concreteness of their own entrepreneurial aspirations: Students who indicate that they are already somewhat serious in their pursuit of entrepreneurial opportunities and those who mention that entrepreneurship is still in their mind but not as a priority at that point in their lives. The former group is more likely to indicate that as a result of the interview they have developed a better sense of how to take concrete steps to bring their ideas forward. Also amongst this group we see evidence of increased reference to plans of action that involve active risk management and creating a safety buffer. As we have not (yet) included their actual business plans in our analysis it is however not possible to establish at this stage whether the planned actions are indeed are materializing into concrete actions. Such a differentiation based on their own entrepreneurial aspirations is not surprising when considering that learning is most profound if students experience higher levels of emotional involvement (Mottet, Beebe 2002).

Other examples of concrete action plans are summarized in Table 2.

Table 2 Examples of action plans

Hire a financial expert	Activate own network
Keep a good bookkeeping system	Do not grow too fast
Think of solutions	Build financial safety net

Meta reflection

In the topic of meta reflections, we tried to establish whether students were able to provide clear idea about behavioural changes that need to happen in their perspective of what entrepreneurship means. The most repeated examples of meta reflection observed in the reflection reports is awareness, thus the acknowledging from students that failure is part of

entrepreneurship and that one can learn from failure. The following students wrote about that realization:

You should know how to behave in certain situations to prevent them happening in the future. The entrepreneur told me that every "starter" should get into his or her flow and find his own way to success. It does not imply a straight line. In fact, in most cases the line is unstable with ups and downs. (s1009)

What I take of this (task) is that every entrepreneur has had to do with setbacks, but to learn from your mistakes and move on is precisely the point. (s1001)

The reflection that student draw are also confirmations of what some students affirm to have already knew. Such confirmation is also part of a learning process to validate the ideas that nascent entrepreneurs have and to validate opinions about the complexity path of entrepreneurship. In the following quote there are certain actions that the student is willing to implement in the future, and after that there is a statement related to the reflection itself.

When looking at the company that I am going to start myself, there are certain aspects where I will focus so that the chance of things going wrong is reduced. When I will start hiring employees, I will be closely involved with them and let them feel what is going on within the company. In that way they will want to work as hard in bad times as I will do in my role of entrepreneur. Further, I could not get any other points from the entrepreneur's story that I did not know yet. It has mostly been a confirmation of ideas that I already had about being an entrepreneur. (s1015)

In a related aspect, other students indicate that their understanding of what it takes to become an entrepreneur has become more realistic and that they now realize that having their own business will also carry along feelings of uncertainty and confusion. Their personal life will be intimately connected with the path of being an entrepreneur, and they realize that more knowledge and experience is needed for them to succeed.

When I think about my future business, I should keep it present that there will be setbacks that have to be dealt with properly. I may want to stop when something bad happens, but I have to learn to keep my head up, keep going and try to improve things. I think that a having a business can be quite hard and it should certainly not be underestimated. (s1027)

I will certainly have to learn things before I think about my own company. If my company fails, I think it is very important that I have tried everything, not just half way. And from the mistakes that you still make, you learn and take them to the new company to succeed (s1104)

You may want to set up a business very much, but it will not make you happy if it is not realistic. In addition, you should get enough knowledge to start a business and also be realistic with that. An advantage of having a company is achieving satisfaction and becoming happy, in my opinion (s1003)

To those students who realize that entrepreneurship requires more hard work and sacrifice than they thought, we identify that resilience and inspiration plays an important incentive to start their own venture.

I have heard from the entrepreneur how things can happen for real. This has provided me with the necessary information to know better and to prevent certain problems. (s1025)

We noticed that, with few exceptions, our students indicate that the meeting with the entrepreneur has not negatively affected their determination to become an entrepreneur. Instead, this activity has helped them to realize what to expect and how to prepare for those scenarios. The combination of previous aspects can be seen in the following quote:

You should think if you can handle the pressure. If things go badly, the bank or nobody will be able to help you and you really have to solve it on your own. A lot of stress can be present. You really need to handle it (s1006)

All in all, we evaluated the meta-reflections of the students included in our sample with an average of 3,01 (stdev 0,86) with 2 students obtaining a 5 for this category. The changes in behaviour are indeed mentioned as one of the goals for the near future, and such changes are still encouraging student to become entrepreneurs.

Discussion for entrepreneurial learning (988w)

Our study aimed to explore to what extent and how we can teach entrepreneurship students about failure and recovery through vicarious learning. Based on our initial analysis of part of our data we initially conclude that students are able to learn lessons and reflect on these in relation to what it takes to be an entrepreneur but that most of them find it difficult to translate this to their own future ventures. This case is also seen in combination with students whose own entrepreneurial aspirations are not yet clear. Most importantly, we showed that addressing this topic does not seem to lead to significant reductions in student's entrepreneurial intentions – a crucial aspects that some educators could be worried about.

With our study we aimed to contribute to the literature on EE in a way that sheds light on the inclusion of the topic of failure and recovery in existing entrepreneurial programs. This topic has remained highly under-studied thus far. In fact, a study by Shepherd (2004) on educating students about emotions and learning from failure seems be the only one focusing specifically on this topic, until very recently. After studying student motivations, Gonul and Litzky (2019) called for supporting students to develop the necessary competencies to manage failure by enhancing their awareness of their own perceptions about success and failure. Likewise Lane, Mallett and Wapshott (2019) indicate that “*accounts of pedagogy engaging with failure in meaningful ways will be most welcome*”(pg 97).

We contribute to the debate about EE approaches in showing the value as well as the limitations of vicarious learning through interviews with entrepreneurs who have experienced failure themselves. Experiential learning approaches have attracted much attention as a desired pedagogy in EE (Pihkala, Ruskovaara 2013, Karimi, Biemans et al. 2016). However, as our findings show, learning from others remains to have its value in education, especially when integrated in a program that is highly experiential in nature. We share the value that a person undergoing his or herself through an (failure) experience has a deeper effect and an emotional imprint, our findings show learning from (failure and recovery) experiences may also contribute to the formulation of ideas and tactics on how to prevent, reduce costs and deal with it. Having

the opportunity to contribute to EE, we provide in this discussion with two aspects that are applicable for teaching strategies, as well as one relevant contribution for theory building in EE.

We begin with aspects related to teaching strategies following the line of Lane et al.'s (2019) with the involvement of students to prepare them for events of adversity and failure. We have included vicarious learning from failure as one of the key activities for students who aim for entrepreneurship. It is clear that taking part in a larger program of experiential learning provides a unique opportunity to develop the module that we described in this article. The experiential learning of talking to entrepreneurs puts student in a close contact with events of failure. We showed that students do not seem to be demotivated, nor do they experience a reduced sense of confidence in relation to starting a venture themselves.

The quotes presented in the previous section illustrate the following two aspect that we identified in this experiential teaching strategies: the pragmatic shift to understand the path to entrepreneurship, and the realistic awareness of potential risks.

The pragmatic shift of students' expectations refers to a better understanding of the complexity involved in any entrepreneurial path. The reflections of the student show that their point of view has changed and now covers a wider picture of entrepreneurship. The face-to-face confrontation with entrepreneurs who have failed has triggered a reaction to expand the horizons of possibilities for the students. With the activity to learn from someone else's experience, pragmatic ideas were identified in their reflections, for example: start something they like, find support in others, or make explicit agreements.

However, having a more down-to-earth approach does not corresponds with developing concrete actions in the immediate future. The realistic awareness of students was found to be superficial and with little application in their immediate plans. The reflection of the students show that they consider that the pragmatic ideas need to be accomplished at some point, though they fail to provide concrete steps in that direction. The plans for the following actions are largely absent, which is also explained by their condition of being nascent or prospective entrepreneurs.

Moving on to the theoretical contribution, EE is gaining when prospective entrepreneurs are trained to deal with failure in order to build towards a faster and learned recovery. Our study show that entrepreneurial behaviour can be shaped to adapt to an uncertain future since nascent stages. It was mentioned in previous studies that there is little known about the ways to encourage behaviour change (Fox, Pittaway et al. 2018). Our study shows that vicarious learning is one of the strategies for an entrepreneur to learn closely from failure without experiencing it him or herself. The reflections show that students are now considering failure as one of the possible outcomes of entrepreneurship. Even more, student consider failure and problems as part of the daily struggle of their own entrepreneurial path, thus being able to draw big lines about what needs to be done though missing concrete following steps.

The completion of the educational ad-hoc module confronted the students with a real life experience of someone else. From the reflections of the students, it can be seen that academic mentors supported in various aspects. Academic mentors fulfilled a vital role in the alignment of entrepreneurial ideas to concrete business steps. Business coaches took a passive role in that experience with guided discussions in class about the topic of entrepreneurial failure, and advise in the search for someone to interview. The openness of teacher to adapt their EE program for

the module of failure and recovery shows a visionary approach to provide practical tools for students.

Further research

This study was based on a preliminary analysis using only a subset of the data collected thus far – with more data coming in. Although already offering some tentative insights into how our method affects student's perceptions towards entrepreneurship and entrepreneurial failure and recovery, there are certain aspects missing. Clearly, including the reflection reports for all students who have participated in our module will offer a full insight into the potential role of study background and program in the outcomes and corresponding usefulness of our approach across domains and curricula.

The immediate follow-up from our research would be to take into account the perspective of teachers and academic models in the topic of failure and recovery. For now, our source of information is the position of students but the capacities, motivations and skills of teachers are not yet taken into account. We are incorporating the initial analysis of the lessons learned in the workshops to be given in the next round, so we propose to increase the abilities and knowledge of educators who take part in the execution of this module. Still, research focused on educators could help us to understand the impact of introducing new modules in the perspective of trainers and coaches.

To complete the picture about the learning effectivity of the vicarious learning, a longitudinal follow up of the business plans and their execution could be carried out. To that end, various sources of data may be matched, including the data embedded in the business plans that students develop, and the grades that students receive for those business plans. One way would be to compare and contrast these to those of students participating in other programs that have not included our plug-in module in their curriculum. Furthermore, we can combine these data with expert reflections of the lecturers and coaches who have been involved in teaching the program for several years. They should after all be able to notice if the plans of the students who have participated in our module devote more explicit attention to preparation for failure (or a Plan B) compared to the generations for students before them.

The context where students, and their entrepreneurial venture are embedded could provide better signs about the applicability of existing tool to prevent failure and/or learn from it. To create and test different tactics and strategies goes hand in hand with the suitability to the challenges of entrepreneurship in that particular context.

To further our understanding of vicariously learning from failure in EE, other studies should also look at the effects of involving other tactics such as the use of mentors with failure experience to tutor student-entrepreneurs in their initial entrepreneurial endeavours. Such studies could not only examine the effect on student's perceptions of failure and recovery but also on these students' actual entrepreneurial plans and activities.

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