Forum

Necessity of Mentoring in Entrepreneurship Education: Reflection by Practitioners

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Introduction

The significance of entrepreneurship education and its potential benefit to the wider community has led higher education institutions and providers in the United Kingdom and other countries to facilitate its pedagogy and andragogy in many various forms. It is mostly taught as an elective module, embedded into various course curriculums, or offered as a stand-alone degree program. The ultimate aim of these modules usually is to engender entrepreneurial competencies in students (Fayolle 2013; Gartner 1990; Matlay 2009; Khalefa et al. 2013; Middleton 2013; Alsharief and El-Gohary 2016; Eid et al. 2017).

Meanwhile, the delivery of entrepreneurship by various Higher Education Institutions (HEIs) and internal processes such as think-kingtakess various forms, such as classroom focus, hands-on approaches to setting up a business, writing business plans, case studies, role play, provision of incubators, competitions, conferences, simulations, and so on (Henry et al. 2005). However, an important facet of the delivery and success of entrepreneurship education is mentoring, especially for those intending to explore the knowledge and experience bank of the mentor and having engagement with the experience of practitioners and identifies areas to be explored in the future; this will influence practice and enhance students’ experience. The paper provides engineering students and educators with a great opportunity to understand entrepreneurship mentoring, which might help in creating a new generation of engineering entrepreneurs.

This paper illustrates the need to further encourage reflection as part of mentoring and leverage the immense knowledge that could be gained from reverse mentoring during the process. As it is evident that mentoring has engendered success in various phases of entrepreneurship (Bridgestock 2013; Rideout and Gray 2013), this paper will highlight the benefits of mentoring in entrepreneurship education for both the mentee and mentor via reflection and reverse mentoring as supported by some scholars in the field, such as Marcinkus (2012). The personal narrative here explores and reflects on the experience of practitioners and identiﬁes areas to be explored in the future; this will influence practice and enhance students’ experience. The paper provides engineering students and educators with a great opportunity to understand entrepreneurship mentoring, which might help in creating a new generation of engineering entrepreneurs.

Mentoring in Entrepreneurship Education

Mentoring has been variously defined, but a converging theme among all these definitions is that mentoring happens between two parties (a mentor and mentee) in which one party (the mentor) provides support, advice, and encouragement to the mentee to enable the achievement of a set of objectives. The mentor is the more experienced, and by providing this to the less experienced (the mentee), he or she will help the mentee to fully engage in the entrepreneurship education process (St-Jean and Audet 2012; Sullivan 2000). However, goings-on in the mentoring relationship are largely driven by the mentee (Pegg 1999). Mentoring is also viewed as “a developmental relationship that is embedded within the career context” (Ragins and Kram 2007, p. 5).

According to Burns (1995, p. 99), “learning is a relatively permanent change in behavior with behavior including both observable activity and internal processes such as thinking, attitudes and emotions.” Underlying mentoring is a learning process, and specifically, in this paper, the Kolb learning theory (experiential learning theory) fits in expanding such a learning process. The theory explains that learning takes place in a loop of four processes; these are through concrete experience, through observation and reflection, through abstract conceptualization, and, finally, active experimentation (Burns 1995). The same concept of considering mentoring as a learning process also fits in with social learning theory, which posits observation, imitation, and modeling. However, it is believed that mentoring consists more of tapping into the knowledge and experience bank of the mentor and having the confidence of someone to bounce ideas off (Bandura and Walters 1977). These are normally evident during the mentoring process and hence lead to experiential learning for both the mentor and mentee (McGill and Beatty 1995, pp. 11–22).

Meanwhile, reverse mentoring is a key component because it enables the mentor also to benefit from interaction with the mentee, whose life experience will provide an avenue to learn something new. The advantage of having an open mind to learn from a younger or less experienced person, especially regarding technology, social media, cultural changes, and new fads, becomes very important (Chaudhuri and Ghosh 2012). Several studies have outlined...
the benefits of both mentoring and reverse mentoring on the behavioral, motivational, attitude, business, and career choices of participants. These benefits are also an outcome of planning, structure, and time commitment of both the mentor and mentee (Allen et al. 2004; Eby et al. 2008).

The importance of subject knowledge to the mentor is enormously important; in entrepreneurship, mentors are predominantly those who have started their businesses, worked in businesses, and occupied various positions and whose experiences can add value to budding entrepreneurs. Moreover, the passion and dedication of the mentor are very important to the entire process, which requires time commitments, patience, value adding, and provision of guidance all along the journey (Jack and Anderson 1999; Van Auken et al. 2006). The importance of mentoring as a vital part of an array of support in entrepreneurship complements andragogy and encourages heutagogy (the study of self-determined learning), enabling the transition of ideas beyond papers and dreams to solid reality. Mentoring contributes immensely to entrepreneurship; it increases the ability of the mentee to see beyond his or her world and outside the box, with confidentiality maintained all through the process (Cope and Watts 2000; St-Jean and Audet 2012).

Entrepreneurship Education and Engineering Students

Although a notable number of scholars within the field have examined entrepreneurship education for engineering students, only few of them have examined the impact of entrepreneurship education on engineering students (e.g., Zhang et al. 2014; Tessema Gerba 2012; Lo 2011; Souitaris et al. 2007; Menzies and Paradi 2003; etc.). In this regard, Souitaris et al. (2007) illustrated that entrepreneurship education programs affect entrepreneurial attitudes and intentions of science and engineering students to start a business. According to them, offering engineering students’ entrepreneurship education education programs raises their overall entrepreneurial inspiration as well as entrepreneurial intentions. Lo (2011) confirmed the same relationship between entrepreneurship education and engineering students’ entrepreneurial intentions (based on his study of 411 engineering students). Moreover, Nichols and Armstrong (2003) argued that engineering entrepreneurship is vital for improving engineering students’ ability to deal with engineering and societal problems.

Along the same lines, Tessema Gerba (2012) examined the impact of entrepreneurship education on 156 undergraduate engineering students’ entrepreneurial intentions in Ethiopia. The findings of Tessema Gerba (2012) reinforced the findings of other scholars within the field and confirmed that engineering students who completed entrepreneurship education courses have better entrepreneurial intentions than those who had not completed such courses in Ethiopia. Zhang et al. (2014) confirmed the same and illustrated, based on their examination of 494 students from 10 different universities, that entrepreneurship education had a significant positive impact on entrepreneurial intentions. They also confirmed based on their findings that such impact was higher for males and people from technological universities and backgrounds. This matched the findings of Menzies and Paradi (2003), who found that male engineering students who completed entrepreneurship courses at a major Canadian university proved to become business owners after graduating.

Furthermore, from an engineering student point of view, entrepreneurship education is perceived to be a vital element in building a successful career. This was confirmed by the findings of Täks et al. (2014), who found, based on an in-depth qualitative examination, that engineering students view entrepreneurship education in a variety of ways. Based on the findings of Täks et al. (2014), engineering students considered entrepreneurship education a “first step to self-directed learning, a preparation for work life, a path to possible self-employment, and a context for developing leadership and re-possibility for group achievement” (Täks et al. 2014, p. 573).

Reflection during the Mentoring Process

This paper uses a reflection of the writers’ experiences to outline the different benefits gained during the mentoring process by all stakeholders. Emphasis will be placed on skills developed and honed and their importance in mentoring.

Reflection entails going back to an experience or action, looking into what happened and what might have been done differently, and ensuring that changes or improvements are implemented in subsequent events if necessary. Reflection entails thinking and adopting learning as a continuum (Boud et al. 1985). It is also essential to keep a record of reflections via a reflective journal, which allows for a critical look during the review of journal entries; it allows for ownership while deepening learning and ultimately enhances personal and professional practice (Moon 2013, pp. 71–102). The process of reflecting during mentoring enhances the pursuit of becoming a better mentor and enhances the mentor’s ability to become a “reflective practitioner” (Schön 1983, pp. 128–166; Schön 1987, pp. 100–118). Larrieh (2000) also emphasized the significance of a mentor developing the practice of critical reflection to aid in truly becoming a better professional. It is a dynamic and continuous process, which requires a willingness to carry out self-critical evaluations.

The mentoring experience reflected on provides a two-way approach through a primary focus on mentoring students on entrepreneurship or entrepreneurship-related modules (e.g., marketing, management, etc.), with the secondary benefit of reverse mentoring. A review of the authors’ experience is carried out subsequently using the Driscoll model of reflection, which allows the mentor to ask what, so what, and now what questions (Driscoll 1994). A mentoring life cycle was an important facet of this because the mentoring was for a period of time and the start and end dates were set at the beginning. This was very much in line with the stages proposed by Hay (1995) which are the start phase, establishing phase, developing independence phase, and termination phase. These phases were adopted and shown in the reflection.

Applying Driscoll Model of Reflection to a Mentoring Situation

Brief Background on the Mentoring Situation

As part of the entrepreneurship modules provided by a UK-based university and the nature of some postgraduate programs (PhD, DBA, etc.), some students approached the authors on more than one occasion to ask the authors to mentor them, and the authors accepted, having discussed expectations from a mentor and mentee with all the students involved. Some of these students were engineering students completing their MBAs at a UK-based university, in addition to one Dutch engineering PhD student who was cosupervised by one of the authors. This was based on the authors’ experience of starting and managing a business, understanding the processes related to it, and having a knowledge bank of the business phase; the students were at different stages of building a business, and a sufficient number of them were in the survival phase of starting a business.
The authors also encouraged each student (mentee) to do the same. This is in line with Kolb learning theory. The authors’ reflective diaries enabled them to identify what went well during the mentoring process, what could have been done in a better way, and what could be done in the future to ensure good mentoring.

Meanwhile, the other advantage of the reflective diary was the opportunity to get lessons that would influence the authors’ practice as both academics and practitioners. Lessons learned during the process of reverse mentoring influenced future examples in the classroom and would influence future mentoring experience, hence enhancing the authors’ practice.

- **Feedback**: The authors provided feedback to their mentees after the implementation of any action plan, and this was very useful in moving the process forward. The authors also requested feedback from the mentees at intervals and the end of the mentoring process. The use of technology during the process saved time and aided communications during the mentoring process. It is evidenced by research that e-mentoring promotes communication with the use of tools such as Skype, email, and phone calls (Ullmann et al. 2011; Hunt 2005; Bierema and Merriam 2002), though evidence suggests care must be taken to avoid an over-dependence on these tools and ensure that face-to-face communication continues (Smith-Jentsch et al. 2008).

### So What? (Using Driscoll Model)

The authors’ initial impression at the start of the mentoring process was that of apprehension due to the whole array of skills required and the complexity that could arise, though the authors were confident of their skill sets and had the experience needed to guide the students. The authors were keen on the students’ learning and engagement during the process and ultimately achieving the aim set at the start of the mentoring journey, which was moving the business to the next phase.

At the end of the process, the entire experience provided the authors with invaluable skills, new information, and ideas gleaned from reverse mentoring. All these have been of value in subsequent mentoring and teaching in the classroom. Specifically, the authors developed the art of active listening (Mullen and Noe 1999) because it forms the bedrock of the entire mentoring process.

### Now What? (Using Driscoll Model)

The entire mentoring experience provided the authors with the opportunity to recognize the value and significance of active listening and comprehend the exclusivity of each mentoring session in addition to how to develop a successful working relationship. The authors further appreciated the importance of asking useful questions during discussions with the mentees (Eby et al. 2006).

The importance of keeping up to date with knowledge on the latest developments in the macro environment and how it could have an impact on decisions was something that came to bear because businesses are impacted by these factors and need to react appropriately. The importance of getting students starting businesses to keep abreast of this is something to stress going forward. Also, the need to have certain information on where to source these from was noted. To further enhance the authors’ practice and that of entrepreneurship education, the views of other practitioners and mentees were explored, and the benefits of reverse mentoring to academics should be promoted. As such, the need to enhance listening and continue critical reflection should form part of the continuous personal development of any academic mentor.
Conclusion and Recommendation

The experience of acting as a mentor further buttressed its importance to the process of successful entrepreneurship education in HEIs (Bisk 2002; Eby et al. 2006; Sullivan 2000; Ensher et al. 2000). Its benefits to the mentees and authors were numerous, the ultimate benefit being the success of mentees in achieving the planned aim of the journey. The benefits to the authors as mentors were numerous, and reverse mentoring by the mentees was especially beneficial. The outline of some of the potential benefits to the mentors is improved communication skills with younger generations of entrepreneurs; listening skills; reinforcement of knowledge; improved confidence (for one of the authors); improved awareness of culture and technology in the macro environment; and, very importantly, a sense of fulfillment.

The feedback obtained from the mentees highlighted the numerous and valuable benefits of mentoring to them; a few of these are access to practical advice and support, improved confidence, improved communication and planning skills, learning from the experience of others, and learning the importance of building a network of contacts and the ability to make decisions. Moreover, the mentoring process enabled the mentees to move toward self-learning (St-Jean and Audet 2012; Wilbanks 2013).

This paper highlighted the positive impacts of mentoring to the mentor, mentee, and practice; it recommends the continued adoption of mentoring in entrepreneurship education and similar practices. It also highlights the need to further explore the benefit of reverse mentoring and developing a bespoke checklist for mentoring in entrepreneurship education (Marcinkus 2012; Leh 2005).

References


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