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Insights for Entrepreneurship Education from Finnish Startups

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The research focuses on six Finnish startup entrepreneurs who participated in the StartupWorldCup competition in Finland. 62 applicants were selected as finalists to compete in European and World level. The main goal of our study was to understand the views of entrepreneurs regarding the skills and education that future entrepreneurs would need. We also wanted to determine whether networking events are beneficial for startups. Results indicated that important entrepreneurial skills for the future were e.g. people skills, motivation and risk-taking capability. With respect to education, entrepreneurs emphasized e.g. customer-focused projects, hands on experiences and networking techniques.

In Finland there is a high gap between students who are interested of entrepreneurship and those who actually become entrepreneurs. 31% of students said that they are planning to establish a company within five years of graduation. However, the actual percentage of companies are formed by young adults (18-24 years) is only 5.2% (Sieger, Fueglistaller & Zellweger, 2016). It is important to ensure that the right education is provided to support potential entrepreneurs. Our goal was to ask successful, highly growth orientated startup founders their opinion on entrepreneurial skills needed in future, how education should be planned and the value of networking events. Theoretical background is written here below and it is divided into 1) entrepreneurial skills 2) entrepreneurship education and 3) networking.

Entrepreneurial Skills

Relevant studies in the past have focused on entrepreneurial skills. Previous studies indicate that the main predictors of the entrepreneurial intentions in Croatian business students are strength of entrepreneurial identity, aspiration and entrepreneurial self-efficacy (Pfeifer, Šarlija, & Sušac, 2016). Entrepreneurs are generally considered to be "do-ers", people who get on and take action towards their goals instead of those who might be orientated towards detailed planning and collecting more information before acting (Fisher, 2012). Risk taking, handling uncertainty, learning as a team and emotional intelligence are the most

powerful experiences for entrepreneurs stated by Arpiainen (2019). Frank (2007) illustrated the difference between the skills for an entrepreneurs and planners. Calculated risk taking, creativity, communication and negotiating skills and independent decision making are top skills required for entrepreneurs.

Lynch, Kamovich, Andersson, and Steiner (2017) studied linguistic content of interviews of 51 successful high-tech entrepreneurs from Silicon Valley and compared those to a control group of spoken text from average entrepreneurs. Results indicated five themes that come up more often with successful entrepreneurs than non-successful entrepreneurs. The first major theme which seemed apparent to us was the concept of *taking actions* or steps towards achieving desired outcomes. Secondly, they seemed to be more concerned with the *future* than they were with the past when compared to the control group. They had less focus on themselves, and are more likely to use words demonstrating a *collective perspective*. The entrepreneurs seemed to have a very clear focus on their customers and understanding their *customers' needs and requirements*. Entrepreneurs were concerned with their customers' success, not just their own personal success. This might be described as a win-win type mentality. Lastly, study indicated that entrepreneurs are *lifelong learners*, who are curious and who see experiences as an opportunity to learn and improve themselves. The control group was twice as likely to label an experience as failure as the successful entrepreneurs.

Entrepreneurial Education

Entrepreneurship education aims to develop students' mindsets, behaviours, skills and capabilities, which will create entrepreneurs of the future. Several studies have been carried out to gain a deeper understanding of the significance of entrepreneurship education and the essential elements of entrepreneurial learning (Rae, 2010) and the impact of entrepreneurship education on students' entrepreneurial intentions (Fayolle & Gailly, 2015). Entrepreneurship education has some positive overall assessment (Pittaway & Cope, 2007), but in many cases its actual impact on students' entrepreneurial intentions remains unclear (Krueger &

Brazeal, 1994; Souitaris, Zerbatini & Al-Laham, 2007; Walter, Parboteeach, & Walter, 2011) and in some cases it appears to be negative (Oosterbeek, van Praag & Ijsselstein, 2010).

Individual and cultural aspects as well as teaching and learning methods may also have effect on the role of impact of entrepreneurial education on entrepreneurial intentions (Packham et al. 2010; Drost & McGuire 2011; Hytti et al. 2010; Fayolle & Gailly 2015). There are many methods on how learning to be an entrepreneur is best achieved. For example "learning by doing", undergoing experiences in real-life situations, theoretical lessons, visit to specific enterprises, case studies, role-plays, internships, business simulations, action learning, and live projects (Gibb, 2002; Hampden-Turner, 2002; Politis, 2005). Although much of entrepreneurial learning also takes place outside formal education, educational institutions and teachers are important entrepreneurship stimulators (Rae & Carswell, 2001). Studies have addressed the role of teachers and teaching methods methods in entrepreneurship education (e.g. Ruskovaara & Pihkala, 2013; Seikkula-Leino et al., 2010; Hämäläinen et al., 2016). Numerous studies (Peltonen, 2015; Ruskovaara & Pihkala, 2013; Gibb, 2011; Hannon, 2006) indicate that teachers have a significant role in enhancing students' entrepreneurial competences. With their pedagogical choices and actions, teachers can both create and enable learning situations and environments, which challenge students to learn and strengthen their entrepreneurial mindset and orientation or vice versa.

Oksanen (2012) points out that, few students have the will or possibility to practice entrepreneurial action in starting and managing a business, even though it would be very important experience to them. However, institutions offering this experience exist in Finland. These can be found in the entrepreneurial school of Proakatemia at Tampere University of Applied Sciences where the coaches (formally teachers) dare students to study and learn in team enterprises in an inspiring community (Saraketo & Nevalainen, 2017). From Proakatemia 40% of students become as entrepreneurs, a rate that is much higher than the usual 4% for higher education students in Finland.

Studies of Finnish growth oriented entrepreneurs indicated that there were three different categories of how the students should be encouraged for becoming entrepreneur (Brandt, Boedeker & Hautamäki, 2018). According to them, the first dimension consists of concrete knowledge and knowhow, like accounting, selling, strategic knowledge and law. The second category consisted of entrepreneurial way of living, such as discipline, resilience, time and stress management. The third category consisted of concrete ways for education, such as attachment to a company during studies, and simulation exercises.

Networking

The necessity for social networking for the foundation and growth of entrepreneurs has significantly increased nowadays. The concept of network ties has also become into a reality.

According to Elfring and Hulsink (2007) the opportunity identification, resources acquiring and gain legitimacy can be achieved by network ties. Their study also identified three categories where networking plays a vital role. Independent start-ups, spin-offs, incubator-driven companies are the categories that can be also sub-divided by incremental innovation and radical innovation. The network-ties concept showed that social events create strong or weak ties for the entrepreneurs and thus helps them to receive feedback and guidance. Also, interaction between strong ties and weak ties brings a new perspective, new way of thinking and new business models. Initial founding and post entrepreneurial process are also associated with network-ties and thus enhance network evolution, renewal and revolution. Similarly Friar and Eddleston (2007) have found that networking events create a system or chain of information, contacts and support. Networking is an important skill that enhances career and entrepreneurial skills. This research outlined that networking events build more capable relationships with customers, financial support and continuity of the businesses. Additionally, networking events allow entrepreneurs to compare prices, services, taxes and marketing hence these events help entrepreneurs to analyse their effectiveness, performance and help them to make connections for future collaboration with investors.

Sample and methodology

The sample is six Finnish growth-oriented entrepreneurs' who took part in the Startup World Cup 2019 held at Tampere on 06th March 2019. Three questions were selected for the interviews. The questions focused on growth-oriented start-up's views on networking events, future skills for entrepreneurs and entrepreneurial teaching methods at university level. All the questions were semi-structured in nature and the same question was asked in the whole research. Moreover, in semi-structured interviews, there are no yes/no answers rather idea was to get the overall perspective of the interviewees Schulz (2012). All the interviews were conducted in English, and interviews were recorded. 85% of the entrepreneurs were interviewed through face-to-face interviews the event and 15% were interviewed via phone after the competition. All the interviews took approximately 10 minutes each and the method of interview was semi-structured. Table 1 shows the basic information about the start-up in terms of technology field they are working on, time since kick-off and founder

age.

The interviews were transcribed and then read through several times concerning the entrepreneurs' views on networking events, future skills and entrepreneurial teaching methods at university level. All the interviews were then coded and categorised. Connecting and interrelation the interview data comes just after. Lastly, these views were further categorized by their content and analysed accordingly in order to find the explanatory meaning (Schulz, 2012).

Table 1. Sample Characteristics

Code & Field	Start-up age	Country	Interview details (age, sex, time as entrepreneur)
Company A E-Commerce	1 y	Finland	30-35 y, male, 1st time
Company B Forest Technology	1 y	Finland	30-35 y, male& female, 1st time
Company C E-Health	1 y	Finland	30-35 y, male, 1st time
Company D Cloud Service	1 y	Finland& USA	30-35 y, male, serial entrepr.
Company E E-Health	2+ y	Finland	30-35 y, male&, female,1st time
Company F Cloud Technology	3+ y	Finland	30-35 y, male& female,1st time

Results

The following section is delineating interview findings in the following order 1) entrepreneurial skills needed at future 2) best way to teach entrepreneurial mindset 3) importance of networking events.

Entrepreneurial skills for future

All the entrepreneurs find this question difficult to answer because of the merit of the question. We received mixed answers for this particular question. One entrepreneur emphasises that primary skills for future entrepreneur will be knowing own product and find out what you are excellent at. Many said that onboarding the right people and filling the

gaps is very important. Pitch do stuffs (hands-on project work) and ready to take risk (being fearless) comes as another top skills that required for future entrepreneurs. Other skills that were mentioned were qualities such as being visionary, self-driven, self-motivation and influencing others. Some citations describing entrepreneurial skills for the future:
"End your uncertainty"
"Recognize your technology and what you are good at"
"Influence other people to get excited as well"
"Mental agility, grit (sisu), understanding of AI (artificial intelligence), sales and marketing skills, people skills"

The Finnish word "*SISU*" (a bit like grit) stands for a cultural construct. It is an extreme psychological strength that comes where grit and perseverance end. It is like an extra gear (Breyer, 2019). Maybe this is cultural thing and emphasized overall in Finland, because earlier studies of entrepreneurial qualities do not emphasize persistence or grit as an important entrepreneurial quality.. Hands-on, visionary, self-driven and risk-taking are in line of earlier studies (Arpiainen, 2019; Duening, 2010; Frank, 2007). People skills (communication, negotiating skills) have been emphasized also by Frank (2007) and hands on project work by Fisher (2012) and Lynch et al (2017).

Interestingly, when we asked about the skills of future entrepreneurs, the answers were focusing more on the characteristics than learnable qualities (like languages, maths, accounting, marketing etc). Maybe the question was something that would have needed more time to think about, or we could have asked further questions that would be more related to skills. It was interesting that entrepreneurs first thought about the qualities that maybe are needed most in their everyday life startup founders. These were qualities like knowing your strengths, mental agility, risk-taking, self-driven, self-motivation. Secondly, the answers indicated strong interaction and people skills ("onboarding the right people, influencing others and people skills"). Skills that were more concrete and learnable were sales and marketing skills which are strongly related to people skills.

Teaching entrepreneurial mindset

We received a mixed reaction from the entrepreneurs when we asked this question of how to teach entrepreneurial mindset at higher education. Most of the entrepreneurs find it difficult to answers in one line or few sentences. Main idea we gathered from the above-mentioned entrepreneurs are given below sequentially:
- Promoting entrepreneurship as a career path
- More customer projects work i.e. hands on experiences along with theoretical and practical lessons.
- Sharing ideas with people and learn networking techniques

- Camping, training and participation in a real team for a while enhance entrepreneurial mindset where couch or teacher will be a team member.
- Also introducing cutting edge concepts and its applications will help to develop entrepreneurial mindset at university. Lastly, entrepreneur B has advised to use Proakatemia* based education system can help universities to build entrepreneurial students. (*The term Proakatemia here describes one of the Finnish education system at Tampere University of Applied Sciences of where students usually teamed up for entrepreneurial studies. They receive training by a coach and form a small co-operative company. The idea is to do business by making tangible product or service for real-life customers.)

Some citations describing teaching entrepreneurial mindset at the university:

"Courses, hands-on workshops, meeting with startups (especially the new and small)"
"Promoting entrepreneurship is a career path"
"Participation in a real team for a while"

Our research findings are aligned with Pihie and Sani's (2009) findings. Their top three technique considered by students are given as follows, (a) running a real business (b) visiting to a business places and (c) conversation or interviewing entrepreneurs (Pihie and Sani, 2009). These three key learning techniques help students to get prepared and motivate them to start their own business. Collins (2003) also suggested that entrepreneurial study can learn from one another, also entrepreneurship can be learnt by doing stuffs, learnt by discovery or mistake or solving a problem. In addition to that students needs to make self-analysis and own competences to understand readiness, is also falls under entrepreneurship study. According to Dale's (1969) the most effective way of learning is doing "hands-on". The hands-on working principle is also coming out from our findings. Lastly Gibb (2002) illustrated that students need to know their own goals and task; they should take ownership of their learning and thus will develop the entrepreneurial mindsets at universities. Gibb (2002) illustration is also in-line with this research.

Importance of networking events

Most of the startup owners agreed that networking events such as start-up competition, pitching events, matchmaking, coaching, etc are a good addition to the entrepreneur's life and these events help entrepreneurs to meet people or stakeholders in ecosystem. Importance of the events also depends upon the stage of company. For example, for early stage startup these events bring light on them and give signals to others that they exist in the market, whereas more mature companies these events are not so important. In addition to gaining visibility, startups also get to know like-minded industries. Few entrepreneurs agreed that from networking events they can meet investors and get more contacts. The only drawback shared by one entrepreneur is that as these pitching events are time limited so they cannot actually get real feedback and thus experience was that they could not improve anything. Here are examples of remarks describing the importance of networking events:

"Networking events are nice addition"
"Yes, it is important because meeting the investors and different stakeholders"
"Pitching competitions are also a good way to market your solution to investors and the startup community"

Our research findings are very much in line with previous studies (Elfring & Hulsink, 2007; Friar & Eddleston, 2007) that networking events help entrepreneurs to create social capital and transparency as well as help them to achieve access to other elements and informations associated with entrepreneurs.

Conclusions

This study focused on entrepreneurs' views of skills and education that would be needed in future. Also the interest was to find the importance of networking events. Interestingly, results stressed characteristics more than skills, future education should be hands-on doing and networking is good way to show yourself and meet the investors. The entrepreneurs emphasized the importance of hard skills as well as soft skills by the entrepreneurs. The importance of people skills was mentioned in the many aspects. For example, people skills were mentioned as important skill of future entrepreneurs, universities should teach networking skills and networking events will create possibility to meet investors.

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