Ph.d - Students unLtd.: A conceptualization of effectuation through an analysis of the entrepreneurial process - from being a student to becoming a founder, CEO and a multimillionaire

The lack of natural resources has meant that the Danish society has always had to rely on innovation, and the ability to foster remarkable companies through entrepreneurship. A lot of research in a lot of different areas has been done to see how the society could further innovation and facilitate the development of these ventures. For the last decade or more, the official policy has been that everyone from kindergarten to Ph.D. ought to be exposed to entrepreneurship. Consequently, many programs have been put in place to reach that goal. This research constitutes an attempt to examine how successful student start-ups work and to see if this knowledge can be implemented in a Problem and Project Based Learning (PBL) setting. **The research question:** How can an analysis of the process of successful knowledge-based start-up contribute to the conceptualization of effectuation, and what practical implications does it have for how students acquire experience and skills in innovation and entrepreneurship under PBL? **Method:** A case study was chosen as a method for conceptualizing effectuation. The case concerns a student start-up based on a technological advance. Additionally, a second case is introduced since the founders are participants in a business plan competition hosted by Venture Cup, which has a sequential and causal approach to entrepreneurship. Its goal is to use the business plan to attract venture capital. The start-up does extremely well in this competition, which makes it possible to see if the causal approach adopted by the competition is useful in the process of creating the start-up. It is argued that it is a critical case. If the case uncovers that the success of the start-up is based on a strict business plan approach, then the business plan approach has proven its value. On the other hand, if the research shows that the founders did not follow the plan when setting up the start-up, the value of a business plan approach becomes questionable. **Theory:** In order to understand the entrepreneurial and innovative process, relevant theory is presented as a foundation for analysing the cases. Actor network theory describes the elements involved in the process of creating a successful start-up. Also, in order to understand this process, the theory of effectuation is introduced and its conceptualization is undertaken to broaden the scope from expert entrepreneurs to novices such as students. **Findings:** The case supports the newest research about the team being the foundation of entrepreneurship, replacing the notion of a super-human with a special gene who creates new companies. Companies are created in a process involving more than just one founder, often by founders working in a close cooperation with a founding team who are as important as the founders themselves. Theoretically, innovation is a marker of entrepreneurship. Therefore, the term is introduced and discussed. Throughout the study, it is used to denote an iterative process with the entrepreneur as the pivotal point. When dealing with knowledge-based start-ups, the importance of the technology as an actant is emphasized. The technology is not only the foundation of the start-up. For the founders and the founding team, it is also the motivation for getting involved. The results from the case study were implemented in designing a Sommerhøjskole, which is a course involving both students and companies. It is shown that a Problem- and Project-Based setting can be created where both students and companies work together on solving a real problem as described by Henriksen (Henriksen et al 2004) and in this create valuable innovation. Creating parity between the students, company representatives and faculty is found to be central to obtaining positive results. Effectuation as described by Sarasvathy (Sarasvathy 2008) is based on expert entrepreneurs. This study shows that even though the students took part in a business plan competition which represents a causal approach both in the process leading up to founding the company and those taken immediately after that, their strategy was effectuation, which proves the hypothesis put forward by Sarasvathy. The last step of this research involves comparison between the findings from the case and the principles of PBL at Aalborg University. When evaluating the principles, it is shown that PBL is able to accommodate innovation, whereas handling the curricula goals with projects based on real problems may prove challenging. Finally, a model for accommodating not only innovation but also entrepreneurship in educational settings is presented.