



Bringing Research Knowledge
to Exploitation: A T-Shape Itinerary
Approach

Enhancing innovation and entrepreneurship skills: evaluation of a doctoral training program

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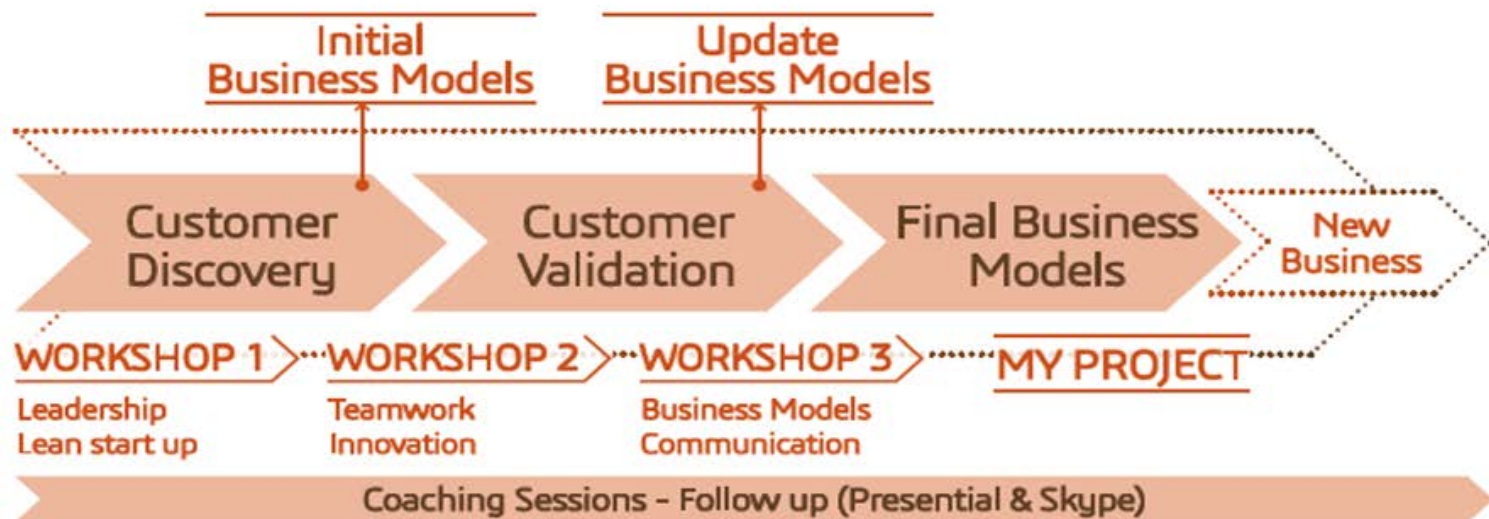


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- The study presents the outcomes of a doctoral training program that had two objectives:
 - 1) To enhance innovation and entrepreneurship skills, and
 - 2) Self-development of the participants.
- **T-Dore (T-shaped Doctors in Residence) project**
 - Conduced during 2016-2017 in Finland and in Spain.
 - Project partners: Lappeenranta University of Technology, Mondragon Group, Tecnalia, Outotec and VTT Technical Research Centre of Finland.
 - 11 participants from research organizations, university and industry.

- Objective of the study is to evaluate the impact of the doctoral training program.
- The research questions are:
 - How the students evaluate the impact of the program on their innovation and entrepreneurial skills?
 - Did the program have concrete impact on the career paths of the students?

The program consisted of three learning cycles: customer discovery, customer validation and final business models:



- The evaluation framework consists of the evaluation levels from 0 to 4:



- Kirkpatrick's four level evaluation framework (Kirkpatrick & Kirkpatrick, 2006) is modified by adding an additional level of participants' initial expectations (level 0).

- Case study based on multiple data sources:

Evaluation level	Research data
0. Expectations: backgrounds, motivation and future aims of the participants	Learning contracts (9/11) Interviews (11/11)
1. Reaction: Trainees immediate reactions	Case study report Interviews
2. Learning: Learning outcomes	Interviews Delayed feedback (5/11)
3. Behavior: Changes in working methods	Interviews Delayed feedback
4. Results: Long-term impact of the training on the participants	Interviews Delayed feedback

0. Expectations:

- Initially the participants' major concern was how to communicate with the customer.
- Evaluation evidenced that the need for improving one's communication and networking skills is tightly mingled with the need to gain a business-oriented mindset and practical tools for innovation processes.

To learn how to transform the knowledge I acquire in the PhD research into value and get a more business orientated way of thinking.

1. Reactions:

- High overall satisfaction with the training.
- Mentoring received by each participant differed hugely.

I learned something new which I can utilize in my work. ... And it [the training] surpassed positively all expectations.

I never thought that it is so hard to start business and find customers, and need some more time

2. Learning:

- Participants improved their business skills, gained useful tools for dealing with business cases, and understood better the customer.
- Tools for developing self-awareness divided the opinions.

I have improved my presentation skills and my communication with companies. I have improved my skills to analyze my hypothesis and how to formulate my solution (value proposition) depending on the customer.

3. Behavior:

- Many skills and competencies learned in the training turned out to be useful in daily work.
- The mindset had widened/changed.

The business model canvas and value proposition I have been using daily in my work and daily business.

4. Results:

- Most of the participants are already applying their new business and communication skills in their work on daily basis.
- Training helped many participants to clear their mind about their future career paths.

The program has not changed anything, but it has given me more ideas that I have not been thinking before. Actually, the program has opened my mind. I am planning to continue working half and half; both academic and business context.

I have noticed that research career is for me. I couldn't be a salesperson. ... But now it is easier to go beyond my research role and meet the customers. ... 11

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- The mindset change results as the major impact of the training program.
 - The initial expectations of the participants were not associated with developing of innovation and entrepreneurial skills, but more or less with developing one's own work.
 - This type of training program is more likely to lead into incremental change on attitudes, rather than being a trigger for starting up a business.



More info <https://breakitproject.eu/>