Dual Learning Space in Undergraduate Entrepreneurship Education: A Framework Proposal

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1 Introduction

Entrepreneurship Education (EE) continues to be one of the fastest growing topics in the university curricula, and scholars still attempt to establish ontological boundaries to the definition and implications of EE, affecting the educational principles that guide the design of courses and programmes (Gabrielsson et al., 2020). Though a variety of educational areas of expertise have contributed to the development of EE (Hägg & Kurczewska, 2021), there is a wide debate about the benefits of EE, along with suitable teaching and learning methods. One measure of EE effectiveness that has been widely accepted in the academic literature is related to indicators of Entrepreneurial Intentions (EI) (Gabrielsson et al., 2020), accepting that EI would expectedly trigger entrepreneurial action.

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This approach originates from the Theory of Planned Behaviour (TPB), which postulates that intentions affect conducts and attitudes (Ajzen, 1991; Bandura, 1977, 1982), and EI, in particular, is activated by students' self-efficacy (Drnovšek et al., 2010; Entrialgo & Iglesias, 2016; Fernández-Pérez et al., 2019; McGee et al., 2009; Sánchez, 2011). However, and contrary to this view, Ismail et al. (2018) find that self-efficacy and EI demonstrate a moderate, indirect or null relationship. Additionally, psychological limitations of young students make EI an outcome of EE that turns out misleading; Gielnik et al. (2018) have found that, while the young tend to demonstrate higher levels of EI after identifying opportunities, entrepreneurial action belongs to mature adults. In other words, whereas entrepreneurial intention characterises formative years, actual entrepreneurial pursuit is more likely in adulthood.

Therefore, if motivation for entrepreneurial intention (but not action) is more likely among the young, considering the perceptual differences in the gap between young and older generations (Gielnik et al., 2018), we must necessarily pose a question as to what type of benefits should be expected from Undergraduate Entrepreneurship Education (UEE). Van Praag (2003) finds that new venture creation is correlated with the existence of previous entrepreneurial experience in similar initiatives, whereas Higher Education (HE) students stand out by varied levels of inexperience. Similarly, Gielnik et al. (2018) find that advancements in education might have an opposite effect on entrepreneurship when there is no prior entrepreneurial experience. These findings make EE particularly problematic for HE, challenging the pertinence of entrepreneurship instruction among young people, especially when traditional HE in business tends to be causal, linear and predictable (Neck & Greene, 2011), which stands in contrast with the uncertainty and serendipity that characterise entrepreneurship.

However, this interpretation can be myopic in that it ignores the benefits and the broader perspective of entrepreneurship. Beyond the process of new venture creation, entrepreneurial value exists in a variety of forms, whose interpretation determines how EE is to be developed in HE institutions. The type of EE model adopted by a particular HE institution is contingent on the definition of entrepreneurship that such an organisation decides to embrace, outlining which competencies are contextually relevant: either to start up a new company or to encourage a mindset that can serve in a broader context (Lilleväli & Täks, 2017). While the first approach appears to take hold in the USA, the latter approach is more

prominent in the European continent (Bacigalupo et al., 2016; Gibb, 2008; Rasmussen et al., 2015).

A solution can be found in the objectives that sustain EE, namely, the development of entrepreneurial competencies (Lackéus, 2015; Tittel & Terzidis, 2020), whose significance is connected to HE students' evolving generational characteristics, i.e. their nascent life experience, emerging identity and aspirations, which set them apart from other student cohorts. This reality should inform educators about the best learning approaches that harmonise with these students' developmental requirements. However, many educators tend to disregard the suitability of their instructional methods to the stage of development among HE students (Hägg & Kurczewska, 2021), a problem particularly relevant in UEE, suggesting the need for a reflexive exercise aimed at matching age-related qualities to the stages in the entrepreneurship development process (Gielnik et al., 2018).

To help address this challenge, this chapter conceptualises UEE as a progression of didactical methods and experiences that develop in a dual learning space environment, emphasising the value of mentorship in facilitating divergent and convergent thinking processes among HE students, who are distinguished by an emerging adulthood (EA) stage. The following section portrays EA as a life stage in which certain entrepreneurial competences are to be realised, which can be attained through the practice of entrepreneurship. Section 3 elaborates on the meaning of experiential learning in the context of UEE and EA, leading to the conceptualisation of the learning space as a construct that blurs the line between a classroom and real-life environment. After this discussion, Sect. 4 emphasises the role of mentorship in learning spaces, which has to be acknowledged as a necessary subjective contribution to help students navigate their learning space. Drawing from experiential learning space and mentorship, Sect. 5 introduces the Dual Entrepreneurship Learning Space (DELS) framework proposal, followed by the chapter conclusion.

2 Higher Education and Entrepreneurial Competencies

EE scholars have paid little attention to the characteristics of young people in Higher Education (HE) (Hägg & Kurczewska, 2021), who endure mental and emotional wants that embed them in a transitional stage between teenage years and full adulthood. Arnett (2000) has termed this

development stage the Emerging Adulthood (EA), which is a mutable cultural construct made implicit in the enlargement of the adolescence life stage relative to the process of continued identity exploration that results from HE engagement. To a certain extent, HE triggers the EA condition among the young (Arnett, 2000).

Emerging adults are self-focused, involved in a broader range of activities, devoid of social roles. Therefore, they may take higher risks and embrace exploration and intensive experimentation to discover their place and identity in life and work (Arnett, 2000; Swanson, 2016). Before reaching adult life, emerging adults tend to make uncritical decisions, which are strongly influenced by external relations, internalising their meaning-making methods, according to the social situations in which they participate (Magolda & Taylor, 2015). Additionally, HE students have little knowledge of the immediate applications of their coursework and give priority to course performance over learning (Dachner & Polin, 2016). In the same way, they resolve meaning following an iterative dynamic that swings between internal definition and external reliance when facing new experiences (Magolda & Taylor, 2015). On this account, considering the diversity of learners' contexts, psychological characteristics, ambitions, identities and varied levels of proficiency, the manner in which entrepreneurial competences materialise for HE students is a topic of much needed research. Generally speaking, a competency involves both cognitive and non-cognitive abilities for successful task execution (Weinert, 2001), whereas entrepreneurial competencies imply the devotion of such skills and attitudes to realise entrepreneurial activities that lead to new value creation (Lackéus, 2015).

Preparatory scholarly research has meant to recognise and classify such competencies (Tittel & Terzidis, 2020), with the stage of advancement (Bacigalupo et al., 2016; Bozward & Rogers-Draycott, 2017), contexts (Man, 2001; Man et al., 2002; Schallenkamp & Smith, 2008; Mitchelmore & Rowley, 2013) and success factors (Bird, 1995) being some of the typical approaches. There are multiple entrepreneurial competencies already identified by the scholarly literature, such as action orientation, creativity, integrity and ethics knowledge, technical skills, self-efficacy, self-knowledge and learning skills, social skills, perseverance, tolerance of ambiguity (Bacigalupo et al., 2016; Lackéus, 2015; Tittel & Terzidis, 2020), among others.

However, the sole identification and classification of entrepreneurial competencies offers an incomplete outlook on the pertinence of certain

techniques for the effectiveness of EE, especially among EA. Comparatively, other research viewpoints converge on the purposive identification of the necessary skills, attitudes and competencies that breed what is usually known as the Entrepreneurial Mindset (EM), which differentiates the outcomes of entrepreneurship from the advancement of the entrepreneurial thinking (Komarkova et al., 2015), while appreciating the required levels of entrepreneurial cognition (Lackéus, 2015). Though EE is primarily focused on the development of the mindset as well as the abilities and practice for new venture creation, its implications are profound in that these capabilities are useful across a variety of organisational types and careers (Neck & Corbett, 2018).

Hence, competencies should be chosen according to students' maturity level and their cognitive development, factors that are forerunners and predictors of future competencies (Obschonka et al., 2017) and whose interactions facilitate the advancement of further proficiencies (RezaeiZadeh et al., 2017). According to Lackéus (2015), UEE necessarily combines knowledge, skills and attitudes, expanding on previous EE stages, and evolves into a business orientation as the student progresses into postgraduate education. For instance, encouraging inexperienced students to be creative and generate problem-solving ideas is probably more valuable than teaching them how to monetise opportunities (Swayne et al., 2019), which involves critical thinking as a relevant HE competence to achieve self-authorship (Magolda & Taylor, 2015).

Nonetheless, it is the practice of entrepreneurship (new venture creation) that fosters an EM, given that new venture creation is what (in part) defines EE as an academic discipline (Neck & Corbett, 2018). Therefore, UEE should embrace both new venture creation and the development of an EM, namely, the narrower and broader perspectives of EE (Lackéus, 2015), whose timely application would lead to the development of divergent and convergent thinking among HE students (Neck et al., 2014), i.e. combined processes of practice and analytical reasoning that originate in experiential learning spaces.

3 The Experiential Learning Space in UEE

Herrington and Oliver (2000) criticise the traditional HE approach to abstract and decontextualised education delivered by teachers, encouraging a type of learning that originates in authentic interactions with "experts". Though this viewpoint appears to degrade the role of the

academic educator, whose expertise is considered less valuable than that of practitioners in the field, it has its merits in that it emphasises the importance of realistic experience. However, it fails to recognise the character of education and its relationship with the necessary knowledge structures that affect judgement. Neck and Greene (2011) demystify the statement of many practitioner-led EE programmes, such as bootcamps and non-university incubators whose focus on personality profiling leads them to claim that entrepreneurship cannot be taught but only experienced in the real world. In said programmes, the authors emphasise a portfolio of techniques to practice entrepreneurship in order to create value. In other words, practitioners and academic programmes need to adapt each other's complementary qualities: while practitioners ought to go beyond personality heroes and successful new ventures by considering techniques for the development of a value creation mindset, decision-making skills and other cognitive attributes (such as experience analysis, reflection and problem-solving), academics are required to incorporate in their teaching experiential methods real-life interactions, ideation and opportunity discovery (Günzel-Jensen & Robinson, 2017; Neck & Greene, 2011), an approach deeply embedded in customer development or Lean Startup methodologies (Blank, 2013; Ries, 2012).

Hence, learning must develop as a social process that invites students to participate in groups of practitioners, who engage such groups in practical activities, where they gain new capabilities and identity (Bonnette & Crowley, 2020). The embeddedness of learners in realistic situations implicates collaborative activities that grant access to role-model experts, coaching, knowledge co-creation, self-reflection and learning evaluation (Herrington & Oliver, 2000). Such a practice-oriented approach, involving real-life experiential activities, idea generation, opportunity identification and self-knowledge, combines with management sciences in order to fulfil the ends of EE, namely, effectual learning from such experiences, innovation skills and exploitation of the opportunity (Günzel-Jensen & Robinson, 2017; Scott et al., 2016), which, ultimately, facilitate the acquisition of an entrepreneurial mindset among HE students.

EE has evolved from situating learning based on the types of entrepreneurship to emphasising the learner as the centre of the EE process and, though the field still struggles to make a connection to learning and education theories (Gabrielsson et al., 2020), some of them have influenced teaching methods, which have been useful in reinforcing the experiential learning approach that characterises EE nowadays (Bell &

Bell, 2020). In this sense, experiential learning stands out as the most popular instructive approach to EE (Kolb & Kolb, 2005), which allows students to bridge the gap that exists between knowledge acquisition and contextual application, leading to the construction of actionable learning (Miles et al., 2017). Experiential learning must include tangible experiences, self-reflection, conceptual abstraction and active experimentation, involving students in activities such as consulting projects or start-up initiatives (Dachner & Polin, 2016). According to Neck and Corbett (2018), the dominion of pedagogical approaches to EE represents an important barrier to practice-based learning, contending that andragogy methods should take precedence over pedagogy in that EE involves guidance and real-life experience in connection to students' individualities. The application of andragogy is flexible and context-dependent (Dachner & Polin, 2016), whose principles expose HE students to self-fulfilment, cooperative relations, shared responsibility in project groups, experiential learning activities and guidance to learn from meaningful experiences (Neck & Corbett, 2018).

On the other hand, reflective critical thinking and prior experience are prerequisites to succeed in self-determined modes of learning, which put into question the effectiveness of experiential learning among immature and unexperienced EA (Hägg & Kurczewska, 2021). However, emerging adults build identity through experiential learning, considering that EA consists of inexpert students who tend to generate news ideas based on their experiences as consumers (Swayne et al., 2019)—i.e. user innovation (Von Hippel, 2005). Additionally, each HE student has varied levels of maturity: while a student may be totally self-directed in one activity, she may be dependent on others regarding a different type of experience, stressing the need for variability in teaching methods in EE (Neck & Corbett, 2018). Hence, knowledge should be contextually learned, with the setting being either an actual work environment or its virtual substitute (Herrington & Oliver, 2000).

In that regard, Kolb and Kolb (2005) coined the term learning space, defined as a construct that relates the learners' character to the institutional setting, determining students' behaviour. As a subjective experience in a social environment, the learning space cannot be constrained by the boundaries of a physical classroom in that it results from collective involvement in specific activities, recognising the social nature of learning. Some EE scholars have embraced this principle to propose alternative constructs such as authentic learning (Bonnette & Crowley,

2020; Herrington & Oliver, 2000) and real-life environment (Neck & Corbett, 2018). Hence, since EE contexts can vary significantly, learning can occur within the teaching space as well as beyond such a structured milieu, clouding the line between classroom and real-life settings (Hägg & Kurczewska, 2021).

4 Guiding HE Students Through Learning Spaces

Real-world applications increase motivation in HE students (Swayne et al., 2019) and, considering that entrepreneurial success depends on both experience and practice, students should be encouraged to test out their hypotheses beyond the classroom (Blank et al., 2014). However, successful experiential groundwork requires a continuous learning facilitation activity, which relies on pedagogy principles to convey the necessary knowledge to have HE students complete those activities that help them acquire new skills, particularly among inexperienced undergraduates (Hägg & Kurczewska, 2021). In other words, EE requires mentorship or guidance.

Mentorship is relevant when students have a hard time to act with independence and empathy (Dachner & Polin, 2016), in that mentorship boosts learning by challenging entrepreneurial assumptions and delivering guidance that helps students appreciate reality (Miles et al., 2017), including the experience of failure (Dobson et al., 2021). The level of guidance in EE can fluctuate between structured instructions (cognitive approach) comprising project-based collaborative learning, self-regulated experiential learning, and self-directed projects (constructivist experiential learning), depending on students' characteristics, as part of a continuum between teaching and learning, that is aimed at evolving from external to internal motivation to learn (Hägg & Kurczewska, 2021). The culmination of this continuum can be found in the fulfilment of the andragogical assumptions at the end of HE, namely, self-concept, intrinsic motivation, proclivity, discernment and readiness to learn, and work experience (Dachner & Polin, 2016). Expressly, as emerging adults gain such skills, assistantship can be reduced, transferring more responsibility to the student (Dachner & Polin, 2016). Additionally, mentorship support is needed to validate learners' knowledge position, recognising their prevailing experience to construct mutual meaning, while emphasising autonomy and connection (Baxter Magolda, 2004). Accordingly,

students' readiness and commitment to learn are instrumental in determining the role of the educator in terms of support and direction (Neck & Corbett, 2018).

However, mentoring is a human factor, which is influenced by the mentor's level of expertise, standards and subjective discernment about students' EE challenges (Henry, 2020). To put it another way, the educator's contribution to UEE is unique, in that, in the learning space, she guides her students through the following patterns that originate in her personal involvement with her own past and present learning space—e.g. specific entrepreneurial ecosystems (Guercini, 2012). Hence, contextual qualities and heuristics that educators acquire along with their real-life setting would have an impact on students' divergent and convergent thinking processes that develop in their corresponding learning space. Such uniqueness would need to be supported and channelled intentionally, according to the UEE institutional programme, and required competencies would need to be attained.

5 A Framework Proposal for UEE

The concept of experiential learning has been overly applied by entrepreneurship programmes in that activities so diverse such as a group discussion about life problems, blogging, opinion surveys or real customer interviews are all lumped together. Although the academic literature communicates experiential learning as an approach that involves real-life experiences, it fails to account in what way specific experiences are valuable to the student entrepreneur; that is, the type of experiential learning whose actions turn out appropriate for the level of cognition that a particular HE student cohort is expected to achieve.

The type of approximation to reality influences cognition, posing a problem of degree in the application of experiential learning. As exhibited by Neck et al. (2014), distinctive theoretical approaches to experimentation and corresponding student actions implicate unique learning outcomes, such as knowledge construction from a process of social negotiation and assessment (problem-based learning), scholarship from the interpretation and synthesis of incomplete information (evidence-based learning) or learning from perceptions and debate about an enacted reality (sensemaking). The highest levels of cognition (deep learning) are reached when conceptual comprehension and critical thinking derive from adaptive experiences that relate to students' intrinsic motivations

(Bain, 2004). Hence, it would be reasonable to expect that the closer HE students' experience is to real-life setting, the higher the level of cognition is, if learners manage to critically understand such experiences, whereby mentorship and guidance become instrumental, especially among HE students. As posed by Bell and Bell (2020, p. 992), "the combination of reflection-in-action with reflection-on-action provides a deeper understanding of the potential value and role of reflection in experiential learning". From this perspective, HE institutional setting blends with the real-life environment, which seems to suggest an interaction of two types of learning spaces for UEE: one that enhances experience like a real business, and another that facilitates analysis and reflection. These precepts have been included in the framework proposal shown in Fig. 1, which has been named Dual Entrepreneurship Learning Space (DELS).

DELS departs from the convergence of two different types of interrelated learning spaces: one led by the educator (e.g. classrooms, collaborative spaces, virtual classes, etc.) and the reality that lies beyond the university walls (emulating a business-like real-life scenario), which jointly build a type of dual learning space environment. A properly equipped educator-led location would allow for the improvement of knowledge, technical and learning skills, and other competencies such as creativity, which are exercised through the combination of both traditional and dynamic methods, including collaborative learning, gamification, role playing, project-based learning (PBL), master class, among others. Likewise, students' experience out of the university arranges for business-like experiential learning, including the development of skills and attitudes such as action orientation, perseverance, social skills, self-efficacy, self-knowledge, tolerance of ambiguity, among others, in correspondence with the need for exploration, experimentation, search for meaning and self-reflexion that characterise EA. In this business-like learning space, students still work on the class subject, but specific activities go beyond the walls of the university and into the real life, embedding students in experiences with real would-be customers. This space entails challenges for educators, who must plan for goal-directed out-of-the-university activities related to the attainment of entrepreneurial competencies, in which learners need to be self-directed and demonstrate collaborative skills with classmates. Additionally, the combination of self-directed methods and a diversity of activities in a real social environment would allow HE students to have a deeper understanding of the direct applications of EE.

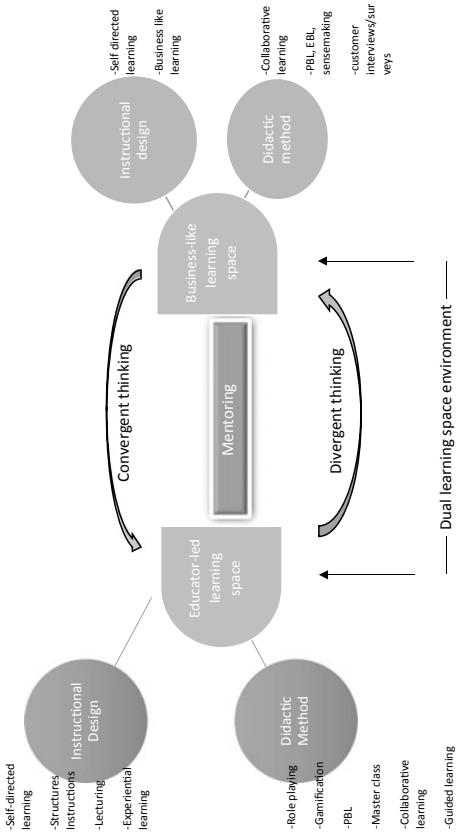

Fig. 1 Dual Entrepreneurship Learning Space (DELS) Framework

The role of an educator is fundamental in this model: on the one hand, she must mediate between teaching methods and the level of guidance to be provided, according to the maturity stage that students have attained in a particular activity and the learning space that is required. On the other hand, the educator ought to acknowledge that the business-like space cannot grant the same level of control or participation that she would usually expect in traditional or synchronous classes, implying that she would need to play a "bridging" position between both learning spaces to enable students to make the most of their experience from experiential learning.

Effectiveness requires this dual space to accommodate a combination of divergent and convergent thinking processes, which entail guidance from the educators in the role of unique mentors. Mentors help students assimilate learning possibilities that might result from the experience and activities that take place in the dual learning space. Each learning space involves its own instructional design, methods, techniques and assessments, which are selected by the educator, based on her own subjective experience in entrepreneurship and entrepreneurship education, according to the projected learning objectives and expected deliverables. This preparation is shown in Fig. 2.

The design of particular elements in the DELS framework must necessarily depart from planning learning objectives, namely, cognitive and emotional objectives, and competencies to be acquired by HE students as well as specific deliverables as defined by the scope of the EE programme. Learning objectives determine the instructional design: (1) self-directed learning material that allows students to have a fundamental understanding of concepts associated to the learning objective; (2) structured instructions to provide learners with a cognitive approach to the experience they are about to obtain; (3) a traditional lecture format. According to each design, didactic methods and techniques are selected, for example, project-based experiential activities, group collaboration, realistic business-like experiences through interaction with potential clients, etc.

These instructional design and didactic methods would depend of the educator's ability to aggregate contents and activities (Henry, 2020), according to the objectives and deliverables indicated by a particular UEE programme, whose definition sets the boundaries of the learning space in which students would experience EE. Educators would abide by such boundaries, guiding HE students in their business-like EE learning

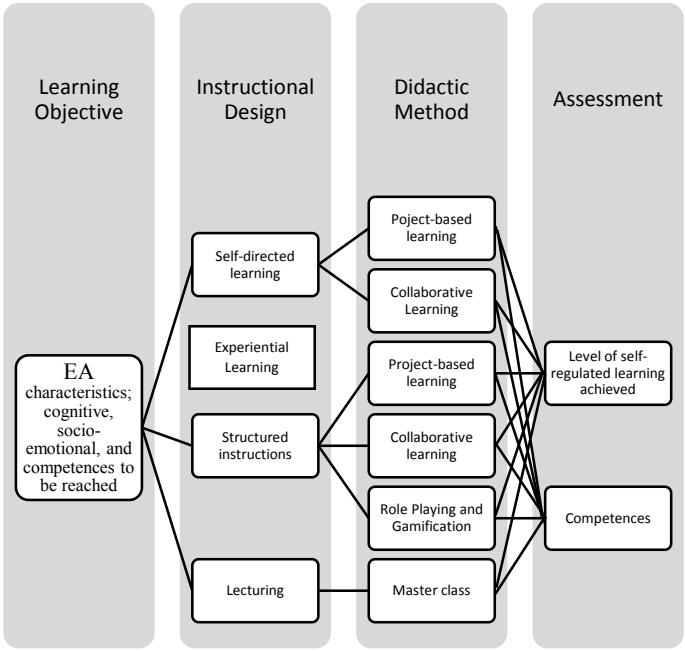

Fig. 2 Design, execution and assessment learning process

process. Continuous mentoring that adapts to HE students' characteristics in terms of internal definition skills vs. external reliance becomes instrumental, as this is the flexibility required by EA. The design of each activity must necessarily involve assessment of EE outcomes, prompting continuous improvement.

Based on the previous discussion, course activities should be designed according to the level of self-concept advancement among HE students, including opportunities for self-reflection and excitement, grounding information analysis on students' present life and work experiences—part-time jobs, faith organisations, sport teams, volunteering, etc.—but should also induce them to gain richer experience through trial and error (Dachner & Polin, 2016), which should include in their design a realistic learning experience such as that offered by immersive entrepreneurship programmes (e.g. incubators and accelerator) (Miles et al., 2017).

Additionally, a balance must be found between the challenge that activities entail and the level of support provided by educators (Magolda & Taylor, 2015), delivering opportunities for the development of divergent and convergent thinking processes, i.e. from multiple directions to one direction (Neck et al., 2014).

6 Conclusion

In view of the development singularities in young HE students, emergent adults cannot be taught as children, but do not learn as adults, nor are they self-determined in their learning process (Hägg & Kurczewska, 2021). Such adulthood is attained when young people become independent decision-makers who take responsibility for themselves (Arnett, 2000), attaining self-authorship identity, social relations and conceptual beliefs (Magolda & Taylor, 2015). UEE contributes to this objective by encouraging the development of reflective learning, which is a combination of theoretical and practical scholarship that responds not only to analytical reasoning but also to the experience of doing (Schön, 1983, 1987), that is, a cognitive process that involves divergent and convergent thinking, which evolves to reach a meta-cognition level (Mamede & Schmidt, 2004).

The framework presented in the previous section has been implemented in the HE institution where the authors of this chapter declare their affiliation, aiming to lead students to such reflective learning in that it purports to encourage a dynamic interaction between educator-led and business-like learning spaces, facilitating thoughtful realistic experiences in HE students. This iterative process piggybacks on the educator's expertise and values to derive meaning among undergraduates who are subject to developmental requirements that characterise EA.

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