

TAMK STUDENTS AS ORACLES – INTRODUCTION OF THE DELPHI METHOD IN THE ENTREPRENEURSHIP RESEARCH

TAMK students as oracles – introduction of the delphi method in the entrepreneurship research

This article introduces an application of the Delphi method in the use of organizational strategy design. It describes the traditional Delphi method and some contemporary modifications which also incorporate features from the wisdom of crowds, and gives an example of the use of Delphi in a business development research. The study described in this paper was conducted for Ensimetri, a counselling organization for new and nascent entrepreneurs.

AUTHOR: TUULA ANDERSSON

The wellbeing of a society depends highly on the birth of new, innovative enterprises as well as the viability of them. Especially the young should be given adequate knowledge about entrepreneurship in order to make it an attractive career alternative. It is also important to be aware of their attitudes towards entrepreneurship and their needs and wants concerning education and counselling (Galloway, Kapasi & Whittam 2015; Zhang, Wang & Owen 2015).

Researching entrepreneurial intention, characteristics of entrepreneurs and factors promoting and hindering entrepreneurship have long been among the central themes of entrepreneurship research (Singer, Amorós & Moska 2014). According to McDonald et al. (2015) majority of entrepreneurship research has been conducted using quantitative surveys and statistical analysis. However, qualitative methods would better provide the depth and richness required of studying any human condition or experience (Gartner & Birley 2002) also advancing knowledge e.g. on the information needs of entrepreneurs. This article introduces the Delphi method using a business case as an example.

In TAMK entrepreneurship is one of the strategic focus areas. Last year a group of TAMK students participated in a research of entrepreneurship counselling and education needs. The research was commissioned by Ensimetri, the entrepreneurship counselling organization operating in Pirkanmaa, and executed by an independent research company Shop'In Research Ltd, where the author acts as partner.

The Delphi Method

Delphi Method was originally developed already in the 50's in RAND Corporation by Olaf Helmer and Norman C. Dalkey to forecast the impact of technology on warfare (Helmer 1968, 1983; Dalkey 1969). Traditionally, the technique aimed at achieving consensus of opinions on a specific issue. The core idea of Delphi is to recruit a small panel of experts who individually and anonymously reply to questions within their domain of expertise.

In traditional Delphi researches the amount of participants has usually been small, from ten to twenty (Okoli & Pawlovski, 2003).

The criteria for participant selection depends on the topic. The more ambiguous or specific the topic the deeper is the needed expertise. On the other hand, say, in consumer research, one could argue that every consumer is an expert of his or her own life.

Delphi problems usually relate to important questions where an unequivocal right answer cannot be found (Okoli & Pawlovski 2004). Delphi method is also applied in situations where values, new views and ideas are needed for the basis of decision making (Linturi 2007). Today Delphi and its modifications are used for various purposes, for instance generating ideas for a product- and service innovation.

Delphi research consists of multiple iterations – or rounds – in order to achieve consensus of opinions. The amount of rounds is usually 2–3, but more iterations can be included depending on the aim for the level of consensus. Usually the first round is a survey with open ended questions to collect ideas, opinions or ‘soliciting specific information about a content area from the Delphi subjects’ (Custer, Scarella & Stewart, 1999 cited by Hsu and Sanford 2007). After the first round the researcher(s) analyze the obtained data and convert it into a structured questionnaire for evaluation on the second round. The panelists are asked, for instance, to rank-order the items by importance or interest. They are also asked to reason their rankings.

Many recent Delphi projects have also borrowed features of the wisdom of crowds, intelligence of large and diverse groups of people with different areas of expertise. The wisdom of crowds defined by James Surowiecki (2005) claims that

under the right circumstances, groups are remarkably intelligent, and are often smarter than the smartest people in them.

The required conditions for the crowd wisdom are diversity, independence and particular kind of decentralization. In that sense wisdom of crowds is also Delphi compatible.

However, most of the users of Delphi technique no longer strive for consensus but embrace a diversity of exceptional but reasoned viewpoints. The emphasis can be on the different points of view that emerge from the communication among the participants (Needham 1990; Yousuf 2007).

Osmo Kuusi, who in his doctoral thesis developed ‘The Argument Delphi’. Kuusi (2012) emphasizes a qualitative and argumentative Delphi process, where consensus is secondary to the diversity of reasoned opinions about the possible future development paths. Kuusi’s method has a solid status in Finland, especially in the societal decision making. The Committee of the Future of the Finnish Parliament has used Delphi as a tool for scanning the future signs in several occasions. (Linturi 2007.)

Ensimetri project

Ensimetri is a counselling organization for new and nascent entrepreneurs, located in Tampere, Finland. In 2013 Ensimetri celebrated its 20th operational year and initiated a strategy development process for their future services. Despite the good operational results a need for strategy revision or a totally new strategy was recognized. It was decided that the main stakeholders would be engaged in the process.

A Delphi based research was executed including the main stakeholder groups Ensimetri staff, voluntary counsellors, former customers (current entrepreneurs) and university students as respondents. The main research question was: What should the counselling services for startup entrepreneurs be like for the next 20 years from now? Should the counselling, for instance, move from the offices to the social media networks?

Separate panels were built up for four stakeholder groups. The student panel, which is used here as an example, was executed in March-May 2014. This part of the research concentrated on the students' needs for entrepreneurship education and counselling, the questions being somewhat different from those for the other stakeholders. It consisted of two rounds: a qualitative first round with couple of open questions and a quantitative second round where the respondents ranked selected items by importance.

The target group was all students in the three universities in Tampere. The students' invitation was done in co-operation with ENTRE – Entrepreneurial Tampere, which is a coalition of Tampere University, Tampere University of Technology and Tampere University of Applied Sciences for promoting entrepreneurship among students. Altogether 257 students participated in the first round and 145 in the second one. About 2/3 of the respondents were TAMK students.

As a result, the student panel participants produced 74 pages of responses in total from the first round. They represented a wide range of ideas and opinions of entrepreneurship education as answers to questions like "What kind of support, training or guidance concerning entrepreneurship and starting a business would you like to have during your studies to make entrepreneurship a career option for you?" After the analysis 25 items were chosen to the second round for evaluation using a Likert-type scale from 1 to 5 by importance.

The results showed that students appreciate personal guidance the most (Table 1). Online services come second, but also the rest three within the top-five most important needs were related to personal contacts with experienced entrepreneurs and other experts. There were some differences in the rank order between students in different universities, but it can be said that quite good consensus was achieved even though it was not an aim in this research.

TABLE 1. Top-5 most important items in entrepreneurship (Shop'In Research, 2014)

I would like to discuss with a business counsellor PERSONALLY before starting my own business
There should be an ONLINE / TELEPHONE help-desk service offering first hand advice to an instant need for students who are interested or already starting their own business
A lot of visiting lecturers: entrepreneurs, experts and counsellors in the field of business should be incorporated into the entrepreneurship studies
Various events should be arranged to give students an opportunity to get to know entrepreneurs and create networks
Students who are interested in entrepreneurship should be offered possibilities to discuss with experienced entrepreneurs

Pros and cons of Delphi method

The research showed that a mixed qualitative method with features from Delphi, wisdom of crowds, even crowdsourcing can be a useful tool in strategy development. By giving up the original Delphi aim to reach consensus widens the scope of use to various areas in strategy design. It also reduces the need for sophisticated statistical methods in assessing the consensus. Especially in business context, - this is a cost saving factor.

On the other hand increasing the amount of participants to several hundred sets quite big challenges to the administration and analysis. Despite the help of new computer programs it is still very time consuming and costly to read and categorize thousands of responses.

Also the motivation of randomly invited participants, not selected experts, varies inevitably and not all responses are useful from the point of view of analysis. As Yousuf (2007) states it is very important to ensure that the participants wholly understand the aim of the research. If they don't their answers may not be appropriate. But among a big amount of responses there is always a grain of gold.

References

Custer, R., Scarcella, J. & Stewart, B. 1999. The Modified Delphi Technique: A Rotation Modification. *Journal of Vocational and Technical Education*, Vol. 15, No. 2, 1-10.

Dalkey, N. 1969. The Delphi Method: An Experimental Study of Group Opinion. Retrieved 12.2.2015. www.rand.org/content/dam/rand/pubs/research_memoranda/

- Galloway, L., Kapasi, I. & Whittam, G. 2015. How not to do it!! A Salutory Lesson on Longitudinal and Qualitative Research Approaches for Entrepreneurship Researchers, *International Journal of Entrepreneurial Behavior & Research*, Vol. 21, No 3.
- Gartner, W. & Birley, S. 2002. Introduction to the Special Issue on Qualitative Methods in Entrepreneurship Research. *Journal of Business Venturing*, Vol. 17, No. 5, 387-395.
- Helmer, O. 1968. *Analysis of Future: The Delphi Method. Technological Forecasting for Industry and Government*. New Jersey.
- Helmer, O. 1983. *Looking Forward: A Guide to Futures Research*. Sage Publications.
- Hsu, C. & Sandford, B. 2007. The Delphi Technique: Making Sense of Consensus. *Practical Assessment, Research & Evaluation*, Vol. 12, No. 10, Aug, 1-8.
- Kuusi, O. 2012. Delfoi-menetelmä – Miten tutkimme tulevaisuutta kirjan uudistetussa laitoksessa. PowerPoint presentation in SlideShare. Retrieved 25.2.2015.
- Linturi, H. 2007. Delfoin metamorfooseja.
http://www.edelphi.fi/fi/content/info/method/02_delfoi, last accessed 26.4.2015
- McDonald, S., Ching Gan, B., Fraser, S., Oke, A. & Anderson, A. 2015. A Review of Research Methods in Entrepreneurship 1985-2013, *International Journal of Entrepreneurial Behavior & Research*, Vol. 21, No. 3.
- Needham, R. D. 1990. Geographic: The policy Delphi: Purpose, structure, and application. *The Canadian Geographer*, Vol. 34, No. 2, 133-142.
- Okoli, C. and Pawlowski, S. 2004. The Delphi Method as a Research Tool: An Example, Design Considerations and Applications. *Information Management*, Vol. 42, No. 1, Dec, 15-29.
- Shop'In Research Ltd. 2014. Yrittämisestä Ammatti. Research for Ensimetri.
- Singer, S., Amorós, J. and Moska, D. 2014. GEM 2014 Global report. Retrieved 10.4.2015.
<http://www.gemconsortium.org/docs/3616/gem-2014-global-report>
- Surowiecki, J. 2005. *The Wisdom of Crowds*. Abacus.
- Yousuf, M. 2007. Using Experts Opinions through Delphi Technique, *Practical Assessment Research and Evaluation*, Vol. 12 No. 4, 1-8.
- Zhang, P., Wang, D. & Owen, C. 2015. A Study of Entrepreneurial Intention of University Students. *Entrepreneurial Research Journal*, Vol. 5, No. 1, 61-82.

Additional Information:

RAND Corporation www.rand.org

Ensimetri <http://www.ensimetri.fi/en/frontpage>

Author Description:

Ms Tuula Andersson, M.Sc., has over 20 years' experience in marketing research as an entrepreneur and a teacher. She is a senior lecturer in marketing in the Degree Program of International Business at TAMK. Her experience includes both qualitative and quantitative research, especially in the area of consumer shopping behavior.