



Entrepreneurial Education towards Social Transformation: Meta-cognition as a tool to stimulate self-awareness

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Introduction

Today, a strong scientific and academic focus is given to learning through interaction with one's social environment. Surprisingly, little research has actually been realized to contribute to the subject. Based on an extensive analysis of publications in well-known international journals of the past thirty years, Toutain and Byrne (2012) state that there are no reviews addressing philosophical postures in Entrepreneurship Education and Training (EET). Even if numerous articles claim the importance of active, experiential, 'learning by doing', 'real-world', self-directed or reflective pedagogies (Gibb, 1993; Gartner and Vesper, 1994; Bird, 2002; Honig, 2004; Corbett, 2005; Politis, 2005; Meyer, 2011; Neck and Greene, 2011), there is no research focusing on ontological and epistemological issues in entrepreneurship education. What place and role for subjectivist and constructivist philosophical paradigms in EET? Understanding the educational consequences of such postures through research and clarifying their philosophical positions seems essential for entrepreneurship educators because as underlined by Merriam (1982: 90-91) "Philosophy contributes to professionalism. Having a philosophic orientation separates the professional educator from the paraprofessional in that professionals are aware of what they are doing and why they are doing it. A philosophy offers goals, values and attitudes to strive for. It thus can be motivating, inspiring, energizing to the practitioner".

In this context, we argue that meta-cognition can be developed through the use of active pedagogies. Those are already applied in some entrepreneurship educations but not explicitly used for that purpose. Thus, the use of teaching methods which stimulate the simulation and resolution of problems will implicitly develop second level learning as meta-cognitive processes are activated.

We suggest that active pedagogies – as a novel form of learning – will stimulate metacognition and thus play an essential role in entrepreneurial education. The use of meta-cognition in entrepreneurship education will furthermore bring about awareness of the learners' meta-cognitive knowledge and of the role of his or her social environment regarding their learning and development. Consequently, this awareness stimulates transformative learning processes on both individual and group level. On an individual level, learners change their perception of the environment, which naturally changes their way of interacting with this environment and thus stimulate further transformation within this environment.

Our work seeks to measure the effects of simulating and resolving problems through becoming aware of their own meta-cognitive knowledge. To do so, we observed 17 teaching sessions where a particular teaching method called M.I.M.E.® (Méthode d'Initiation au Métier d'Entrepreneur) was applied. We then talked to more than 450 engineer and management students who took part in the education. The questionnaire was designed based on Shepherd's model (2009) that includes five categories of meta-cognitive knowledge: Goal orientation, meta-cognitive knowledge, meta-cognitive experience, meta-cognitive choice and monitoring.

Data was analyzed by the help of the software system STATA. We used the tool Poisson Regression to measure changes in students' perception. The results of our survey demonstrate a significant impact of the chosen pedagogy on both the learners' awareness of meta-cognitive knowledge and a motivation to deepen their learning about entrepreneurship.