

Who is the entrepreneurial educator? A transferability perspective to tease out antecedents needed to form a signature pedagogy

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Abstract

Purpose – Entrepreneurial education (EE) has grown rapidly and become important for how we prepare future generations for work. However, a less addressed piece of the puzzle is: who is the entrepreneurial educator? In this paper, our aim draws upon Palmer's (1998) idea of wholeness, where we seek to connect the two problem spaces of the role diversity of entrepreneurial educators and how the educator is closely tied to the evolutionary development of the domain in constructing signature pedagogies that could cater for the issue of a low capitalization rate.

Design/methodology/approach – We problematize on a conceptual level the entry-level personas that have been addressed in prior literature by using the processes of transferability and evolutionary theory to tease out how variability among educators could create antecedents to form a signature pedagogy.

Findings – We recognize four archetypes: the experienced entrepreneur, the entrepreneurship scholar, the academic scholar and the pedagogical expert. Our problematization on the variance of the four archetypes provides a fertile ground to engage in addressing “the elephants in the room” in EE, the capitalization rate of graduates and the importance of developing a signature pedagogy, acknowledged in other domains, to enhance legitimacy.

Originality/value – The paper provides a nuanced outlook on who is teaching in the entrepreneurial classroom and problematizes from an evolutionary perspective the potential future paths to continue staying relevant for society as well as justifying our presence as a legit domain in academia.

Keywords Entrepreneurial educators, Evolution, Transferability, Signature pedagogy, Capitalization rate

Paper type Research paper

Introduction

Entrepreneurial education (EE) has grown rapidly in higher education and policy has put faith in EE to deliver answers vis-à-vis how we prepare future generations for the world of work (Ball, 1989; Hägg and Kurczewska, 2022). Much attention has been allocated from

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scholars to push policies toward more EE initiatives, and discussions have focused largely on the issue of how to teach and what students should learn (Mwasalwiba, 2010; Nabi *et al.*, 2017). However, a less addressed piece of the puzzle that just recently has gotten a more prominent position in scholarly discussions has been: who is the entrepreneurial educator? (e.g. Foliard *et al.*, 2018; Henry, 2020; Peura and Hytti, 2022).

In this conceptual paper our aim draws upon Palmer's (1998) idea of wholeness, which strives to reduce either-or thinking and instead embrace "and" thinking, such as enterprise "and" entrepreneurship education, or venture creation "and" enterprising citizens. Based on the idea of wholeness we seek to connect the two problem spaces of the role diversity of entrepreneurial educators "and" how the educator is closely tied to the evolutionary development of the domain in constructing signature pedagogies that could address the issue of a low capitalization rate on the cohort level. Hence, our aim has two sides, first, we seek to problematize who entrepreneurial educators might be and what different roles these individuals have been assigned in the scholarly discussion to tease out how specific resource profiles could be transferable to find common ground in our domain. Second, based on our elaboration on educator archetypes and the idea of transferability to find a common ground we problematize from an evolutionary perspective how both pedagogical content knowledge and signature pedagogies become central to addressing the issue of capitalization rates (Gladwell, 2015), which in our view is "the elephant in the room" regarding how to enhance the legitimacy of the domain (e.g. Hägg, 2023).

From the emerging literature on the entrepreneurial educator, multiple roles have been assigned. Here, we can see discussions of the guide-on-the-side, the mentor, the pracademic, the sage-on-the-stage, as well as the facilitator – the meddler-in-the-middle – that orchestrates the process of learning (e.g. Foliard *et al.*, 2018; Henry, 2020; Toding and Venesaar, 2018). However, is it possible for one individual to take on all these varied roles and might there be cues in the different roles addressed regarding how to transfer knowledge, skills and abilities from one role to another? This would seem important in terms of building broader educator competences and/or dispositions that may meet or at least prepare educators who both are in the domain or about to enter the broad landscape that we call EE (see Pittaway *et al.*, 2023 on doctoral students and the educator role). Based on the initial question – who is the entrepreneurial educator? – and the problem space highlighted, the paper develops and discusses a potential typology that caters to the transferability of roles oftentimes equated to the entrepreneurial educator. By addressing transferability, we do not seek to find an ideal type of educator but instead, provide a discussion on how to embrace the variability of starting positions that educators bring when entering and engaging in EE.

The discussion on entrepreneurial educators then leads us to the second part of the aim to move toward wholeness (Palmer, 1998), which in our present context focuses on how transferability in connection to the evolutionary process that is starting to emerge may act as a catalyst for the development of a signature pedagogy that could then cater for the issue of capitalization rate (Gladwell, 2015). In the context of EE, capitalization rate refers to the percentage of students graduating from forms of EE [1] who have the ability to genuinely create new value in a number of situations. Since Jones (2011) reported that only around 20% of graduates in the field of EE (globally) graduate with evidence of new value-creation activity, there has been scarce new research that contradicts this level of activity. In a study by Alsos *et al.* (2023), it was acknowledged that roughly 44.9% of graduates from highly specialized master programs in venture creation engage in entrepreneurial activity (running or starting their own business) and another 31.3% engage in intrapreneurial careers. However, this type of program is not the norm but an indication that when specializing and having highly intrinsically motivated students there is potential to increase capitalization rates. Hence, the suboptimal capitalization rates currently present in the domain of EE represent a true problem space that our current focus is located within. We argue that to tackle this "elephant in the room" a focus on reaching more consensus in the domain and coming to terms regarding what is to be retained to educate entrepreneurial graduates needs more scholarly attention.

By opening this discussion and departing from the heterogeneity of entrepreneurial educators, we contribute to and aid the domain in progressing how we understand EE in the context of higher education, which then provides fuel for the community to develop a baseline signature pedagogy leading us toward higher capitalization rates as addressed by Gladwell (2015). In essence, EE (like other disciplines) must live within its means, i.e. be accountable at graduation vis-à-vis student capability, rather than operate in a future-oriented world comprised of optimistic hope.

The paper is structured as follows. To start, we discuss the types of entrepreneurial educators found in our domain. From the emerging literature on entrepreneurial educators, we build a discussion on educator archetypes followed by a discussion around the concept of transferability. We then discuss the evolutionary development related to resource profiles in this specific context to provide a connection to pedagogical content knowledge and signature pedagogies. The paper then moves into a consolidating discussion on how transferability can make room for synergy and increased insights on how to create movement between the educator archetypes, which we address as mindful educators. The paper ends with a conclusion and implications for future research.

Prior research on the entrepreneurial educator

At first glance, entrepreneurial educators – like our students – represent a heterogeneous group (Foliard *et al.*, 2018; Peura and Hytti, 2022; Wraae and Walmsley, 2020). They represent different teaching experiences and teaching philosophies, and come with or without experience in starting and running a business (Henry, 2020; Jones and Matlay, 2011; Toding and Venesaar, 2018). But trying to answer who the entrepreneurial educator is reveals a web of complexity because acting in the role of an educator not only depends on who the educator is as an individual but also on the context in which the educator operates.

To understand the role of the entrepreneurial educator, we have chosen to conduct a literature search around research on entrepreneurial educators in higher education. Given the scarcity of research, we build the continuing discussion upon the findings of Wraae *et al.* (2022) focusing on educator identity. Given the importance of identities and the scarcity of studies (e.g. Foliard *et al.*, 2018; Wraae *et al.*, 2022), the continuing discussion draws mainly on six selected papers that have provided different perspectives on the role of the entrepreneurial educator (Table 1). These perspectives act as the foundation for a discussion about who the entrepreneurial educator is. Given the limited scholarly attention that the educator has had in the past research discussions (see, e.g. Foliard *et al.*, 2018), there is not enough breadth to conduct a systematic review and instead our continued discussion around the archetypes of entrepreneurial educators will be informed primarily by the different perspectives addressed from Table 1 and papers that directly speak to the topic of the entrepreneurial educator. We are aware that this may limit our reach, but it also provides clarity when addressing perspectives on the entrepreneurial educator that have been voiced in research discussions.

While most research in EE focuses on pedagogies and student development, the selected studies (Table 1) acknowledge that to understand “the how” in the entrepreneurial classroom we need to include the educator in our discussion and studies. As Toding and Venesaar (2018) state, “the entrepreneurial educator is a key player in teaching practices.” Their reasoning is that for students to learn the necessary entrepreneurial skills, there is a requirement for certain pedagogical choices. But they also argue that the entrepreneurial educator plays different roles. Toding and Venesaar’s (2018) argument on roles aligns well with the reasoning put forward by Wraae and Walmsley (2020) who describe the entrepreneurial educator as a shaper of the future entrepreneurial landscapes.

The selected studies paint a picture of how entrepreneurial educators plan and execute their teaching in an environment that is dependent on various stakeholders in different

Quote:	Author(s):
“... teachers are not seen as providers of knowledge but as co-learners and role models who support student learning. They become experts who consider teaching a problem-solving context in which they must come to understand the meaning of the students’ ideas rather than just correct them”	Toding and Venesaar (2018, p. 699)
“The role of teachers is evolving – they are becoming operators, central decision-makers and facilitators”	Foliard <i>et al.</i> (2018, p. 10)
“... the role of the entrepreneurship educator and what they do in the classroom is shaped by the dialogic relationships which constitute the EE landscape; the situatedness of the classroom cannot be ignored if we are to understand what goes on in the classroom”	Wraae and Walmsley (2020, p. 266)
“... being allowed to take on the unique aggregator role, the entrepreneurship educator can take account of the educational context and ensure individual student interests, experiences, motivations and learning styles are catered for”	Henry (2020, p. 17)
“Academic teachers make sense of themselves and events by socially negotiating and mutually co-constructing the subjective meanings related to entrepreneurship”	Peura and Hytti (2022, p. 1)
“The educator therefore plays a significant role in developing and inspiring the entrepreneurial mindset, skills, and concepts of the students through entrepreneurship education. The actual approaches differ depending on the learning objectives of the educator, how the educator interprets these objectives, and how these are translated into the teaching process”	Wraae <i>et al.</i> (2022, pp. 12–13)
Source(s): Table created by the authors	

Table 1.
Perspectives on the
entrepreneurial
educator

contexts (Wraae and Walmsley, 2020) with both business and non-business students (Peura and Hytti, 2022) and how these interactions contribute to building the legitimacy of the entrepreneurial educator (Foliard *et al.*, 2018).

From these studies, we gain knowledge that entrepreneurial educators can be researchers, educators, as well as practitioners (Foliard *et al.*, 2018). Their educational and/or entrepreneurial background and expertise vary and the backpacks of experience that they bring with them influence their perceptions and role inside the entrepreneurial classroom (Henry, 2020; Wraae *et al.*, 2022). Moreover, their backgrounds also shape their roles outside the classroom walls as well. The entrepreneurial educator also often carries the role of coordinator at a more institutional level. This positions entrepreneurial educators in relation to the educational institution and to other actors, which also leads to deliberations on what role(s) they play in a broader context (Foliard *et al.*, 2018; Wraae and Walmsley, 2020). A common denominator for entrepreneurial educators is trying to find their own role and meaning. Simply put, to make sense of their position and place in relation to entrepreneurship and their educational institutions (Peura and Hytti, 2022).

Acting in the entrepreneurial classroom represents a multiplicity of possible educator roles that has been voiced previously ranging from the “sage-on-the-stage, to the” “guide-on-the-side” and into the “meddler-in-the-middle” (McWilliam, 2009). However, on a more recent note there are studies that discuss the entrepreneurial educator from a teacher-, network- or student-focused approach (Wraae *et al.*, 2022), where different views on how educators see themselves also implies different roles taken in the classroom. When asked, entrepreneurial educators view themselves in the role of mentors, coaches or facilitators (Wraae and Walmsley, 2020) while others prefer a role in the shadows and even use the terminology of being a “midwife” to describe how the educator’s role also relates to planning the educational process (including teaching activities and the process from start to finish) before the students even enter the classroom (Wraae, 2021). As acknowledged above, there are a multitude of roles assigned to being an entrepreneurial educator, but we must also remember that the role

of the entrepreneurial educator relates to the purpose of teaching entrepreneurship. This makes it critical for entrepreneurial educators to understand their role and purpose when developing and delivering EE (Jones, 2010).

If we look beyond the contextual boundaries of the classroom walls, also the rapid and ongoing societal changes influence the relationship between the student and the entrepreneurial educator (Toding and Venesaar, 2018). The dialogic relationship that moves beyond the traditional roles of teacher and student in a classroom setting implies that both parties must engage to accommodate those changes (Wraae and Walmsley, 2020). This assumes that the changes that we are seeing also create challenges for taking on the role of an entrepreneurial educator. Some are related to the entrepreneurial classroom, for instance, the challenge of how getting students to put their learning into practice and creating a safe atmosphere to liberate the student's potential to engage in the oftentimes uncertain learning processes that move beyond the safe haven of the classroom as they have become used to (Wraae and Walmsley, 2020). Here, it is to move away from traditional lecture formats and guide students on a journey into the unknowable future (Hägg and Jones, 2021). Other challenges relate to "the how" of teaching entrepreneurship in terms of content (Henry, 2020). From an institutional perspective, certain entrepreneurial learning approaches might not fit the general understanding of how to deliver teaching and learning (Bandera *et al.*, 2021).

Amid these contextual factors and operating in their own ecosystem, each entrepreneurial educator contributes individuality and, according to Fayolle (2013) commitment, passion, and intellectual and emotional investment (p. 695). It might be possible to change the educators' understanding of both teaching and learning processes (Toding and Venesaar, 2018). However, the perception of how to teach is closely related to each educator's personal values and understanding of teaching (Wraae *et al.*, 2022). For instance, if the educator views his or her role as being at the core of the learning process by transferring knowledge to the students the emphasis is on values like tradition and discipline (Wraae *et al.*, 2022). The entrepreneurial educators' beliefs in their capabilities to obtain goals correspond with Zimmermann and Cleary's (2006) perception of agency. They link personal agency with being self-regulative and using that self-regulative capability to reach goals.

"[T]his concept of agency highlights that actors always act by means of their environment rather than simply in their environment [so that] the achievement of agency will always result from the interplay of individual efforts, available resources, and contextual and structural factors as they come together in particular and, in a sense, always unique situations. (Biesta and Tedder, 2006, p. 137, in Priestley *et al.*, 2015, p. 3).

Educator agency is the product of different iterative aspects that stem from past experiences like personal capacity, beliefs and values (Priestley *et al.*, 2015). Interestingly, personal experience is more significant than professional experience, and likewise for professional experience versus education when the educator agency is shaped (Priestley *et al.*, 2015). The profession of being an educator implies ambiguity due to the context, contestable aims, and not least "emotional politics" all inherent in the daily (difficult) decision-making process, which also includes compromise and conflicting emotions (Priestley *et al.*, 2015).

As such, the agency is something the entrepreneurial educator achieves through interaction with the surroundings (Biesta and Tedder, 2006). A notion that leads back to the role of the entrepreneurial educator raised by both Fayolle (2013) and Hannon (2018) is that we might need a new type of entrepreneurial educator that moves beyond the static characteristics that we have so far addressed. Hence, in the following part, we will seek to address how four different archetypes of educators provide potential transferable knowledge, skills and abilities that could aid in finding what Fayolle and Hannon speak of as a "new (entrepreneurial) educator." Although we have no intention to argue for "the educator" as we do not think that such an "übermensch" [2] exists, but rather we want to

speak about the potential development of educator agency that can be developed through an openness toward transferability that is found in the variance of educators in the context of EE.

Entrepreneurial educator archetypes

In EE research, there is a continuous discussion on who is actually deemed fit to teach entrepreneurship to prospective learners in higher education primarily. In this discussion that has been ongoing since the 1980s and the arguments laid forward by Gibb, Ronstadt, Sexton and Bowman, and by Johannisson to name a few we can see various arguments for and against certain personas. There has been an overly argumentative voice that only those that have prior experience may be able to actually teach how to engage in entrepreneurial activities, whilst there has also been a resistance that a more important skill has been in the pedagogical process for how to learn, and there have also been voices arguing that it is not how they learn but what they learn that will impact whether they pursue entrepreneurial careers afterward. Entrepreneurial expertise can enrich students' learning depending on where the students are in their entrepreneurial learning process.

However, despite the continuing discussion on who might be deemed best fit for teaching we want to alter the conversation toward how we might best meet different personas that will, regardless of whether they are the perfect fit or not, engage in teaching learners in subjects tied to EE. Flipping the conversation toward transferability among educators may also move us toward consensus-seeking and from an evolutionary perspective, retention of best practices that lead, in the prolongation, to the establishment of potential signature pedagogies.

Here, we want to bring forward the reversed argument that various personas that engage in teaching EE bring something different to the table and it is through leveraging these differences that we can find areas of development to improve one's abilities to teach this versatile subject that includes the entire realm of pedagogical content knowledge (Shulman, 1986), vis-à-vis the actual experiences of students globally. Based on the educator literature and our engagement within the field, we have on the aggregate recognized four archetypes of entrepreneurial educators that regularly engage in teaching different subjects and topics located under the umbrella of EE. The four envisioned entrepreneurial educator archetypes are:

- (1) *The experienced entrepreneur* – the practitioner that comes in and in the most basic form talks about his/her own startup process and might also be seen as the current entrepreneur in residence who provides authentic coaching/insights on how to develop entrepreneurial opportunities into viable businesses (e.g. [Blenker and Christensen, 2010](#)).
- (2) *The entrepreneurship scholar* – the majority of educators that we meet at specialized conferences (3e, USASBE, ISBE, RENT, Babson, AoM ENT Division etc.). It is the provider of content knowledge (subject experts in entrepreneurship, family business, small business etc.) and someone that seeks to engage in developing new teaching practices based on some current ideas (largely influenced by early ideas on learning experientially) (e.g. [Henry, 2020](#)).
- (3) *The academic scholar* – the non-subject expert that is given the role of including entrepreneurship or enterprising into their curricula and is faced with the task of both understanding the what of entrepreneurship as a subject matter and the how of EE, whilst simultaneously being a novice in the domain. The academic scholar brings new perspectives and abilities to integrate entrepreneurialism into new subject domains (e.g. medicine, law, engineering, arts etc.) (see for instance [Hämäläinen et al., 2022](#), on different teacher's perceptions of EE).

- (4) *The pedagogical expert* – often found in the area of pedagogical development or focused on pedagogical processes in primary and secondary school settings. Here, there is a strong focus on seeing entrepreneurship as a pedagogical approach (e.g. Gibb, 1987; Jones and Iredale, 2010; Kyrö, 2015; Leffler and Svedberg, 2005), and perhaps as Ball (1989) discussed, the broad development of enterprising citizens.

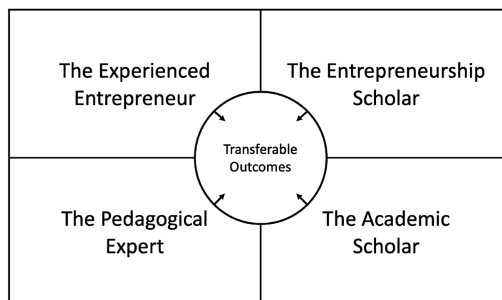
Our problematization is rather straightforward. As the search for an ideal archetype or persona that will master the variation of how to teach EE is always going to reach a dead end, we flip the table and instead argue for embracing diversity in our educator community to build from our different starting points as acknowledged in our four envisioned archetypes (see also Figure 1).

Working in an ever-changing educational environment where students are more and more focused on developing transferable skills (Cooper *et al.*, 2004) and where entrepreneurship education has become more popular, the role of the entrepreneurial educator logically becomes ever more demanding. We might need to view the entrepreneurial educator as a “unique aggregator of content” (Henry, 2020, p. 1). To remedy this, we seek to address what transferable knowledge, skills and abilities each archetype brings to the table and what they need, to take on the versatile role of an entrepreneurial educator.

In the remainder of the paper, we will seek to provide a point of departure regarding how understanding transferability could create a base for addressing – “the elephant in the room” – the discussion of capitalization rates, which in our view is tightly connected to creating transferability of pedagogical content knowledge among our educator archetypes that binds us all to the domain. We argue that this is tied to an evolutionary development based on a low internal willingness to *select* among the *variance* to reach some *retention* of practices that could create signature pedagogies for the domain at large. Before we start teasing out the specificity of these archetypes, we will address two key parts in our problematization: transferability as a term and the notion of resource profiles to understand our evolutionary approach.

Transferability and its relation to our entrepreneurial educator archetypes

We speak of transferability with direct reference to the views of Barnes *et al.* (2005), that while generalizability is often claimed by academic researchers, transferability is something applied by the readers of scholarly academic research. The former relates to statistical probabilities, and the latter relates to the connections made between the elements of someone else’s practice and our own unique teaching and learning contexts. These differences are often influenced by the nature of research design, with richer case studies often accessing the



Source(s): Authors’ own creation/work

Figure 1.
Four archetypes and
transferability
outcomes

context of study settings and processes that allow new insights to be informed that may be independent of actual research findings. By embracing the importance of transferability, we are able to celebrate the inherent *variance*, rather than seeking to average it away in an attempt to increase generalizability. Thus, we see transferability as a key driver of the development of pedagogical content knowledge (Shulman, 1986) in that it underpins the ability of individual entrepreneurial educators to recognize their own practice relative to the practices of others in their domain, and review and develop their knowledge of teaching and learning.

Our concern for the problem space, and related to the second part of the aim, is linked to the collective speculation about the ongoing evolution of the domain of EE (Fayolle, 2013; Hägg and Jones, 2021; Hägg and Kurczewska, 2022; Jones, 2019; Ramsgaard and Blenker, 2021). We may ask, is the domain evolving in such a way that a signature pedagogy (Shulman, 2005), as developed in other domains of education (e.g. engineering, science, law, education, medicine, etc.), can confidently be expected to emerge? Or is the domain drifting aimlessly, unable to find a legitimate path in which its identity is clear to all stakeholders? Drawing on Campbell's (1969) socio-cultural evolution processes of *variation*, *selection* and *retention*, we can make the following general observations.

First, any current consideration of the entrepreneurial educator must account for a high degree of *variation* in the type of person and roles performed. Second, there is very little external *selection* from accrediting bodies or qualification requirements influencing the composition of who gets to teach (or not teach) entrepreneurship or enterprise in higher education settings. This lack of external *selection*, also addressed as downward causation, extends down to lower levels where the nature of teaching practices is highly unregulated. For example, while certain pedagogical tools and activities (e.g. business plans, opportunity recognition processes and guest lectures from seasoned entrepreneurs) have been *retained* across the domain's lifespan [3], other tools and activities (e.g. lean startup, effectuation and business model canvas) have been widely incorporated into the domain (e.g. Mansoori and Lackeus, 2020; Shepherd and Gruber, 2021) with little or any empirical evidence from the learning sciences regarding their impact on student learning (e.g. Günzel-Jensen and Robinson, 2017; Sarooghi *et al.*, 2019). This is something that would not occur easily in those other domains of education noted above where the presence of a signature pedagogy ensures the *retention* of teaching practices that underpin the capitalization rate (i.e. "the percentage of people in any given situation who have the ability to make the most of their potential" Gladwell (2015)) in those educational domains. We contend that the capitalization rate associated with any teaching discipline is a good metric for contemplating the contribution it makes to society vis-à-vis the expected contribution of its learners' post-graduation.

The positive here is that EE is a domain of education in which many *variations* are welcomed, tolerated and hold the potential to positively influence the domain's capitalization rate. Alternatively, in the absence of a "jealous God of natural selection . . . [that] . . . sets up his tribunal" (MacIver, 1931, p. 50), many *variations* remain until such time as they actually demonstrate their value in practice or are replaced by newer ideas. The downside here is that such freedom works against the development of standards and norms from which any possible signature pedagogy would be fashioned. Motivated by the need to increase the capitalization rate associated with the domain of EE so that the domain can demonstrate its broader value to the societies it serves (as do engineering, science, law, education, medicine, etc.), we argue that one important first step in the domain's evolution is to take advantage of the current *variations* within the types of entrepreneurial educators present in the domain.

We argue that this can be done by contemplating a process of transferability that consolidates those factors that logically have the potential to increase the capitalization rate, which is often noted as being as low as 20% (i.e. only 20% of students become bona fide entrepreneurs within the immediate years post-graduation of their higher education studies)

(Jones, 2011). In the 2021 GUESSS report (Sieger *et al.*, 2021), it is reported that students' career choice intentions to become an entrepreneur directly following education is as low as 17.8% but it rises to 32.3% in their 5-year plan. This is not actual behavior and still the numbers would be considered low in other domains of education such as Law, Engineering and Medicine. Although entrepreneurial careers have been broadened in contemporary discussions (e.g. Alsos *et al.*, 2023), there are few studies that have provided clear evidence on what the capitalization rates look like besides some graduate studies on highly specialized entrepreneurship programs (e.g. Aadland *et al.*, 2023; Alsos *et al.*, 2023). Hence, contemplating how to create a common ground to increase the capitalization rate is key for moving forward and developing the field, which also would address alternative entrepreneurial careers. But without any focused evolutionary process that increases the *selection* and *retention*, we will be stuck in a process built largely on *variance* without the consolidating and organizing process to develop signature pedagogies.

Resource profiles connected to our archetypes

Since the original work of Greene *et al.* (1997) that was later refined by Aldrich and Martinez (2001), we equate the notion of a resource profile as the indispensable forms of capital (i.e. human, social and financial) that individuals should hold relative to a specific opportunity space to succeed. From an evolutionary perspective (Aldrich, 1999), we can see how such forms of capital can influence the nature of both internal and external *selection* surrounding one's actions, as well as the likely presence of intentional and/or blind *variations*.

Each of our four archetypes is embedded in historical contexts that inform us, if we care to look, regarding what they believe, know, and can-do vis-à-vis contemporary educational practice. Kegan (1982) speaks to the developmental challenge associated with individuals in general, noting that one's capacity for development is by recognizing both the historical cultures we are embedded in and the possibilities of individuation as we develop as individuals. Therefore, we must recognize that our archetypes could never converge to a similar point due to the significant differences present and remaining in their embeddedness in society. So, we again draw attention to the inherent variation that each of our archetypes contribute to the domain of EE and the different evolutionary trajectories they may or may not remain on.

In a sense, we view EE as a community space where different types of educational populations seek legitimacy for their institutional and societal contexts. At these lower levels, educators do often speak of experiencing external *selection* operating directly upon their teaching practices. But at higher levels (e.g. countries and regions), there seems to be little *selection* guiding the domain toward any specific signature pedagogy. Under such circumstances, what is known, who is known and what resources can be acquired (i.e. one's resource profile) become the tools for one's own development.

However, as Palmer (1998) notes, it takes courage to embrace those factors that can entangle our teaching practices. It also requires an increasing degree of self-development to develop one's selfhood, given that the "self is a haunting problem" (Allport, 1961, p. xvi) that gets in the way of most educator development. Nevertheless, we position the development of selfhood, defined as "those elements of the human experience that stem from the capacity to self-reflect and regulate behavior" (Hoyle *et al.*, 1999, p. 9), as a crucial mechanism through which entrepreneurial educators can learn about, adapt to and change aspects of their environment. The caveat here is that individual entrepreneurial educators must develop sufficient mindfulness to be aware of the varied teaching practices in the global domain of EE and be willing to transfer into their repertoire new methods of teaching. For example, the insights gained from venture creation programs, although far away from the ideas of enterprising citizens, has still teaching methods that can be of value when educating in

enterprising education. Likewise, personal development and the focus on authentic experiences when taking out the business practice have important insights for venture creation-oriented teaching as the development of selfhood is of equal importance. In these examples, also the existing and future resource profiles become central to understand the potential transferability among the entrepreneurial educator archetypes. That is, entrepreneurial educators will act as agents of change, often by chance, often through deliberate engagement with the scholarly literature. What matters is that they recognize the nature of their teaching context, and their ability to shape those local *selection* forces related to their learning and teaching environments.

So, we see a co-evolutionary model of development occurring in EE. On the lower level, we have many individual educators plying their practice, seeking legitimacy locally, loosely belonging to certain entrepreneurial educator archetypes (see [Landström et al., 2022](#) on the social structure of the domain). Given that individuals do not share or experience a common environment, we do not default to crude notions of natural selection but rather acknowledge the discrete and varied types of selection environments they experience, best described as selection neighborhoods ([Brandon, 1990](#)). On the higher level, we have the aggregate domain of EE struggling to gain and/or hold onto legitimacy as questions begin to arise, across time and space, about its purpose, methods, and more recently, the value of the domain vis-à-vis its capitalization rate (e.g. [Hägg, 2023](#)). For the domain to move forward, there needs to be broad interest developed in understanding the nature and importance of codifying the domain's pedagogical content knowledge ([Shulman, 1986](#)). This would create a platform from which to develop a domain-informed signature pedagogy.

However, the potential of developing a domain-informed signature pedagogy needs to occur initially where the process of selection in EE remains highly problematic, with little or no external selection exerted on entrepreneurial educators through regulatory bodies such as we find in the domains of engineering, medicine, law or accounting. Such a situation is aptly described by [Brandon and McShea's \(2020\)](#) zero-force evolutionary law (ZFEL) which predicts that “in any evolutionary system in which there is variation and heredity, in the absence of natural selection, other forces, or constraints acting on diversity and complexity, diversity and complexity will increase on average.”

To bypass this obvious conundrum, we propose a simple microevolution and macroevolution approach ([Sepkoski, 2008](#)) that postulates that micro global EE activity (by informed scholarly educators) will produce greater upward causative selection pressure on the macro global EE activity (i.e. policymakers etc.) than vice versa. The caveat is that we are betting on the emergence of the mindful EE educator to produce such upward causation through their various forms of scholarship that increase the understanding of context and practice in EE. So, it is upon the inherent presence of varied teaching practices and contexts that the mechanism of transferability can act to consolidate pedagogical content knowledge of EE. This process of upward causation in turn also holds the potential to contribute to the development of a domain-informed signature pedagogy that improves student learning outcomes, thereby logically also improving capitalization rates in EE over time.

Discussion

Building on the above sections we will in this discussion contemplate the complementary co-evolutionary interplay between the development of each entrepreneurial educator archetype's selfhood (i.e. agency) and the ongoing development of the domain of EE. We see these evolutionary processes unfolding not from a process of one-off “competence” transfers between the archetypes, but rather through a process of continuous reciprocal exchange. That is, we see the domain's future evolution as in the hands of its current educators' own development, more so than dependent upon the natural arrival of events

(such as consensus). Let us explore how such transferability could lead to the evolutionary events postulated above.

Through ever more sophisticated scholarly activities the resource profile of each educator shifts, potentially increasing their ecological versatility or the degree to which educators “can fully exploit the resources in their local environment” (Mac Nally, 1995, p. 19). At present, we do not see sufficient sophistication in such localized action to produce the required upward selection pressure on the levels of macro activity. We postulate that eventually an increasing level of transfer, among our educator archetypes as addressed previously and illustrated in Figure 1, will lead the domain to form consensus, specialization and ultimately, a higher capitalization rate.

Therefore, in no particular order, we see the knowledge of the *pedagogical expert* being utilized by the *experienced entrepreneur* to embrace new forms of teaching and learning, such as the cognitive apprenticeship approach of Collins *et al.* (1991), which most certainly is taking place momentarily. In such a situation, the *experienced entrepreneur’s* ability to model, scaffold and coach entrepreneurial processes in ways that develop the required cognitive structures to act entrepreneurially in novel contexts could be enhanced as the nature of their human capital is expanded. We can also imagine the *pedagogical expert* being able to move closer to understanding the nuances of what should constitute pedagogical content knowledge in EE by tapping into the realism of the *experienced entrepreneur*, the varied learning contexts experienced by the *academic scholar*, and by understanding the subject-domain expertise of the *entrepreneurship scholar*. Likewise, we can envisage the work of the *academic scholar* working in multiple discipline contexts being advanced through developing a greater understanding of how signature pedagogies and transformative learning occur in other domains of education by gaining insights from the *pedagogical expert* and the *entrepreneurship scholar*. Finally, we can imagine how the domain-specific knowledge of educators in other domains that embrace EE (Penaluna and Penaluna, 2021) via their *academic scholars* could be directly beneficial to *pedagogical experts* focused on advancing teaching and learning frameworks for EE.

From this limited list of transferability examples, it would seem logical to assume that until such transference is continuously present in the field of EE, genuine forms of consensus, a precondition for the development of sound pedagogical content knowledge and/or initial signature pedagogy (see Jones, 2019; Peschl *et al.*, 2021; Ramsgaard and Blenker, 2021), will be at best, sporadic and fleeting. This suggests that an agenda that feeds into transferability outcomes would be most likely to spark the evolutionary movement we foretell and illustrate in Figure 2.

A logical place to begin this process would be to revisit Fayolle’s (2013) call for evidence-based entrepreneurship. This would not only lead to the domain taking stock of existing assumptions of what works and why, but also embrace opportunities for specialization in topical areas such as sustainable-, social-, intra-, immigrant-, commercial- and institutional entrepreneurship as well as more domain-specific areas like psychology, sociology, strategy and pedagogical knowledge.

Conversely, we see the need for more convergent processes to bring conformity to EE through which initial types of signature pedagogies (Jones, 2019; Shulman, 2005) can start to emerge. A potential starting point for this would be to tease out transferable outcomes that we can envision from different educators and what they “bring to the table” in the form of insights into the field. Logically, and as in other professional learning contexts, it is through the emergence and retention of signature pedagogies that the capitalization rate for domains of education increases and is retained over time (Shulman, 2005).

We posit that this is the current role of the scholarship in EE, and more importantly something that is based on a community of practice. Since, without the emergence of forms of consensus around pedagogical content knowledge (Shulman, 1986) the nature of

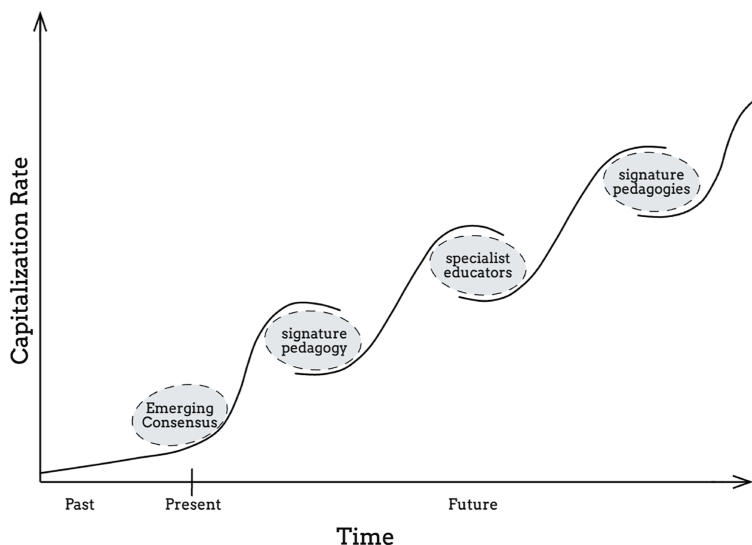


Figure 2.
Projected evolution of
signature pedagogies
in EE

Source(s): Authors' own creation/work

teaching and learning practice in EE will continue to diversify as the endless permutations of educator types, teaching contexts, institutional aims and student needs interact in ways that globally, are undirected. The next section seeks to imagine how the future evolution, departing from our discussion around embracing transferability among our four archetypes, could occur in ways that lead to the development of signature pedagogies and the benefits that it could produce, which could potentially then lead to an increased capitalization rate in EE.

An evolutionary take on moving toward a signature pedagogy in EE

When one thinks of the emergence of engineering as a professional domain of education, we also immediately recognize the domain's sub-fields, such as chemical, civil, electrical, mechanical, structural etc. Indeed, it is not possible to imagine the domain of engineering evolution without such specialization having taken place. In contrast, and despite recognition of many types and elements of entrepreneurship (e.g. venture creation, social, corporate, innovation, finance, strategy, small business, eco, intrapreneurship, enterprising etc.), by and large, EE remains organized along generalist lines, with most educators expected to know a lot about such diverse contents and processes. This hints at the nature of EE as still being in the early phase of its evolution as a domain of education, despite recent arguments that the topic is much older than what we often discuss (Wadhvani and Viebig, 2021). On this basis and with our previous discussion on the role that transferability among educators plays, we seek to address the second part of our aim where we problematize from an evolutionary perspective how both pedagogical content knowledge and signature pedagogies become central to addressing the issue of capitalization rates.

The nature of our speculation is illustrated in Figure 2. The two axes represent EE's increasing capitalization rate and the domain's timeline. We argue that until sufficient consensus around what constitutes pedagogical content knowledge (Jones, 2011; Shulman, 1986) in the domain of EE, it is unlikely that a domain-informed signature pedagogy will

emerge (see also [Ramsgaard and Blenker, 2021](#)). However, if such consensus does emerge an initial signature pedagogy could be possible that tends to introduce convergent (or directional) selection pressure within an overall generalist domain of education. However, such outcomes despite their importance would be expected to have little impact on the low capitalization rate in EE.

The logic of our thinking here is quite straightforward. A signature pedagogy developed for a generalist domain of EE still likely requires its educators to be a “Jack of all trades” and master of none, and therefore student learning outcomes would remain tethered to the limitations of those generalist educators. Some common grounds can already be envisioned in the evolution of the field, including underlying teaching practices (simulations, use of guest lecturers, live cases and different kinds of project work) that have generated some consensus (see [Mwasalwiba, 2010](#); [Pittaway and Cope, 2007](#)). But also, common grounds can be seen in the active learning methods that have been advocated based on experiential-, problem-based-, social- and action-learning ([Gibb, 1987](#); [Haneberg and Aadland, 2020](#); [Higgins and Elliott, 2011](#); [Howorth et al., 2012](#); [Johannisson, 1991](#); [Neck et al., 2014](#); [Rasmussen and Sørheim, 2006](#)), and the importance of experience and reflection for entrepreneurial learning to take place ([Hägg, 2021](#); [Jack and Anderson, 1999](#); [Jones, 2009](#); [Neck and Greene, 2011](#); [Neergaard et al., 2021](#); [Wraae et al., 2021](#)). Hence, there is an emerging consensus that speaks toward both *selection* and *retention* for the field at large that could lead to what [Jones \(2019\)](#), as well as [Ramsgaard and Blenker \(2021\)](#), advocate in the strive to address the issue of signature pedagogy for EE that may be a next evolutionary step. However as noted, the domain of EE lacks the external regulatory mechanisms to neatly codify such emerging consensus into an accepted set of curricula. Instead, the field is largely reliant upon the random transfer of knowledge and skills between educators whose individuality brings high levels of *varied* practice and scholarship to EE (seen through specialized conferences).

Importantly, the development of a signature pedagogy is not envisioned to be a one-size-fits-all idea, but rather a means to develop progression between years and also generate a common ground for deeper discussions on how to elevate the present knowledge frontier and build foundations for future entrepreneurship scholars that enters the field. Something recently addressed by [Pittaway et al. \(2023\)](#) in relation to cognitive apprenticeship among PhD students.

But as we move forward in our speculation of the evolution to address the “elephant in the room” of the domain’s capitalization rate we argue that for the domain to truly realize its potential, additional phases of specialization are required within which the demands of educator specialization would increase in terms of subject matter depth. Tailored toward topics like intrapreneurship, social-, sustainable-, societal- and tech-entrepreneurship to name a few, rather than subject matter breadth. The nature of such individual development vis-à-vis educator effectiveness has been the focus of [Otache \(2019\)](#) as well as [Schuhmacher and Thieu \(2022\)](#), with the entrepreneurial educator’s background, teaching approach and context of increasing interest. We view these individual-level inputs as being key variables in the ongoing evolution of the domain.

The phase of educator specialization we envision will take place in the medium-term future, which then will be the seeds for the development of several signature pedagogies in specific sub-fields (i.e. finance, psychology, strategy etc.). As a result, the opportunities for students to learn more deeply and in ways coordinated with their immediate needs ([Jones, 2019](#)) would make possible the effective implementation of learning in their here and now ([Whitehead, 1929](#)), thereby increasing the capitalization rate of EE. Nevertheless, in comparison to other domains of education, there would most likely always be a limit on the uppermost level of EE’s capitalization rate, but as specialization increases the likelihood of clarity regarding entrepreneurial career path would naturally increase as well.

Conclusion

The aim when we started to craft this paper and explore the idea of transferability among and between educators was not to move into a discussion of capitalization rates or signature pedagogies or pedagogical content knowledge, but the evolutionary movement in our deliberations led us to perhaps a more intriguing problem space. We have in the paper increasingly sought to address what we see as an “elephant in the room” (the almost non-existent discussion of capitalization rates) in scholarly work on EE. This might be due to the immaturity of the domain and perhaps our argument is rather expected to emerge in a close-by future.

Throughout the article, we have sought to be mindful not to be too specific on the micro contextual issues of what type of EE we focus on as our argument is that we are still too early in the evolutionary development to make such contextual distinctions on a general level. Such differences need to withstand the scrutiny of higher forms of scholarship found in other more advanced domains of education. Publications that self-report on one’s practice without proper consideration of context, scholarship and the broader educational literature should not achieve the status of EE research but rather disseminate scholarship. We are aware that this can be seen differently by others, but so far little evidence has emerged in the scholarly literature that justifies the emergence of signature pedagogies and little consensus has been reached on what to include in EE. Although some consensus has been reached on how to create learning processes (e.g. Hägg and Gabrielsson, 2020), little consensus has been seen when addressing the why of educating in EE (e.g. Fayolle, 2013). A potential would be seen in the increasing publication standard for EE (small steps in the right direction have been found in research (e.g. Gabrielsson *et al.*, 2020)), which are important for evolutionary development. However, the versatility of the scholarly community and their background, as discussed related to our entrepreneurial educator archetypes, creates a high variety that implies an increased publication standard. Something we need to cater to and address in the community to move forward.

Our hope with the problem space addressed and capitalization rate is not to create a monolithic focus on creating *bona fide* entrepreneurs. Increasing awareness of the domain’s capitalization rate could lead to the infusion of different entrepreneurial educators to work collectively toward stronger forms of consensus from which a domain-informed signature pedagogy can be fashioned that better defines the purpose of EE and could cement a stronger legitimacy in higher education from an evidence-based point of view (Fayolle, 2013). One thing we are quite sure of is that the process of evolution in the domain of EE will be driven by the further development of the existing entrepreneurial educator archetypes present in the domain today as they expand their individual resource profiles via scholarly actions.

Implications and future research

A main implication is how transferability could take place among different educators and we have touched upon the way in attempting to open up a discussion around capitalization rate as an important precursor for where the domain is moving, and how it could aid in the evolutionary development involving *variation*, *selection* and *retention* for a domain that seems to lack (at the moment) any obvious forms of external selection (Brandon and McShea, 2020), calling attention to areas that need to be further scrutinized by the scholarly community.

We have also sought to address the potential role of transferability among entrepreneurial educator archetypes as a precursor for creating the required common ground to develop a potential signature pedagogy that could, in the words of Palmer (1998), move toward wholeness. Without proposing any solution to when this should be done, we do point to both what potential commonalities the domain has *selected* for and *retained* over time, as well as how we could envision the evolution to materialize in the near- and medium-term future (see Figure 2). Future research projects could focus on further understanding how the evolutionary process has unfolded.

Finally, the paper makes a call for action to find common ground to develop consensus for developing a basic signature pedagogy for the domain. However, it will only be possible by recognizing the heterogeneity in our domain and how we come to terms with the transferable parts that can be homogenized and tethered to a baseline signature pedagogy. Here, specific mechanisms, such as conferences, journals, and standards (e.g. QAA, 2018) could offer pathways toward such consensus and future attention should be on problematizing how they advance the field.

Notes

1. We are explicitly vague on the context and forms of entrepreneurial education in the paper as our argument and point of departure build on the lack of specificity in scholarly discussions on what to include, how to teach and the why of educating in EE. The paper instead makes a call for scholarly engagement to tackle the problem space addressed.
2. Übermensch is here related to the ideas discussed by Nietzsche in “Thus spoke Zarathustra” (Magnus, 1986). We do not imply that the persona sought is beyond moral institutions but rather imply that the multitudes of roles assigned might be beyond the scope of individual educators.
3. Of course, we are well aware that the use of the business plan is not a main element anymore, but still, it is adopted in various places around the globe.

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