The Role of Empathy in Entrepreneurship: A Core Competency of the Entrepreneurial Mindset

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ABSTRACT

Entrepreneurship education has become an important feature in many programs across higher education—especially in engineering education. A common goal of entrepreneurship education is developing an entrepreneurial mindset in students. Furthermore, a key competency of an entrepreneurial mindset is the ability to empathize with others. Empathy is a cognitive and affective process fostering the capability of understanding and appreciating the feelings, thoughts, and experiences of others. Since entrepreneurship is about introducing innovations into a community, having a keen understanding and appreciation of the needs and desires of community members is an important entrepreneurial skill. This article aims to provide a deeper and broader understanding of empathy and its role in entrepreneurship, along with a brief discussion of educational efforts designed to develop an enhanced sense of empathy in students.

Key words: Engineering Profession, Professional Skills, Entrepreneurship

INTRODUCTION

Innovation and the entrepreneurial activities that help innovations become mainstream are means of enhancing people's lives, solving important social problems, and important drivers of economic well-being in most contemporary economies worldwide (Brennan, Wall and McGowan 2005; Kuratko 2007; Neck, Greene and Brush 2014; Shane and Venkataraman 2000; Weilerstein and Byers 2016). In support of increasing innovation and developing an entrepreneurial workforce, entrepreneurial education is quickly spreading across many disciplines in higher education (Brooks et al., 2008). This surge in entrepreneurial education is closely linked to goals of increasing the innovativeness of people and increasing innovations through greater investments in research and development. In this emerging entrepreneurial world, engineers have become key innovators of new technology (Bosman and Fernhaber 2017).

From a grounding in design thinking, engineering has become a major source of innovation (Dym 2012). One of the primary tenets of design thinking is understanding or empathizing with those that could benefit from an innovation (Brown and Wyatt 2010; Leonard and Rayport 1997; Zoltowski, Oakes and Cardella 2012). From efforts to improve usability (user-centered design) to collaborations with stakeholders (human-centered design) to immersion in the lives of stakeholders, empathic design became a method for developing a deep understanding of the emotions, experiences, needs, and motivations of people (Batterbee, Fulton Suri, and Gibbs Howard 2014; Leonard and Rayport 1997; Mattellmaki, Vaajakallio and Koskinen 2014; Zoltowski et al. 2012).

Considering the growing importance of empathy in design and the importance of design to engineering, there has been relatively little attention paid to developing the skills of empathy in engineering education (Strobel, Hess, Pan and Wachter Morris 2013; Walther, Miller and Sochaka 2017). This article focuses on the role of empathy in an entrepreneurial mindset to provide more impetus to emphasize empathy in the practice of 21st century engineering (Walther et al., 2017). We do this through the context of entrepreneurial education, which is increasingly becoming an important part of engineering education programs (Byers, Seelig, Sheppard and Weilerstein 2013).

This article begins with a brief review of entrepreneurship and the entrepreneurial mindset. It is followed by a review of empathy as a key practice of entrepreneurship. The next section addresses the nature of an entrepreneurial mindset and empathy in the context of engineering education. The final section presents a few ideas for the development of empathy in the context of engineering education.

ENTREPRENEURSHIP AND THE ENTREPRENEURIAL MINDSET

A common definition of entrepreneurship is "the study of *sources* of opportunities; the *processes* of discovery, evaluation, and exploitation of opportunities; and the set of *individuals* who discover, evaluate, and exploit them" (Shane and Venkataraman 2000, 218, italics in original). Essentially, entrepreneurship is the collection of practices used by individuals to explore and exploit opportunities (Neck, Greene and Brush 2014).

There are different types of entrepreneurship. The most common type is the search for innovations having commercial value and the creation of a business to provide this value for a return on the investment. In this form, the entrepreneur takes on sizable risk to develop and launch this enterprise. *Intrapreneurship*, occurs within an existing commercial organization (Parker 2011). The method to search for and commercialize innovations from within an organization is similar to entrepreneurship, however the risk is shared with the existing organization. *Social entrepreneurship* is another type of entrepreneurship that emphasizes the provision of benefits to a community or society (social value) and de-emphasizes the personal or organizational profit-making goals of the more commercial ventures (Stevens, Moray and Bruneel 2015). Obviously, there are many variations and overlapping forms among these types. Common features include the exploration of opportunities and the exploitation or deployment of innovations.

The definition of the attributes (Merriam-Webster online n.d.) of an entrepreneur has evolved from earlier trait-based models to current attitudinal, mental models (a mindset) characterized as having a propensity to scan the environment for opportunities, evaluate selected opportunities, and pursue those that seem viable (Bosman and Fernhaber 2017; Douglas 2009). A mindset guides one's thoughts and behaviors, mediating how one acquires, processes, and uses information (Bosman and Fernhaber 2017). An entrepreneur's mindset determines how she or he will perceive, interpret, and consequently respond to situations. It is "the ability to sense, act, and mobilize under uncertain conditions" (Haynie, Shepherd, Mosakowski and Earley 2010, 217).

Mindsets form and reform in different ways based on individual, group, and contextual inputs. They can be constraining or generative to individuals and change over time in idiosyncratic ways (Dweck 2008; Nobel 2015). Robinson (2010) claimed that the notion of an entrepreneurial mindset is poorly researched, largely derived from folklore, and not well understood. Sarasvathy (2001) studied how entrepreneurs think and proposed that successful entrepreneurs used *effectual thinking* to identify goals that could be achieved by the means available to them. This up-ended conventional notions of first selecting goals and then choosing the means to achieve the goals. This perspective reinforced the dynamic, constrained, and situational nature of the entrepreneurial process.

One of the more important characteristics of an entrepreneur is the ability to empathize with others (Humphrey 2013). Empathy, along with other emotional and social intelligence competencies, is an important factor reducing the negative effects of cognitive biases, as well as increasing the chances of successfully understanding customers, users, or stakeholders, leading innovation teams and organizations, and negotiating with suppliers, distributors, and financial backers (Humphrey 2013). Entrepreneurship is largely a social enterprise and the ability to sense and interact effectively with others in multiple arenas is an essential ability for entrepreneurs.

Neck et al. (2014) described five categories of entrepreneurial practices that informed the education and development of entrepreneurs: (1) The *practice of play* fosters the development of "a free and imaginative mind" (p. 16) helping one see opportunities where others might not; (2) The *practice of empathy* describes a highly developed skill to understand others' thoughts and feelings; (3) The *practice of creation* enhances the role of creativity and creation in entrepreneurship; (4) The *practice of experimentation* describes the iterative cycles of taking action and learning from the results; and (5) The *practice of reflection* enhances the preceding four practices by evaluating, making sense of, and learning from these experiences. Together these practices portray an attitude or inclination that is the entrepreneurial mindset, we focus this essay on the practice of empathy as a core competency of an entrepreneurial mindset.

EMPATHY AS A CORE COMPETENCY

Empathy is the subjective capability of and willingness to become aware of, sensitive to, and understand the feelings, thoughts, and experiences of others (Kouprie and Visser 2009). From a human-centered approach, Decety and Jackson (2004) described empathy as developing a sense of similar, but separate, feelings of others. In its various forms, empathy includes caring for others, experiencing the emotions of others, and discerning what others feel and think. Broader definitions include more distant stakeholders (in time and space) and non-human entities, such as the environment or ecosystem (Strobel, et al. 2013).

In the process of finding and developing an innovative solution, perspective taking is a form of empathic bonding that can broaden entrepreneurs' perspectives, thereby enhancing creativity and opportunity recognition, finding desirable and feasible solutions aligned with peoples' needs, and integrating technical expertise with market or community dynamics (Prandelli et al. 2016). Thus, empathy helps bridge the gap between innovators and others.

Studies of social entrepreneurship have highlighted the importance of empathy as an antecedent to intentions of pursuing social entrepreneurship (Hockerts 2017; Mair and Noboa 2006; Stevens,

Moray and Bruneel 2015). In this realm, empathy is more of an emotional driver eliciting feelings of compassion and intentions to help others and protect the environment. Perceptions of an entrepreneur's level of empathy indicate whether he or she is concerned for others' welfare or for personal wealth (Humphrey 2013). This concern is likely to be more of an emotional component of empathy, while the understanding of the other's perspective is a more cognitive component. Hockerts (2017) articulated empathy as a cognitive factor (the ability to assess another's emotional state) and an affective factor (the propensity to react to another's emotional state), as well as empathic concern (the propensity to react with compassion).

In some cases, empathy is included under the broader constructs of emotional and social intelligence (Humphrey 2013). Empathy is a core ability of emotionally intelligent behavior and has a long history in psychology, social work, counseling, and more recently in organization and management studies (Cherniss 2000; Kellett, Humphrey and Sleeth 2006; Salovey and Mayer 1990). Mayer, Salovey, and Caruso (2004) described the construct of emotional intelligence as the "cooperative combination of intelligence and emotion" (p. 197). Yet, there is little consensus on what emotional intelligence is or if it is really an intelligence (Cherniss 2000).

There are levels of emotional intelligence ranging from basic emotional awareness to more sophisticated interpersonal management of emotions and this is a key factor in the use of empathy in social interactions (Mayer, Salovey and Caruso 2004). It is this ability that can help entrepreneurs not only assess the value of their innovations from others' perspectives, but also to influence others' perceptions of an innovation. This is the entrepreneurial drive of knowing what others want before they do. And it is a critical cause for concern regarding the ethics and morals of empathic decisions and practices (Walther et al., 2017). It is not only knowing what others think, or knowing how to influence them, but also having a deep appreciation and compassion for others and the environment that is the value of empathy as a core competency.

In entrepreneurship education, Neck et al. (2014) advised that students need to develop their empathic skills for more than just understanding user needs. They described that students need to: (a) empathize with practicing entrepreneurs to learn what it is like to be an entrepreneur as a career and as a lifestyle, (b) connect with others in more meaningful, empathic ways to develop more effective networking, and (c) identify unmet needs and wants of stakeholders and constituents. The entrepreneurial mindset that supports entrepreneurial activity is also useful as an attitude or inclination to go beyond the traditional aims of commercialization (e.g., social entrepreneurship, intrapreneurship, self-development, career development).

Robinson (2010) reviewed different perspectives of entrepreneurship and found that there was this inclination or intentionality for seeking and pursuing opportunities for development as the essence of an entrepreneurial mindset and this can apply across a wide range of human activity.

For example, developing an entrepreneurial mindset contributes to the broader development of the person (Secundo, Ndou and Del Vecchio 2016). In addition, the field of career studies recommends people pursue their careers in a manner similar to entrepreneurial practices of effectuation (Sarasvathy 2004; Savickas 2013). Other examples are found in education where an entrepreneurial mindset can facilitate student engagement in learning (Robinson 2010). This work could inform and enhance engineering education and the development of engineers and their careers.

IMPLICATIONS FOR DEVELOPING AN ENTREPRENEURIAL MINDSET
IN ENGINEERING EDUCATION

Developing empathetic practices for different aspects of entrepreneurship is essential to the entrepreneurial mindset. It is important to develop empathy in students not only as part of entrepreneurship education, but also as part of becoming an engineer. In a compelling argument, Walther and colleagues (2017) advocated for the recognition and development of empathy as a core skill in engineering. In their model of the professional engineer of the 21st century, they included empathy as not only a core skill, but also a professional orientation and an engineering way of being, that is, as a critical part of an engineering mindset.

Traditionally, educating empathic engineers has not been emphasized in current engineering education practice. Research findings have shown that engineers have a lower degree of empathy than future doctors and nurses (Rasoal, Danielsson and Jungert 2012). Cech (2014) has noted that there is a tendency toward cultural disengagement in engineering education and her research indicated that students' interest in public welfare actually declines over the course of their engineering education. The media has also reported that engineering education may be relentlessly emphasizing technical problem-solving over personal and societal needs (Marcus 2013). Fortunately, this is changing as more engineering programs have realized the importance of recognizing the impact of technology and engineering on the quality of life.

Neck et al. (2014) provided a number of classroom exercises or lessons designed to develop the competency of empathy in students. These lessons help students to: compare their actions and emotions to others; develop empathy in negotiation; critically explore issues of equity, fairness, and implicit biases; develop abilities to give and receive feedback and advice; understand the experience of practicing entrepreneurs; develop communications and pitch their ideas while addressing the needs of the audience; understand and appreciate the various roles of team members; and identify and understand different types of entrepreneurial activity (e.g., social entrepreneurship and intrapreneurship).

CONCLUSION

As professionals, engineers often encounter challenges that require an empathic orientation (Walther et al. 2017). Therefore, in addition to providing future engineers with a thorough training in technical and entrepreneurial skills, curricula might also provide a broader exposure that considers how engineering affects various stakeholders (human and non-human) and the world at large. How to emphasize high-quality interpersonal communication, sincere engagement with diverse stakeholders, self-reflection, collaborative problem solving, and fostering a sustainable environment, all embedded in an empathic professionalism, remains a challenge for engineering educators and students.

As engineering education embraces entrepreneurship, the teaching of empathy has been mostly overlooked (Walther et al. 2017). Developing skills in empathy benefits far more than developing entrepreneurs, it also develops a more holistic and socially responsible engineer. Despite these ideals, Walther et al. (2017) cautioned that there is currently a tension in engineering education between teaching empathy as an instrumental skill for engineers to achieve their goals by selling stakeholders on an innovation and the development of empathic engineers striving for the common good. As with other competencies of an entrepreneurial and engineering mindset, there is a risk that moral and ethical values, and working for the common good might be overlooked in the quest for commercial and technological success.

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