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Mapping Entrepreneurship Education: Can we put together the pieces of the puzzle?

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Abstract

1. Questions we care about
At every 3E conference we discuss: What is entrepreneurship? And derived from this: What is entrepreneurship education? Depth and intensity of these frequently emerging questions seem to underline their importance to the field. Even though the intention of the 3E-Community is to pose substantial questions of relevance, we assume that a map that is able to structure and order these questions might be fruitful for further discussions. Thus our purpose is to develop a consensus driven framework of entrepreneurship education. Questions we care about:
   • What do we talk about, when we talk about entrepreneurship education?
   • In entrepreneurship education, who is doing what to whom and why?

2. Approach
At a certain point evolution of scientific fields naturally includes, taking stock, looking back and forward. This was done for the field of entrepreneurship research several times (e.g. Low & McMillan, 1988; Shane & Venkatamaman, 2000; Gartner, 2007; Aldrich, 2012). For entrepreneurship education as issue of research, this was done at conferences (Blenker et al., 2014; Hägg & Gabrielson, 2014) as well as in the written debate (Pittaway & Cope, 2007). Looking deeper behind these results, we can find of course definitions of entrepreneurship education - e.g. entrepreneurship education as „all activities aiming to foster entrepreneurial mindsets, attitudes and skills “ (Fayolle, 2009, S.3). But within the field two perspectives are missed: First - reviews of the genesis of entrepreneurship education as issue of research seem to be decoupled. If research is – and this is suggested by action research as “participatory, democratic process … [that] seeks to bring together action and reflection, … in participation with others …” (Reason & Bradbury, 2001: 1), this could be a perspective to structure our questions in constructive collaborative way. Second - definitions of entrepreneurship education as issue of research reduce perspectives and show mostly the single perspective of one or maybe few researchers.
Inspired by action research (Brydon-Miller et al., 2003), we intent to open up a new way of mapping the field of entrepreneurship education, in close contact with the researching and practicing community. Inspired by Gartner’s 2007 article, we are now calling for all the “Blind Men” of entrepreneurship education to describe their piece of the puzzle, enabling us to make a contemporary map of the field. Since Gartner believes “that the development of theory involves the creation of a
community of scholars in dialogue about a specific set of problems and issues, and who hold similar beliefs about the relevance of certain methods for solving these problems” (ibid: 34), we believe, that the entrepreneurship education research and practice community is now at the stage where this dialogue can be opened up in a structured way, to map and frame the future of the field as a community. To do so, we conceptualized our empirical research as an open and collaborative process with the 3E community, a Delphy study (Green, 2014) with at least three rounds:

The first round of data is analysed and results of this will be send back to the community for for a deeper exploration. According to our plan, the map of the field of entrepreneurship education can be presented at the 3E conference with the purpose of getting a third round of feedback which will qualify the study further. To do so, we plan to continue the collaborative work at the conference by embedding entrepreneurial perspectives of design thinking and creative techniques on-site in the research process.

3. Results

Our results will be the impressions of this collaborative process and the specific results of the intermediate stages. The first round is finished. Data is collected through a questionnaire sent to the 3E research community in summer 2016 (N=249). A total of 39 respondents completed the questionnaire. The respondents were educators and researchers from 13 different countries, with a total of 306 years of experience in research and 408 years of experience in educating within the field. We are currently able to reflect on following key questions: (A) What does the map of definitions in entrepreneurship education look like? Our map includes a variety of dimensions regarding educator, educated, process of education, effect, purpose and context. (B) What are our main topics in practice and issues in research? Our map includes a variety of topics in practice e.g. personal development, mind-set, creativity, opportunities, innovation, as well as issues in research e.g. assessment, old vs. new school, who and how of entrepreneurship education. (c) Which theories influence our practice and research in entrepreneurship education? Our map shows a spectrum from effectuation, constructivism, positive psychology, game based learning to social identity theory and organizational emergence. In the following steps, our mapping of entrepreneurship education will be reflected with those participants that allowed us to do so (Round 2). Finally, we aim to put together all pieces of the puzzle at 3E conference (Round 3).

4. Implications

With our paper, we wish not to reduce our debate in a common sense, but to paint a picture of what all of us might assume as entrepreneurship education. We aim to give educators and researchers within the field of entrepreneurship education a method to position education designs and research. With a map of the field it will become easier to decipher and understand upon which preconceptions education designs and research are based and with this knowledge a constructive dialog can emanate.

5. Value/Originality

This paper seeks to end the discussions of what entrepreneurship is and what the purpose of entrepreneurship education is by acknowledging the different positions of the field. By ending the internal bickering we can unite despite our differences and focus on moving the field forward from whatever position one may stand.
Introduction

At every 3E conference we discuss: *What is entrepreneurship?* And derived from this: *What is entrepreneurship education?* Depth and intensity of these frequently emerging questions seem to underlie their importance to the field. Even though the intention of the 3E-Community is to pose substantial questions of relevance, we assume that a map that is able to structure and order these questions might be fruitful for further discussions. Thus our purpose is to develop a consensus driven framework of entrepreneurship education. Questions we care about:

- What do we talk about, when we talk about entrepreneurship education?
- In entrepreneurship education, who is doing what to whom and why?

Connection to literature and scientific debate

At a certain point evolution of scientific fields naturally includes, taking stock, looking back and forward. This was done for the field of entrepreneurship research several times (e.g. Low & McMillan, 1988; Shane & Venkatamaran, 2000; Gartner, 2007; Aldrich, 2012). For entrepreneurship education as issue of research, this was done at conferences (Blenker et al., 2014; Hägg & Gabrielson, 2014) as well as in the written debate (Pittaway & Cope, 2007). Looking deeper behind these results, we can find of course definitions of entrepreneurship education - e.g. entrepreneurship education as „all activities aiming to foster entrepreneurial mindsets, attitudes and skills …“ (Fayolle, 2009, S.3). But within the field two perspectives are missed: First - reviews of the genesis of entrepreneurship education as issue of research seem to be decoupled. If research is – and this is suggested by action research as „participatory, democratic process … [that] seeks to bring together action and reflection, … in participation with others …“ (Reason & Bradbury, 2001: 1), this could be a perspective to structure our questions in constructive collaborative way. Second - definitions of entrepreneurship education as issue of research reduce perspectives and show mostly the single perspective of one or maybe few researchers.

The most usual way to explore the status quo of a specific research community, main issues and theories, is an exhaustive literature review. The underlying assumption is, that written and published research is the one and only currency of science. On the contrary, the European entrepreneurship education community distinguished itself by its outstanding conferences, that pose questions (instead of publish results) to encourage and enrich the scientific debate amongst the community. At every 3E conference, participants are not reduced on the roles of “presenter” and “listener”, but truly “participants” that act and engage in a vivid and inspiring way. A brief look to the philosophy of science literature shows as well, that this oral and discussing form of communication is part of the scientific debate in a community. To give the example of the constructivist perspective, Luhmann (1990) assumed science as a social system. In this assumption, science is processed by communication. And this communication has not to be reduced to publication. A community processes scientific communication in journals, conferences, chairs, doctoral programs and so on (Luhmann, 1990). Keeping in mind, that scientific debates can be pushed and formed as well in dialogue, personal communication and connection, we decided not to do research on the above posed questions in a common way, but assuming all people of the entrepreneurship education community as creative directors and experts, that are able to carve out in a scientific communication with us, how we define entrepreneurship education.
Method

Inspired by action research (Brydon-Miller et al., 2003), we intent to open up a new way of mapping the field of entrepreneurship education, in close contact with the researching and practicing community. Inspired by Gartner’s 2007 article, we are now calling for all the “Blind Men” of entrepreneurship education to describe their piece of the puzzle, enabling us to make a contemporary map of the field. Since Gartner believes “that the development of theory involves the creation of a community of scholars in dialogue about a specific set of problems and issues, and who hold similar beliefs about the relevance of certain methods for solving these problems” (ibid: 34), we believe, that the entrepreneurship education research and practice community is now at the stage where this dialogue can be opened up in a structured way, to map and frame the future of the field as a community. To do so, we conceptualized our empirical research as an open and collaborative process with the 3E community, a Delphy study (Green, 2014) with at three rounds of data collection:

Figur 1: Research outline

| 1 | • 1st Survey  
• The purpose of the survey is to collect data on:  
• Definition and purpose of EE, topics in practice, research issues and theory used in research and practice |
| 2 | • Data analysis  
• Mapping of the results |
| 3 | • 2nd Survey  
• Respondents comment on the findings from the first survey |
| 4 | • 2nd Data analysis  
• Expand and adjust the mapping of results |
| 5 | • 3E Conference in Cork  
• Presentation of results and collection of additional feedback |
| 6 | • Final data analysis and data presentation |

The first round of data is collected and analyzed. The result is presented in the next section of this paper and it is send back to the community for a deeper exploration. According to our plan, the map of
the field of entrepreneurship education can be presented at the 3E conference with the purpose of getting a third round of feedback which will qualify the study further. To do so, we plan to continue the collaborative work at the conference by embedding entrepreneurial perspectives of design thinking and creative techniques on-site in the research process.

**Findings**

The first round of data collection and data analysis is finished. Data was collected through an online questionnaire sent to the 3E research community in summer 2016. The total number of respondents (N) were 249. It was an extensive questionnaire and 39 respondents (n) completed the questionnaire. The respondents were educators and researchers from 13 different countries, predominantly from Western Europe.

*Tabel 1: Country of origin and country of practice*

<table>
<thead>
<tr>
<th>Country</th>
<th>US</th>
<th>NL</th>
<th>SWE</th>
<th>DK</th>
<th>NOR</th>
<th>GER</th>
<th>SCOT</th>
<th>CAN</th>
<th>LAT</th>
<th>FIN</th>
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<td>2</td>
<td>2</td>
<td>2</td>
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<td>1</td>
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<td>1</td>
<td>1</td>
<td>0,5*</td>
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<td>Practice</td>
<td>6</td>
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<td>2</td>
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<td>4,5**</td>
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</tbody>
</table>
*Both from Germany and Ireland  
** Practice both in Germany and Canada

It is an experienced group of respondents, with a total of 306 years of experience in research and 408 years of experience in educating within the field. The survey included questions according to three main questions:
- How do we define entrepreneurship education?
- How do we practice entrepreneurship education and which topics and theories are important?
- How do we research entrepreneurship education and which topics and theories are important?

In the next section the results of the data analysis are presented in a number of charts and word clouds.

*How do we define entrepreneurship education?*

In a first step, we tried to bring the definitions of entrepreneurship education given by respondents into a structure. By doing so, our first result is a suggestion of six questions that are able to provide a framework for every given definition of entrepreneurship education.

1: Who is the educator?  
2: What does the educator do?  
3: What is the process of EE about?  
4: Who is taking part in EE?  
5: What is the purpose of EE?  
6: In which context is EE practiced?

In connection with this deduced structure, the answers given were analyzed. The results structured by these questions are presented in word clouds, the larger the word is the more frequent it is used in the
respondents answers. To us it was only rarely relevant, how often a term was mentioned. Our focus was the variety and broadness of assumptions within this context.

1: Who is the educator?

In defining entrepreneurship education, many respondents addressed who the educator is. The results shows that educators in entrepreneurship education have many capacities, from classical teachers to facilitators, supporters and coaches. The educators’ multiple capacities of cause translates into a broad spectrum of what educators do.

2: What does the educator do?

In the definitions, the actions of the educator is also multifaceted. The educators’ actions range from dosing knowledge through teaching to supporting and empowering students. Looking at how this translates into a learning process the following was discovered from our data.
3: What is the process of EE about?

When we look at the process of entrepreneurship education, the sample space is again broad. Concepts like creativity, value creation and design is mentioned alongside with didactic methods such as process reflection, action orientation and experimental. The process is stimulating entrepreneurship and the classic about, for and through entrepreneurship is also include in the respondents descriptions. Next we are looking at the actors.

4: Who is taking part in EE?
It is very clear that the main focus, when it comes to participants, that the main focus was on students, either as individuals or in groups. But EE is not only restricted to a teacher-Learner relation, entrepreneurs are also described in the process. Next we focus on the purpose of the process.

5: What is the purpose of EE?

When looking at the purpose a variety of knowledge, skills and competences were mentioned. Lastly in relation to the definition of entrepreneurship education a number of contexts were described.

6: In which context is EE practiced?

Subjects, institution and local community was mentioned as context parameters and a focus on entreprise as context were introduced.

The answers given to the simple question “How can entrepreneurship education be defined?” were of an impressive spectrum, as the illustrations above might show. Since this research is a research in progress, we do not want to interpret too much at this stage, but give a first impression of results and invite all participants to discuss the results with us.
In practicing entrepreneurship education, which topics and theories are important?

In relation to the practice of EE, the respondents were asked to list the three key topics they work with during their courses. The results are illustrated in the figure below.

**Figur 2: Frequency of mentioned topics in EE practice**

![Word cloud showing frequency of mentioned topics in EE practice](image)

Given the wide spread of responses and the fact that a number of topics are only mentioned once, suggest that the syllabus in EE is far from standardized. But it is also important to remember that participants were only asked to select 3 topics not make an exhaustive list.

When exploring theory, tools and methods used in practice the following word cloud was developed.
Figur 3: Theory, tools and methods in practice

Predominant are various methods used such as Lean Startup and business model you. But pedagogy and didactics are also in focus.
In entrepreneurship education research which issues and theories are important?

Turning the attention towards research, a picture much like the topics of practice is painted. Many issues in theory are only mentioned once. But again respondents were only asked to mention three.

Figur 4: Issues in EE theory
Leading to a similar conclusion. Given the wide spread of responses and the fact that a number of issues are only mentioned once, suggest that the research agenda on EE is broad spectra.

Finally, we asked for the theoretical foundation of EE research. Which theories are mostly important for our research? The answers the respondents gave us, contributed to the following image.

**Figur 5: Theory and approaches used in research**

The theories that were mentioned to affect our research in entrepreneurship education show a variety of approaches and levels of abstraction. While effectuation (Sarasvathy, 2008) seems to be currently the most present approach in researching entrepreneurship education, the variety of theories shows a span from traditional assumptions (resource based view, decision making, theory of planned behaviour) to theories from the pedagogical context (constructivist learning, cognition theories), modern European social theory (process thinking) or assumptions from philosophy of science (constructivism). Noticeable is that some new approaches from other disciplines (e.g. positive psychology, digital game based learning) were mentioned.
How do theories in research and practice match together?

Finally in comparing the used theorists in research and practice the results showed that some theorists are used in both research and practice and some were only used in one of the fields.

Table 2: Theorists used in practice and research

<table>
<thead>
<tr>
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<th>Used in Research</th>
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Based on the data collected the following key questions were formulated: (A) What does the map of definitions in entrepreneurship education look like? Our map includes a variety of dimensions regarding educator, educated, process of education, purpose and context. (B) What are our main topics in practice and issues in research? Our map includes a variety of topics in practice e.g. personal development, mind-set, creativity, opportunities, innovation, as well as issues in research e.g. assessment, old vs. new school, who and how of entrepreneurship education. (C) Which theories influence our practice and research in entrepreneurship education? Our map shows a spectrum from effectuation, constructivism, positive psychology, game based learning to social identity theory and organizational emergence.
Discussion and implications

We still have not put the pieces of the puzzle all together, but we now have a better understanding of what pieces we are working with and starting to see some structures. So the process continues. In March 2017 we started our second round with those researchers that expressed their support in the first round. Again, we set up an online survey, with the aim to reflect and discuss with other members of the community the results of the first round. The questionnaire included three parts: Reflections on how we define entrepreneurship education, entrepreneurship education in practice and entrepreneurship education in research. In focus were the general reflections of the results by other researchers, missed issues and ideas how to order the results. To support a vivid discussion, we included the visualizations you can see in this paper.

At 3E conference in Cork we plan to present the results of the second round and we would like to conclude this research by a third round with participants of the conference.
References


Low & McMillan, 1988

