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Understanding influences on entrepreneurship educator role identity

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Abstract

Purpose – Despite the considerable increase in research on entrepreneurship education, few studies examine the role of entrepreneurship educators. Similarly, most frameworks from entrepreneurship education recognize the educator's importance in facilitating instruction and assessment, but the factors influencing the educator role are not well understood. According to the identity theory, personal factors including self-efficacy, job satisfaction and personal values influence the perspective of self, significance and anticipations that an individual in this role associates with it, determining their planning and actions. The stronger the role identity the more likely entrepreneurship educators will be in effectively developing their entrepreneurial skills as well as the overall learning experience of their students. The objective of this study is to pinpoint the factors that affect entrepreneurial role identity.

Design/methodology/approach – Drawing upon the identity theory, this study developed a theoretical framework and carried out an empirical investigation involving a survey of 289 entrepreneurship educators across the globe. Structural equation modeling (SEM) technique was applied to analyze and explore the factors that impact the identity of the educators in their role as entrepreneurship teachers.

Findings – The findings show that the role identity of entrepreneurship educators is significantly influenced by their self-efficacy, job satisfaction and personal values. Among these factors, self-efficacy and job satisfaction have the most significant impacts on how educators perceive their role. The implications of these results and directions for future research are also discussed.

Originality/value – The novelty of the current study is derived from its conceptualization of the antecedents of role perception among entrepreneurship educators. This study stands out as one of the earliest attempts to investigate the factors that shape an individual's scene of self and professional identity as an entrepreneurship educator. The significance of comprehending the antecedents of role perception lies in the insights it can offer into how educators undertake and execute their role, and consequently, their effectiveness in teaching entrepreneurship.

Keywords Entrepreneurship, Entrepreneurship educator, Role identity, Role perception, Self-efficacy

Paper type Research paper

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1. Introduction

Numerous research studies on entrepreneurship education investigate the curriculum, teaching content, student learning processes, teaching methods and the outcomes of courses (cf. Fayolle and Klandt, 2006; Gabrielsson *et al.*, 2020; Kuratko and Hoskinson, 2014; Mwasalwiba, 2010; Nabi *et al.*, 2017; Neck and Corbett, 2018; Neck *et al.*, 2021; Neck *et al.*, 2014; Pittaway and Cope, 2007; Ratten and Umanij, 2021; Aparicio *et al.*, 2019). The focus of received research has been largely on the "what", or teaching content, the learning processes of students "whom" and the use of various teaching methods "how" (Gabrielsson *et al.*, 2020). However, Hägg and Gabrielsson (2020) argue that the "who" of entrepreneurship education is less studied than the other three aspects. This is somewhat surprising given that the entrepreneurship educator plays a crucial role in course creation, teaching, developing materials, facilitating student learning and interaction, which impacts student learning effectiveness and desired outcomes such as attitudinal changes, knowledge enhancement and potentially venture creation (Finkle *et al.*, 2006; Jones and Mataly, 2011; Peura and Hytti, 2022; Todding and Venesaar, 2018). In addition, many studies on entrepreneurship educator's role identity tend to focus on a particular context or setting, such as higher education or vocational training. Moreover, while there is some accumulated knowledge on the factors that shape entrepreneurship educator's role identity, much of this knowledge is still based on anecdotal evidence or personal experiences. Thus, there is a need for more empirical research that uses rigorous methods to examine the various factors that shape educators' sense of self and professional identity.

At the same time, many conceptual frameworks, and recent reviews of the field of entrepreneurship education do not include the role of the educator at all, focusing programs, policies and approaches to curricula (Gibb, 2002; Hoppe *et al.*, 2017; Sirelkhatim and Gangi, 2015). Of those that include the role of the entrepreneurship educator, some show that they have a role in facilitating instruction and learning assessment (Jones and Mataly, 2011; Macht and Ball, 2016), and that the educator orientation directly shapes knowledge of entrepreneurship education curricula, student understanding of entrepreneurship education, instructional strategies and assessment (Jones and Matlay, 2011). Even though many studies prescribe what educators should do and how they should seek to provide a student-centered learning experience (Macht and Ball, 2016; Neck and Corbett, 2018; Todding and Venesaar, 2018), the importance of the entrepreneurship educator role and an articulation as to how their role is shaped are dealt with only peripherally. One integrative framework proposes a teaching and learning model of entrepreneurship education and highlights "teacher factors", which includes teaching and learning approach, competencies and experiences, teaching goals, objectives and assessment (Todding and Venesaar, 2018). It is argued that teacher factors interact with learning environment and student factors leading to teaching and learning activities and learning outcomes, but the model does not reflect on how these teacher's factors are shaped.

Literature from entrepreneurship education does recognize that the educator's role identity shapes how they approach and perform their role as an educator, and how such role perception influences the effectiveness of their teaching and the learning outcomes (Finkle *et al.*, 2006; Krueger, 2007; Neck and Corbett, 2018). Teaching effectiveness in entrepreneurship education is the ability of educators to facilitate learning and development of the necessary knowledge, skills and attitudes that enable students to start, manage and grow successful businesses (Liu *et al.*, 2022; Otache, 2019). The effective entrepreneurship education involves several components, including active learning (using teaching methods that encourage students to actively engage in the learning process), relevant curriculum (curriculum designed to meet the needs of students) and supportive learning environment (an environment that encourages creativity, risk-taking and innovation) (Bell and Bell, 2020; Hynes and Richardson, 2007). But even though it is well recognized that the entrepreneurship educator is a critical player in entrepreneurship education, and research describes and prescribes how the educator might be effective, there are few theoretical insights about the role of the instructor, how they

facilitate learning, how their role is shaped and how they see themselves in this role (Haag and Gabrielson, 2020; Toding and Venesaar, 2018).

While research on educator role identity in entrepreneurship is sparse, the teacher education literature suggests that an educator's identity is shaped by three components: social structure, interactional factors and personal factors. Social structure relates to the context and department of the faculty member, and it influences the role identity meanings formed in different contextual situations (Stryker, 2001). For example, faculty are identified by their disciplines, their rank (e.g. assistant, or associate professor), courses they teach, departments within which they serve (e.g. marketing, finance, strategy) and their affiliation with a particular center or institute (Kreber, 2010). Interactional factors refer to interactions and negotiations with others (McCall and Simmons, 1978), where faculty engages with others through which their self-concepts is confirmed or validated by means of self-presentations. Finally, personal factors relate to internal dynamics and perceptual control of the individual (Burke and Stets, 2009). Of these three components, personal factors: job satisfaction, personal values and self-efficacy are the major influence on identity (Richter *et al.*, 2021; Stets and Burke, 2014; Canrinus *et al.*, 2011).

In contrast to literature in entrepreneurship education, teacher professional identity is well studied. Anchored in role identity theory, which emphasizes the identification one has to a particular role, essentially how individuals see themselves in context (Burke and Reitzes, 1981; Stets and Burke, 2000). These works consider factors influencing educators' professional identity, a sub-identity of role identity that includes the role of agency in the pursuit of professional development and learning in accordance with teacher goals (Beauchamp and Thomas, 2009). It includes a set of cognitions about one's profession and is based on attributes, beliefs, values, motives and experience (Beijaard *et al.*, 2004), or more specifically, "it is a lens through which teachers (educators) look at their job, give meaning to it, and act in it" (Keltchermans, 2009, p. 260). This work delves into the relationship between how teachers' instructional practices are associated with how they make sense of their job (Day *et al.*, 2006), how personal factors including task perceptions are associated with self-efficacy, job satisfaction and beliefs (Richter *et al.*, 2021) and how professional identity develops (Lamonte and Engles, 2010). Further, these studies also show that teacher professional identity is linked to the ways that teachers teach and their commitment to teaching and the extent to which they may use student-centered or teacher-centered approaches in the classroom (Lamonte and Engles, 2010; Day *et al.*, 2006; Kelchtermans, 2014).

In the context of entrepreneurship education, the educator role identity is of great interest for several reasons. First, compared to other disciplines, entrepreneurship educators may be more likely to come to teaching entrepreneurship from many different pathways; some have experience in starting and running a business while others do not, some are part-time faculty some are full-time (Jones and Mataly, 2011). Second, the number of PhD programs providing specialization in entrepreneurship remain small [1] and the number of tenure/tenure track positions exclusively in entrepreneurship is also relatively small [2]. Entrepreneurship educators most often have PhD's from different disciplinary backgrounds (i.e. strategy, management, marketing, finance) (Finkle *et al.*, 2006). Third, there are limited opportunities for faculty to participate in educator or training programs specifically for entrepreneurship education Pittaway *et al.* (2023). Fourth, for most colleges and universities, entrepreneurship is considered as a sub-discipline of management, marketing, operations or strategy. As such, entrepreneurship educators are not frequently housed in a separate entrepreneurship faculty department, like finance, strategy or marketing, but instead, it is considered a niche area (Fayolle *et al.*, 2016; Katz, 2008) and they are almost always teaching elective rather than core courses. This contextual reality suggests that it may be difficult for educators to develop their entrepreneurial role identity and to be highly committed to it if they are not trained in the field of entrepreneurship (Peura and Hytti, 2022) and/or teaching an elective that is housed in a

different department where they may feel they have less legitimacy and support. In contrast, the entrepreneurship educator is often expected to be the lead advocate for entrepreneurship courses, or even a change agent, moving entrepreneurship education across disciplines, to co-curricular and the school (Gibb, 2011). Hence, having a strong role identity would be important if the educator is expected to lead entrepreneurship beyond the classroom.

As such, this study specifically examines influences on entrepreneurship educator role identity. An understanding of the entrepreneurship educator, who designs, orchestrates and executes the entrepreneurial learning process is crucial to our understanding of entrepreneurship education and its effectiveness (Neck and Corbett, 2018). The perspective entrepreneurship educators have regarding their role can impact their job performance, which includes decisions about teaching methods and strategies employed in the classroom (Beijaard, 1995; Burke and Reitzes, 1981), the quality of instruction and student attainment (Richter *et al.*, 2021), a sense of fulfillment derived from their work (Gibbs and Coffey, 2004) and their motivation for teaching, which has been shown to impact education planning, curriculum design, teaching effectiveness and student outcomes (Watt and Richardson, 2007). Therefore, it is relevant to ask how entrepreneurship educators see themselves in their roles, and what influences their role perceptions? We ask, *"What factors influence entrepreneurship educator role identity"?*

Using a unique dataset of 289 entrepreneurship educators world-wide, we draw from role identity theory to develop a conceptual model to empirically validate and analyze the effect of personal factors (Richter *et al.*, 2021) on how entrepreneurship educators perceive their role as educators. To analyze the data, we used structural equation modeling (SEM) technique. This study makes several contributions. First, we find that self-efficacy, job satisfaction and personal values influence the role identity perceptions. Self-efficacy and job satisfaction were strongly significant, consistent with theory and earlier findings in teacher education (Canrinus *et al.*, 2011; Richter *et al.*, 2021). Personal values have significant but a weaker influence on role perception. In other words, those educators with strong self-efficacy and job satisfaction will have a stronger entrepreneurial role identity. Moreover, the multigroup analysis results suggest that the distinct qualities of entrepreneurship educators, such as their gender, length of experience in teaching entrepreneurship and whether they run a business concurrently with their teaching duties affect their perspectives regarding their role and responsibilities. The examination of background factors demonstrates that gender affects (1) the link between job satisfaction and role perception, with job satisfaction playing a more significant role for female educators, and (2) the link between personal values and role perception, being a more significant factor for male educators. Additionally, the result shows that greater experience in teaching leads to stronger role perceptions but operating an entrepreneurial business has the opposite effect.

Overall, the findings of the study provide new insights and theoretical implications for the field of entrepreneurship education as they offer an understanding of how an individual's sense of self and professional identity as an entrepreneurship educator is formed through their perceptions of self-efficacy, job satisfaction and personal values. This work elaborates the framework created by Todding and Venesaar (2018), by reflecting the key influences on teacher factors that then influence the process and product of entrepreneurship education. Specifically, the study highlights the importance of personal factors in shaping the role identity and suggests that interventions aimed at improving educators' self-efficacy and job satisfaction could enhance their effectiveness in the classroom. Additionally, the study contributes to the broader literature on role identity and professional development by providing a more nuanced understanding of the factors that shape educators' professional identities. We begin with a brief literature review, theoretical background and hypothesis development, then present the methodology, results and discussion. The paper concludes with limitations and future research directions.

2. Background on entrepreneurship educators and role identity

The conceptual boundaries associated with the entrepreneurship educator role identity can be defined as the limits or the scope of the concept. For example, the level of education (e.g. primary, secondary, tertiary), the type of institution (e.g. public, private, business school) and the specific subject matter taught (e.g. entrepreneurship, small business management). It also includes the perspective from which the role identity is examined, such as the individual's own perception of their role, or the perceptions of others (Riley and Burke, 1995).

Literature shows that those educators with a strong positive perception of or commitment to their entrepreneurship educators' role might be more likely to promote learning and innovate than those with a weaker perception of their role (Bandura, 1997). While it is noted that more recently teacher-guided instructional models are being replaced with constructivist perspectives, where educators act as facilitators, co-learners and adopt a learner-centered approach (Gabrielsson *et al.*, 2020; Mueller and Anderson, 2014; Nabi *et al.*, 2017; Pittaway and Cope, 2007; Robinson *et al.*, 2016), most research about the role of the educator is largely descriptive (Kabongo and McCaskey, 2011; Toding and Venesaarm, 2018) or conceptual (Béchard and Grégoire, 2007; Gabrielsson *et al.*, 2020; Myrah and Currie, 2006; Nabi *et al.*, 2017). Recent qualitative studies find that educators' instructional approaches and methods were associated with how they see themselves in their role (Neck and Corbett, 2018; Wraae *et al.*, 2020; Wraae and Walmsley, 2020).

However, a few studies have explored development of entrepreneurship educator identity, notably a qualitative study using a sense-making approach finds that training for entrepreneurship educators involving sharing of ideas and resources can contribute to entrepreneurial educator's role identity (Peura and Hytti, 2022). Alternatively, other work notes the teacher's role as an entrepreneurship educator derives from a model of teacher development and reflection (Shulman and Shulman, 2004) where the teacher's vision which generates readiness and induces motivation to pursue pedagogical and organizational practices in the classroom (Seikkula-Leino *et al.*, 2010). Finally, one other study examines how passion of the entrepreneurial educator can influence student outcomes (Tavakoli *et al.*, 2018).

3. Theoretical background and hypotheses

The essential part of identity theory is best described as: "*in order to be (some identity), one must act like (some identity)* and *in order to not be (some other identity), one must not act like (that other identity)*" (Burke and Reitzes, 1981, p. 90). More specifically, identity theory emphasizes the identification one has to a particular role, and incorporates view of self, meanings and expectations associated with that role and its performance (Burke and Reitzes, 1981; Burke and Tully, 1977). There is general agreement that the self of the individual provides the basis for the identity (Erikson, 1994), and the choice of the role is a product of the self (Stryker, 2001). For example, a person may have role identities such as a professor, wife, vegetarian or other, which provide meaning and distinguish them from other roles. Similarly, Stryker (2001, 1980) finds that master statuses, such as gender and ethnicity are a part of identity theory because they can act as characteristics for a role and at the same time act as a modifiers of role identities. The importance of role identity lies in its ability to explain an individual's behavior in relation to their role within a larger societal structure (Hogg *et al.*, 1995; Stryker, 1980). This means that the self-conceptions of roles motivate behaviors because individuals desire self-consistency to maintain one's self-identity (Burke and Reitzes, 1981).

Identity theory offers a theoretical foundation for considering role perceptions. Role identity is the way one identifies with and perceives their particular role, and the view of self, meaning and expectations that the holder of the role associates with the role (Burke and Reitzes, 1981; Burke and Tully, 1977). People form identities based on a sense of belonging to

a certain social category (e.g. nationality, organization, religion, social group, etc.) and their identity in turn influences their self-concept and their behavior (Stets and Burke, 2000). Generally, identities are multiple and socially constructed phenomena (Ibarra and Barbulescu, 2010; Stets and Burke, 2014), and they vary across many dimensions including the importance to the individual, or whether they reflect achievements, or whether they are durable (Stryker and Serpe, 1982).

The field of entrepreneurship is characterized by a focus on developing and promoting the skills necessary for fostering creativity and innovation, whether in practical, classroom or other environments (Binks *et al.*, 2006; Morris and Liguori, 2016). As a result, educators who teach entrepreneurship are often viewed as entrepreneurial individuals by both themselves, and others. Hence, entrepreneurship educator role identity would be associated with enacted behaviors associated with this role (Stets and Burke, 2014). Following Bandura (1997) we suggest that the educator's self-image influences teaching approaches and strategies in the classroom, and a strong entrepreneurial role identity would suggest greater likelihood of promoting entrepreneurial learning and creating positive experiences for their students. Entrepreneurship educators with a strong sense of identity would see themselves as entrepreneurial in their teaching approach (Bosman and Fernhaber, 2018), which scholars have characterized as behaviors that facilitate, guide and coach students to learn theories of entrepreneurship, develop entrepreneurial skills and develop an entrepreneurial mindset (Béchard and Grégoire, 2007; Wraae *et al.*, 2020). In the entrepreneurial context, this may be manifested as a greater awareness of student expectations, and an experiential learning approach rather than a traditional, or teacher-centered approach (Gabrielsson *et al.*, 2020; Myrah and Currie, 2006; Neck and Corbett, 2018). In other words, the strength of the educators' identification with an entrepreneurial role identity would likely lead to behaviors that are associated with entrepreneurial teaching approaches.

Literature indicates that the identity of a teacher as it relates to their role is shaped by the social, organizational and institutional context in which they work, and it is a multi-faceted and ongoing process (e.g. Forbes and Davis, 2007; Settlage *et al.*, 2009). This is a social process where interactions with others (faculty, students, administrators) shape teacher role identity. As part of their job definition, entrepreneurship educators, who work within an institutional setting like higher education or universities, have a specific social role such as professor or instructor. Further, faculty roles are also identified by discipline, the department in which they teach, courses and their research. In particular, standards and requirements for certain courses as well as spaces, networks and other contextual factors influence how educators see themselves in their roles (Thomassen *et al.*, 2019).

In addition, identity theory argues that personal, interpersonal and structural resources influence role identity (Stets and Burke, 2014). While interpersonal or interactional negotiations with others are important in that they validate or invalidate role identity depending on the nature of the interaction McCall and Simmons (1971). Structural influences refer to the social and organizational structure within which an educator is working (Stryker, 2001). Both influences are difficult to measure. However, personal factors which refers to the internal dynamics one must validate or verify their identity are easier to capture (Burke and Stets, 2009).

Professional identity is a subset of role identity and considered more or less central to overall identity (Beauchamp and Thomas, 2009). It includes the notion of agency and the pursuit of professional development and learning, in accordance with specific goals, in this case, teacher goals. Professional identity is described as a set of attributes that are imposed on the teaching profession by outsiders or members of the teaching community and provides a set of shared attributes and values differentiating this group from others (Beauchamp and Thomas, 2009; Sachs, 2001). However, entrepreneurship educator role identity differs from typical individual role identity in that it encompasses the specific beliefs, attitudes and

behaviors associated with being an educator in the entrepreneurship field. While an individual's role identity may encompass many different aspects of their life, such as their occupation, family role and community involvement, educator role identity is specific to the role of teaching and instructing others. In addition, teacher identity emerges through a process of socialization and learning through relations within a community (Kreber, 2010), and it is shaped by the knowledge, beliefs, self-efficacy and disposition towards teaching practices and interactions with the environment (Forbes and Davis, 2007).

Several studies in the teacher education literature have examined personal influences on professional role identity, and most consistently, core influences are personal values (Stryker, 2001), job satisfaction (Richter *et al.*, 2021) and self-efficacy (Bandura, 1997; Stets and Burke, 2000; Richter *et al.*, 2021; Keltchermans, 2009).

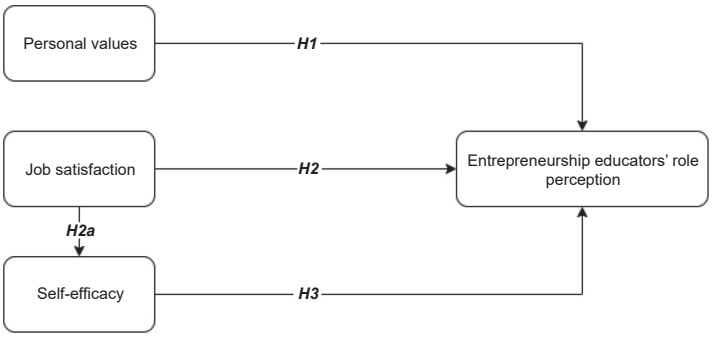
These are important factors for several reasons. First, identity may be influenced by personal values, which are defined as guiding principles for one's life (Hitlin, 2003), and the commitment to these values, sometimes referred to as "value-identities" which is where individuals conceive of themselves in terms of the values they hold (Gecas, 2000). As such, these core values influence the teacher's task perception (Kelchtermans, 2009). In other words, personal values are an important aspect of an individual's identity and can influence their behavior and decision-making in their role as an educator. For example, if an entrepreneurship educator values innovation, they may be more likely to design and implement innovative teaching methods in their classes.

Second, in organizations, in this case universities, formal or informal rewards motivate behavior, and the degree to which one is satisfied or not satisfied with these and/or the nature of one's employment situation can influence role perceptions and behaviors (Béchard and Grégoire, 2007; Myrah and Currie, 2006; Simpson and Carroll, 2008). In other words, job satisfaction is an important aspect of an individual's overall well-being and can affect their commitment and engagement in their role as an educator. A highly satisfied entrepreneurship educator is more likely to be motivated and engaged in their work, which can have positive effects on their students' learning outcomes. However, it should be noted that inversed causality may exist. In other words, educators' role perception can affect their job satisfaction, but in this research, we were mainly to assess the influence of job satisfaction of role identity.

Third, the confidence with which entrepreneurship educators approach their role will influence their role identity and subsequently, how they come across in the classroom. Kelchtermans (2009) argues that five components make up the perspective of how teachers view themselves as professionals in their work: self-image, self-esteem, job motivation, task perception and future perspective. Following this work, Canrinus *et al.* (2011) suggest that professional identity is acquired through self-efficacy, job satisfaction, motivation and commitment in combination. It can be argued that self-efficacy, or an individual's belief in their ability to perform a task or role effectively, can impact their motivation, persistence and performance in their role as an educator. High self-efficacy can lead to increased job satisfaction and improved performance in the classroom. Therefore, for a greater understanding of the factors shaping role identity, we have developed a conceptual framework (see Figure 1) that explores personal values, self-efficacy and job satisfaction as influences on entrepreneurial role identity. The next section builds out the logic for hypotheses explaining these relationships.

3.1 Personal values

Identity theory suggests that an individual's personal values are inherent in their core identity (Stryker, 2001). Values are "desirable trans-situational goals, varying in importance, that serve as guiding principles in the life of a person or other social entity" (Schwartz, 1994, p. 21, in Hitlin, 2003). Values are mental structures, or enduring beliefs that certain patterns of



Source(s): Authors' own work

Figure 1.
Research model

behaviors are preferable to others. Stets and Trettevik (2014) argue that there is a direct link between identity theory and values and claim that personal values are related to the prominence hierarchy, and the importance of an identity relative to the other identities the individual claims. In the teacher education literature, it is acknowledged that teaching is not a neutral endeavor but includes value-laden choices and considerations relative to the task perception, or what to do to deliver a good education for students (Kelchtermans, 2009; Richter *et al.*, 2021). Hence, teaching means standing for something, and therefore, personal values influence the particular norms applied in this pursuit. Kreber (2010) provides a framework showing that personal theories of teaching are rooted in personal values and have a direct influence on teacher authenticity and identity, finding similarities across disciplines (e.g. English, Physics and Law). We propose that personal values will have a direct and positive impact on the identity of entrepreneurship educators in their role as educators; hence, we hypothesize:

H1. Personal values are positively related to entrepreneurship educator role identity.

3.2 Job-satisfaction

Job satisfaction can be defined as "an affective (that is, emotional) reaction to a job that results from the incumbent's comparison of actual outcomes with those that are desired" (Staples and Higgins, 1998, p. 212). Job satisfaction is linked to employees' engagement in the sense that more satisfied employees will desire to work harder, be more engaged and believe in their organizations (Agho *et al.*, 1993). Perceived work satisfaction is sensitive to other elements that are entailed in the work (i.e. work tasks), the organization, supervision, colleagues and pay (Wrzesniewski *et al.*, 1997). Literature shows that a sense of appreciation for teaching, connectedness, competence and future career trajectory positively linked to teacher identity in a university setting (van Lankveld *et al.*, 2017). Because role identity is shaped by social interactions, the extent to which one is satisfied with his/her work would logically influence role identity (Burke and Reitzes, 1981). A study of Dutch teachers found that job satisfaction, occupational commitment, self-efficacy and motivation level contribute to the teachers' professional identity (Canrinus *et al.*, 2011). Toropova *et al.* (2021) recently argued that there is a positive link between professional development, teacher self-efficacy, belief and job satisfaction.

In addition, and following Kelchtermans (2009), job satisfaction and a sense of fulfillment can create positive self-esteem. Canrinus *et al.* (2011) note that a teacher's relationship satisfaction (measured as job satisfaction) is related to their professional identity which in turn, influences self-efficacy. Other work shows a positive and significant relationship

between job satisfaction and teachers' self-efficacy in junior high school teachers (e.g. Capara *et al.*, 2006), and that job satisfaction follows from high levels of job-related self-efficacy (Capara *et al.*, 2003). In other words, the more that individuals believe they can perform certain tasks the more likely they will gain satisfaction from their accomplishments. But, based on a multi-country study of teacher self-efficacy, it is also argued that the opposite relationship might be true that those with high job satisfaction may have a greater degree of educator self-efficacy (Klassen *et al.*, 2009). However, we believe that the extent to which teachers are satisfied with their jobs, colleagues and support from their schools influences their feelings of self-efficacy and their overall sense of professional identity. Therefore, we propose that not only does job satisfaction influences entrepreneurship educator's role identity, but also it has a positive impact on self-efficacy; hence we hypothesize:

H2. Job satisfaction is positively related to entrepreneurship educator role identity.

H2a. Job satisfaction is positively related to entrepreneurship educator's self-efficacy.

3.3 Self-efficacy

Self-efficacy is related to the individual's belief in her/his own abilities to succeed in some area or a particular situation. It refers to the capabilities to organize and execute the courses of action that are required to achieve a given goal (Bandura, 1997). Stets and Burke (2000) associated the self-efficacy to the motivational part of acting in a role and argued that "individuals may categorize themselves in particular ways (in a group or a role) to not only to fulfill their need to feel valuable and worthy (the self-esteem motive) but also to feel competent and effective (the self-efficacy motive)" (p. 233). According to Bandura (1994) self-efficacy refers to the extent to which teachers believe they can bring about change and impact on student behaviors and learning outcomes. The more confident they are that they can impact students, the more likely their role perception will be stronger. This suggests that the self-efficacy of the entrepreneurship educator will influence their role identity or how the educator sees him/herself. Bandura (1994) argues that self-efficacy can be influenced by mastery experiences, social model experiences, social persuasion and by trying to alter negative emotional proclivities about one' self. Further, teacher training, previous successful experience and mentorship can impact the teachers' self-efficacy (Lamonte and Engels, 2010). Canrinus *et al.* (2011, p. 117) suggest a strong link between teachers' classroom self-efficacy and their sense of professional identity and showed that: "teachers' self-efficacy, job satisfaction, motivation and occupational commitment are perceived as indicators of the sense of their professional identity". Therefore, we argue that self-efficacy will be related to role identity of the entrepreneurship educator; hence, we hypothesize:

H3. Self-efficacy is positively related to entrepreneurship educator role identity.

4. Research methodology

Our methodology was influenced by two major objectives. First, to move beyond traditional qualitative research on role identity and entrepreneurship educator's role, we sought to develop and test a model including the antecedents of entrepreneurship educator role identity. To do so, we designed a quantitative study and developed an online survey. Following the work of Richter *et al.* (2021), and Kelchtermans (2009), this research adopts the three key measures influencing teacher professional identity for this study. These works argue that the self-perception of the teacher role is influenced by their own self-image, which is influences by self-efficacy, perceptions of job satisfaction, personal system of beliefs and perceptions of the tasks for which the individual feels responsible (Kelchtermans, 2009;

Canrinius *et al.*, 2012). These components influence the professional educator identity and subsequently their actions in the workplace, as well as their performance and the quality of their instruction.

Drawing from literature, we explored three antecedents: personal values, job satisfaction and self-efficacy on the role identity. The survey consisted of three sections; (1) a section to obtain the participant's consent, which informed participants about the purpose, benefits, risks and data privacy conditions of the study, (2) a section to collect demographic information and (3) a section to measure the items (survey indicators) forming the four constructs in the study. Because we were interested in understanding the entrepreneurial educators' role identity of current entrepreneurship educators, in the survey, we included only educators active in teaching entrepreneurship for the last 5 years as of May 2021. This is consistent with identity theory which notes that identity is based on socialization over time (Kreber, 2010; Stets and Burke, 2000).

4.1 Measures

All measurement items used in this research were rooted from previous studies in role identity, and the teacher education literature that explored influences on professional educator role identity. While role identity and entrepreneurship educator role identity are distinct constructs, it is possible to argue that they share several similarities. These similarities can justify the utilization of indicators related to general role identity to measure entrepreneurship educator role identity. As such, while acknowledging the distinction between role identity and entrepreneurship educator role identity, the shared characteristics, transferability of role identities, measurement challenges and conceptual overlap between entrepreneurship and educator roles can justify the use of indicators related to general role identity to measure entrepreneurship educator role identity. It is also important to indicate that we carefully considered the unique aspects of entrepreneurship educator role identity when adapting and refining the indicators to ensure their appropriateness for capturing the construct accurately.

We assessed personal values using a set of eight items derived from the works of Hitlin (2003) and Béchard and Grégoire (2007). Some modifications were made to the wording of these items to ensure their relevance and alignment with the specific context of this study, which focuses on the role identity of entrepreneurship educators. Job satisfaction was measured using six items from studies of Loher *et al.* (1985), Oshagbemi (1998) and Wright and Cropanzano (2000). Self-efficacy included nine items adapted from both Neck and Corbett (2018) and Tschannen-Moran and Woolfolk-Hoy (2001). Assuming, the respondents are active entrepreneurship educators, the six items such as "*I create my role based on the students demand and expectations*", "*I facilitate or guide student learning*" and "*I guide and coach, providing support for students, while overseeing student learning*", were used to measure entrepreneurship educator role identity. These items were derived from previous studies of Béchard and Grégoire (2007), Greenberg *et al.* (2007) and Neck and Corbett (2018).

All survey items were measured with 5-points Likert scales, being 1 "strongly disagree" to 5 being "strongly agree". In addition, we used some demographic information as control variables in the analysis of the proposed conceptual model. Demographic information such as age, gender and affiliation (US and non-US educators) can provide insight into how educators perceive and identify their role in teaching entrepreneurship. For example, older educators may have more experience and a different perspective on teaching entrepreneurship compared to younger educators. Similarly, gender may also play a role in shaping an individual's perspective and approach to teaching entrepreneurship. Moreover, including demographic information such as whether educators run their own business next to teaching or whether they teach only entrepreneurial courses can also provide valuable information.

Educators who run their own business may have a different level of practical experience and understanding of entrepreneurship compared to those who do not, which could influence their teaching approach. Similarly, educators who only teach entrepreneurial courses may have a different level of expertise and focus on the subject matter compared to those who teach a variety of courses. These demographic variables in a multigroup analysis allows for a more comprehensive understanding of how different groups of educators perceive and approach the teaching of entrepreneurship. By analyzing the data in this way, researchers can identify patterns and trends among different demographic groups and gain a more nuanced understanding of the factors that shape an educator's role in teaching entrepreneurship.

4.2 Data collection

Based on our literature review in entrepreneurship, role identity theory, teacher education and the above-mentioned explanation of the measures, an online survey was created. Then the survey was distributed to only entrepreneurship educators and professors using the authors' professional and personal networks. We sent this survey out to specific groups; for instance, faculty members of entrepreneurship education associations, including the United States Association for Small Business and Entrepreneurship (USASBE), the Academy of Management Entrepreneurship Division list-serv and the Babson Collaborative, which is a 38-member international association of colleges and universities dedicated to learning and sharing best pedagogical practices in entrepreneurship education [3]. Our first question asked whether or not participants were presently or had taught entrepreneurship within the past 5 years. If the answer was no, they were not considered in our sample group. Prior to its distribution, we obtained the approval of the Institutional Review Board at one of the author's schools. The survey was pre-tested by an expert panel of eight entrepreneurship educators from various universities and countries. They examined the flow, clarity, language and significance of the items carefully and objectively, following which edits and changes were made to the initial survey.

The invitations were sent to possible respondents over six weeks April–May 2021. Two reminders were sent, one three weeks after the survey began and the other two weeks before the survey ended. Many respondents did not qualify for our sample either because they were no longer teaching entrepreneurship, they had not recently taught entrepreneurship or were retired. Further, several of the email addresses were incorrect. The initial invitation was sent to 730 potential respondent, and 343 responses were received.

5. Data analysis and descriptive results

The following subsections provide an overview of the demographic information of the respondents, the measurement model and results. We used Smart PLS v.3 to analyze the data. Of 343 responses received, 54 respondents were excluded from further analysis as they were not engaged in teaching entrepreneurship courses in their respective institutions within the last five years. Therefore, the final useable dataset included 289 responses without missing data or corrupted information. To assess non-response bias, we followed several strategies to mitigate its effects. Research has shown that survey length can impact response rates, with longer surveys leading to lower participation (Tourangeau *et al.*, 2000). To address this, we aimed to design a relatively short survey to increase the likelihood that respondents would be willing to participate. Moreover, we also took measures to ensure the confidentiality and anonymity of respondents' information and answers (Sudman and Bradburn, 1982). This can increase the willingness of individuals to provide honest and accurate responses. Finally, we aimed to increase the representativeness of the sample by distributing the survey to a large

percentage of the population of entrepreneurship educators, through different channels and communities (Groves, 2005). Moreover, respondents were told that they will receive an integrated report, upon a request, providing them an in-depth analysis of the research findings. By considering these factors, we hope to minimize the impact of non-response bias and increase the validity of the survey results (Sax *et al.*, 2003). Assessing response rate of 47% indicates our data is potentially free of non-response bias. Moreover, a test for non-response bias was performed, and the results showed no significant differences between responding and non-responding respondents regarding their gender and status of employment.

Out of 289 respondents, 150 (51.9%) respondents were females, 136 (47.1%) were males and 3 (1%) preferred not to indicate their gender. The average age of the respondents was 49.1 years old with (std = 11.1), ranging from 27 to 79 years old. When asked to indicate for how long they have been teaching entrepreneurship courses, respondent answers ranged from one year to 45 years, with the average of 11.2 years. However, most respondents (n = 156) indicated they have been teaching from five years to 15 years. We also asked respondents to indicate whether they taught only entrepreneurial course(s), and 105 (36.3%) of them answered "yes" and 184 (63.7%) indicated that they taught other courses besides entrepreneurship.

Out of 289 respondents, 80 (27.7%) noted that the course they teach is a required or core entrepreneurship course, 73 (25.3%) stated that is an elective entrepreneurship course, while 120 (41.5%) noted they taught both core and electives entrepreneurship courses, and 16 (5.5%) taught other courses as well. When asked about the level of students taught, respondents could choose multiple option(s) and 219 (75.8%) respondents have primarily taught entrepreneurship courses to undergraduate students, and 189 (65.4%) to master's level students. In addition, 81 (28%) taught primarily practitioners (entrepreneurs), 65 (22.5%) taught PhD students and 20 (6.9%) mentioned they taught others such as associate's level, corporation, educators, entrepreneurs in an incubators, postdocs and university head and leaders. When asked about their current role (title) in their institution, most were Assistant, Associate or Full Professors (n = 198), lecturer (n = 23), researcher (n = 10) and part time or adjunct (n = 24). Additionally, most of the responders said they are now employed by business, entrepreneurship or innovation departments. The following information was gathered when we questioned respondents if they had ever taken part in a training course or workshop geared toward improving their ability to teach. The respondents reported that 27% had attended a workshop on how to teach management or business courses, 41% had taken part in a training program on how to teach entrepreneurship, 26% had participated in a training program on teaching management or business courses and 46% had attended a workshop on how to teach entrepreneurship. However, it should be emphasized that a significant portion of the respondents had participated in numerous workshops or training sessions. We also asked if they had any prior work experience outside of the university, and 46% said they had worked for a large corporation and 54% said they had worked for a small-medium-sized firm. In addition to teaching, 37% of respondents said they currently have a second job, and 28% said they currently run their own business. In the survey, 22% of respondents said they were now based in the USA, 7% in the UK, 37% in the EU, 10% in Mexico and the rest were from other countries.

5.1 Measurement results: validity and internal reliability

Several tests, such as item loadings and composite reliability were used to assess the constructs' internal consistency and scale reliability. It should be noted that six items were removed from a total of 29 items used in the survey due to a factor loading below the

recommended threshold value of 0.70. Furthermore, the internal consistency was assessed via Cronbach alpha, which is a measure of the internal reliability of latent constructs. The recommended threshold value is 0.70 (Hair *et al.*, 2012). However, Cronbach α has several rigorous assumptions, including uni-dimensionality, uncorrelated errors and essential tau-equivalence of all items. Cronbach alpha values for all the constructs in this study were above the suggested threshold of 0.70, except for the entrepreneurship educator role identity, which had a slightly lower than expected value of 0.70 (0.68), see Table 1. For construct reliability evaluation, the composite reliability (CR) was estimated, with a desired threshold value of (0.70) or higher (Hair *et al.*, 2011). As shown in Table 1, the lowest CR value was (0.80) for role identity and the highest was (0.92) for the job satisfaction. This means that all the constructs met the threshold value, and we were able to determine acceptable construct reliability.

Convergent validity, which is the degree to which two measurements of structures that should be related theoretically are indeed related was assessed. According to Hair *et al.* (2011), the average variance extracted (AVE) can be used to analyze the relationship, with a recommended AVE threshold of 0.50 or higher (Fornell and Larcker, 1981). All the AVE values were between (0.52) and (0.66), and thus convergent validity was established in our data (see Table 1). We then calculated discriminant validity, which, unlike convergent validity, to establish that the measures or concepts have no association or relationship and to demonstrate that the items used to measure a construct accurately captured the intended construct and that the construct was not captured by other measures (Henseler *et al.*, 2015). Following the Fornell and Larcker (1981) criterion, the distinctness of the constructs and discriminant validity in the data was determined, see Table 2.

	Items	Loadings	Mean	Std.	Alpha	CR	AVE
Entrepreneurship educator role identity	ROLE1	0.70	3.63	1.02	0.68	0.80	0.52
	ROLE2	0.71	4.56	0.66			
	ROLE3	0.70	3.51	1.08			
	ROEL4	0.79	4.40	0.75			
Job satisfaction	SAT1	0.87	3.96	1.21	0.90	0.92	0.66
	SAT2	0.88	4.29	1.01			
	SAT3	0.81	4.11	1.16			
	SAT4	0.70	4.17	1.13			
	SAT5	0.79	3.61	1.18			
	SAT6	0.88	4.48	1.03			
Self-efficacy	SELF1	0.77	3.99	1.07	0.83	0.87	0.54
	SELF2	0.75	4.30	0.82			
	SELF3	0.77	4.29	0.78			
	SELF4	0.70	4.34	0.75			
	SELF5	0.70	3.84	1.08			
	SELF6	0.77	4.08	0.93			
Personal values	PVAL1	0.79	4.28	0.82	0.87	0.89	0.55
	PVAL2	0.73	3.96	1.21			
	PVAL3	0.70	4.49	0.73			
	PVAL4	0.79	4.40	0.81			
	PVAL5	0.70	4.17	0.94			
	PVAL6	0.78	4.34	0.73			
	PVAL7	0.73	4.28	0.78			

Note(s): CR = Composite reliability; AVE = Average variance extracted
Source(s): Authors' own work

Table 1.
Results of reliability of the constructs

The Heterotrait–Monotrait ratio (HTMT), which is an alternative approach to establish discriminant validity was also calculated. All values as recommend by Henseler *et al.* (2015) were below the desired threshold value of 0.85. Therefore, the discriminant validity can be accepted for the research measurement model and the constructs. (See Table 3).

As the model's dependent variable (role perception) was predicted by multiple independent variables, multicollinearity issue was assessed through the value of variance inflation factor (VIF) since there was a risk of intercorrelation among the dependent variables. Hair *et al.* (1998) and Petter *et al.* (2007), have suggested that the lowest acceptable VIF value is 3.3. We determined that multicollinearity was not a problem in our data based on the VIF values obtained, the lowest (1.114) and the highest (3.091). In addition, we looked at the common method bias to see if there was any bias attributable to the measurement method (CMB). We computed the CMB using two methods: (1) Podsakoff and Organ (1986) recommended Harman's one-factor test, and results showed that none of the constructs explained more than 50% of the variance, and (2) the common latent factor (CLF) technique, as recommended by Podsakoff *et al.* (2003). The CLF, according to MacKenzie and Podsakoff (2012), gives a more robust understanding of the CMB than Harman's one-factor test. The chi-square values of two models were compared: an unconstrained model versus a model with all paths restricted to zero and the results showed that the CMB had no effect on any of the model's path relationships.

5.2 Structural results

We used structural equation modeling approach to investigate the path relationships in the model. Figure 2 shows the results of the structural model, including the explained variance (R^2) of the predicted variable (i.e. role perception). The SEM result revealed that entrepreneurship educator role identity was explained by variance of 39%. Since we used PLS-SEM to evaluate the path relationships in the proposed model, we are unable to provide a complete model fit result. However, the Standardized Root Mean Square Residual (SRMR) value can be used for the model this purpose. The SRMR refers to the difference between the observed correlation and the model implied correlation matrix. Hair *et al.* (2014) argued that a value of less than 0.10 (or 0.08 in a more conservative version) could be considered a good fit. In our analysis, the SRMR value was (0.069). A bootstrap analysis with 5,000 resamples was used to determine the significance of the estimates (t-statistics) in the path model and to

Table 2.
Discriminant validity (Fornell-Larcker criterion)

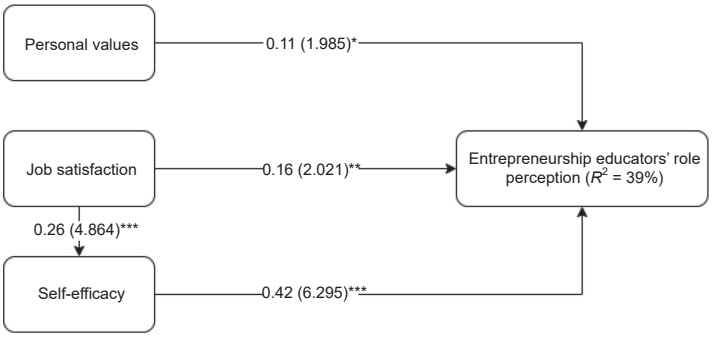
	ROLE	SAT	SEEFI	PVAL
Entrepreneurship educator role identity	*0.70*			
Job satisfaction	0.21	*0.81*		
Self-efficacy	0.46	0.25	*0.73*	
Personal values	0.20	0.13	0.24	*0.74*

Source(s): Authors' own work

Table 3.
Discriminant validity (Heterotrait-Monotrait ratio (HTMT)

	ROLE	SAT	SEEFI	PVAL
Entrepreneurship educator role identity				
Job satisfaction	0.24			
Self-efficacy	0.59	0.27		
Personal values	0.25	0.14	0.27	

Source(s): Authors' own work



Note(s): ***p-value < 0.001; **p-value < 0.01; *p-value < 0.05
Source(s): Authors' own work

Figure 2.
Structural results

assess the structural results. Alternative conceptualizations of the model were also evaluated, with the results obtained showed that the model shown in Figure 2 was the most suitable for the current research. The SEM results revealed that the path between personal values to entrepreneurship educator role identity was positively ($\beta = 0.11$, $t = 1.985$, $p < 0.05$) related to entrepreneurship educator role identity; therefore, H1 was accepted by the model.

The direct path between job satisfaction to entrepreneurship educator role identity was positively related ($\beta = 0.12$, $t = 2.021$, $p < 0.01$), therefore, H2 was supported by the model. The analysis also showed that the job satisfaction was positively ($\beta = 0.26$, $t = 4.864$, $p < 0.001$) related to entrepreneur educators' self-efficacy, providing theoretical support for H2a. The SEM analysis also found that the path between self-efficacy to entrepreneurship educator role identity was positively related ($\beta = 0.42$, $t = 6.295$, $p < 0.001$), providing support for H3.

5.3 Results of moderation analysis

We ran MGA analysis on the model based on the respondents' demographic information. For gender, the path between satisfaction to entrepreneurship educators' role perception was only significant for females ($\beta = 0.15$, $t = 1.998$, $p < 0.05$) but not for males. In addition, the gender of the entrepreneurship educators has influence on the path between personal value and role perception, such that this link was only significant for males ($\beta = 0.17$, $t = 2.113$, $p < 0.01$) but not for females. We also considered differences based on whether respondents operated their own business or not. Out of 289 respondents, 82 indicated that they ran their own businesses in addition to their entrepreneurial teaching activities. The results showed for those educators who do not operate their own business in addition to their teaching activities, the relationship between self-efficacy to entrepreneurship educator role identity ($\beta = 0.12$, $t = 2.013$, $p < 0.05$) as well as the path between personal values to entrepreneurship educator role identity ($\beta = 0.47$, $t = 7.236$, $p < 0.001$) were both positively significant. We also analyzed educators' teaching experience as a control variable to assess whether their teaching experience would have any effects on the path relationships. We divided the sample into the two groups, group one $_{<10\_years}$ (n = 169) and group two $_{>10\_years}$ (n = 120). The results showed that the path between job satisfaction to role perception was only significant ($\beta = 0.17$, $t = 2.323$, $p < 0.05$) for those educators who indicated that they have more than 10 years of experience in teaching entrepreneurship. In addition, teaching experience had also impacted the path between personal values to role perception, such that this path was only significant for educators with less than 10 years ($\beta = 0.15$, $t = 2.555$, $p < 0.01$) of teaching experience.

Moreover, when the educator's age was used as a moderator, test results did not show any meaningful results. Therefore, it can be assumed that the age of the educators has no impact of their role perception. Based on their affiliations, the educators were divided into two groups. Group one consisted of educators from the US (n = 115) and rest were formed group two (n = 174) educators. In this way were interested in examining if any significant path differences could be found based on educators' affiliation. The MGA analysis showed that, for non-US educators, the path between personal values to role perception was significant ($\beta = 0.21$, $t = 3.115$, $p < 0.001$), but not for the educators from the US. Finally, when we asked educators to indicate whether they teach only entrepreneurial course(s), 105 respondents indicated yes and 184 taught other relevant courses in addition to the entrepreneurial course(s). Our analysis showed the path between personal values and role identity was significant ($\beta = 0.17$, $t = 2.746$, $p < 0.005$) for those educators who indicated that they teach other course(s) in addition to the entrepreneurship course(s), but this was not significant for educators who teach only entrepreneurship course(s).

6. Discussion

Our study was motivated by lack of research on the role of the entrepreneurship educator existing both in our empirical research and in frameworks and reviews that describe the field of entrepreneurship education. While significant work covers the "what", "how" and "why" of entrepreneurship education, the role of the educators is described but little is known about how educators see their role, despite the unique role of the entrepreneurship educator. In contrast, the teacher education literature offers frameworks and studies that can help us understand influences on the identity of the educator. The sense of self that a person develops from the roles they play in their various social contexts, such as their job, family and community, is referred to as their role identity. We argued that for entrepreneurship educators, their role identity is likely shaped by a variety of factors such as their personal and professional experiences, their beliefs and values, their satisfaction and confidence of their job and their interactions with students and colleagues. Our study aims to fill this gap in the literature by investigating how these factors shape the role identity of entrepreneurship educators. Drawing from role identity theory, our study investigates the following question: "*What factors influence entrepreneurship educator role identity?*" Using a unique dataset including of 289 entrepreneurship educators world-wide, a conceptual model was developed to empirically evaluate the entrepreneurship educators' role identity. The SEM findings indicated that the educator's role identity is affected not only by self-efficacy and job satisfaction, but also their personal values. We discuss our three major contributions below.

6.1 Influences on role identity

Role identity refers to the self-perception and recognition of an individual within a particular role or position. Role identities are shaped by the beliefs, values, behaviors and expectations associated with a specific role (Burke and Reitzes, 1981). Consistent with previous research from the teacher education literature, in particular, influences on professional identity, we hypothesized that the core influences on role identity were personal values (Schein, 1978), job satisfaction (Staples and Higgins, 1998) and self-efficacy (Stets and Burke, 2000). We found that all the three determinants of the proposed research model significantly influence the role identity of entrepreneurship educators. Of these three, educators' self-efficacy has the strongest effect on their role perception. Stronger self-efficacy is associated with the amount of effort a faculty member puts forth in the classroom, the likelihood of innovation and encouraging student autonomy and collaboration (Miller *et al.*, 2017).

For entrepreneurship educators, the greater the self-efficacy, the stronger the role identity as an entrepreneurial educator, and the more likely they were to perceive their role as a guide

or facilitator, meeting student expectations and allowing students to have a central role in designing their own learning (Neck and Corbett, 2018). A student-centered learning model is prescribed as more desirable in entrepreneurship education (Hägg and Gabrielsson, 2020). In the student-centered learning model, educators give up control, which requires confidence to take the chance that students will introduce new topics and ideas outside the plan for the course. There is greater uncertainty for how the learning will progress, which can be challenging and even risky for the educator. For those less self-confident, they would be less likely to give up control and try new things, which would likely diminish their entrepreneurial educator role identity (Miller *et al.*, 2017). When the role identity is weaker, the educator may be less likely to enact an entrepreneurial identity; for example, less likely to experiment and less confident in presenting the content and process of entrepreneurship. This raises the question as to how to develop self-efficacy in faculty? Personal teaching effectiveness can be trained through vicarious learning or mastery experiences (Burton *et al.*, 2005). Generally, there are limited professional development seminars for entrepreneurship faculty designed to help them develop their pedagogical knowledge, self-efficacy and skills in a way that leads to effective teaching (Goldstein, 2021).

In this research, we did consider whether other factors may have indirectly influenced the high self-efficacy in our sample. While we did not directly test education level, most of our sample were PhD qualified (67%), and it is possible that because of their training and educational accomplishments as professors, this contributes to their self-efficacy in their role and therefore is stronger than other influences (e.g. job satisfaction or personal values). Alternatively, a high percentage (41%) of our sample attended training program on teaching management/business courses as well as 46% of the sample indicated they have attended in workshops on how to teach entrepreneurship, which may have influenced their self-efficacy and therefore role perceptions. Exploring whether or not entrepreneurial training leads to stronger self-efficacy and role identity would be an extension of our study and follow work by Bandura (1994).

Job satisfaction also had a direct effect on entrepreneurship educator role identity, but the effect was much weaker than the mediated effect through self-efficacy. While theory has argued that perceived work satisfaction is linked to how individuals define themselves in a work context, most of these studies have occurred in a corporate setting (Wrzesniewski *et al.*, 1997). In the university setting where professors are qualified through educational degrees, it is likely that work satisfaction is derived from a variety of factors including student feedback, success in publishing articles, teaching innovations or service accomplishments, and that may be a plausible explanation of its weaker influence on role identity compared to educators' self-efficacy. Further, entrepreneurship educators are in fact somewhat independent in how they choose and carry out their research, and to some degree, how they create their entrepreneurial courses. It would be of interest to explore the link between publication success and student evaluations of teacher performance to determine the differential effects of these influences on job satisfaction.

Our study also found the personal values influenced entrepreneurship role identity, but the effect was the weakest of our three independent variables. While theory and research in teacher education suggests that values are a strong influence in personal identity (Hitlin, 2003), we found only a weak but positive association of personal values to role perception. Because value identities are often linked to task perceptions, and how one delivers education to students (Kelchtermans, 2009), it is possible that values may be less apparent as an influence on role identity, and more often reflected in other aspects of teacher behavior or pedagogy. For example, studies note that values and norms are a part of a teacher's professional thoughts, role and actions and are linked to the pedagogical choices, and may well be manifested in the tools, learning goals and educators' decision-making (Beijaard and De Vries, 1997; Greenberg *et al.*, 2007; Hiemstra, 1988).

Therefore, personal values may have a stronger influence on the pedagogical approaches rather than a direct and strong influence of role identity perception. This of course is a future research direction. Future research could focus on how self-efficacy, or an educator's belief in their own ability to successfully complete tasks and achieve goals, influences the entrepreneurship educators' role perception. This could include examining the how self-efficacy may shape the way in which entrepreneurship educators perceive their role in the classroom and in the larger entrepreneurship education community. Additionally, research could explore how self-efficacy may interact with other factors, such as personal and professional experiences, and influences the entrepreneurship educators' role perception. Future studies also could examine how self-efficacy may moderate the relationship between these factors and role identity. Furthermore, research could also focus on how to enhance self-efficacy in entrepreneurship educators to improve their role perception and success in their field.

6.2 Background factors

In addition to the three theoretically motivated constructs of job satisfaction, self-efficacy and personal values, we also examined background factors (Henry, 2020), to assess the extent to which gender, teaching experience, entrepreneurial operating experience and the educators' affiliations influenced our results. We found that teaching experience moderated the relationship between job satisfaction and role identity, where greater teaching experience (>10 years) increased the strength of the relationship. Because a high percentage of our sample were Associate and Full Professors, it is likely they were tenured and/or had more job security, therefore, they may be more satisfied or engaged with their institutions explaining this relationship. Further, because of the multiple aspects of an entrepreneurship educator's job (teaching, research, service), satisfaction with their job may be of less importance as related to their identity, than having a sense of whether their work is meaningful or not, which is a direction for future research (Rosso *et al.*, 2010). In addition, it was found that teaching experience influences the path between personal values and role perception, such that educators with less than 10 years of teaching experience significantly find that their personal values influence their role perception.

Results also showed that the relationship between satisfaction to role identity through self-efficacy was significant for women ($\beta = 0.15$, $t = 3.863$, $p < 0.001$) and not for men, supporting earlier research (Klassen and Chiu, 2010). This suggests that women may feel a deeper connection to their work, and when they feel appreciated, this leads to being more satisfied and confident (Canrinus *et al.*, 2011), and therefore stronger role identity. Going forward, it would be of interest to explore other factors that might affect job satisfaction (e.g. mentoring, salary equity or other working conditions), and whether these differentially affect the self-efficacy of men and women entrepreneurship faculty relative to role identity.

For men, it is personal values that have the strongest influence on role identity. It is acknowledged that teaching is not a neutral endeavor but includes value-laden choices relative to certain tasks, and that personal theories of teaching are rooted in personal values that influence authenticity and identity (Kelchtermans, 2009; Kreber, 2010). It is likely that because university faculty have been predominantly male, they may feel more empowered than women to express their values especially as it relates to entrepreneurship educator role. In the entrepreneurial arena, women comprise about 30% of all faculty in the 579 AACSB accredited schools [4], and account for approximately 24% of all entrepreneurship faculty. Women faculty may have a weaker connection to their roles because of stereotypes that associate being a faculty member with masculinity, and therefore may be less likely to express their values. The faculty composition within different institutions as well as role models for men and women might be a direction for future research. Moreover, experience as

an entrepreneur was not associated with stronger role identity, which might be unexpected. Entrepreneurship educators often have practical experience as entrepreneurs (Finkle *et al.*, 2006), so it might be expected that this would moderate the role identity as an educator, but the opposite was true. It is possible that because our measures of role identity focused on student interactions rather than entrepreneurial behavior (e.g. entrepreneurial competences), the relationship was less significant than expected.

Finally, our work offers the first empirical examination of the factors influencing role identity of entrepreneurial educators, a construct that we have defined and measured from previous work. Entrepreneurship educators are characterized as facilitators, co-learners and those who adopt a learner-centered approach (Gabrielsson *et al.*, 2020; Mueller and Anderson, 2014; Nabi *et al.*, 2017; Pittaway and Cope, 2007; Robinson *et al.*, 2016). The entrepreneurship educator designs, orchestrates and executes a student-centered entrepreneurial learning process (Neck and Corbett, 2018; Neck *et al.*, 2014). As such, we provide a measure and definition of the entrepreneurial educator role identity, which might be explore further in future studies. We recognize that educators may have different role identities and that they may be more or less salient in different situations (Stryker and Serpe, 1982), hence there may be variations in entrepreneurial educator role identity beyond what we have proposed. Further, we recognize that role identities may evolve or change over time, as one becomes more committed to that role, either through personal internal dynamics, or social interactions with others which may validate that role (Canrinius *et al.*, 2012). Another direction for research might be to explore how entrepreneurial educator role influences their choice of pedagogy or learning goals in a class. In other words, building on research in teacher education, how does a stronger or weaker entrepreneurial role identity influence motivation of students, instructional practices and student learning? Finally, as noted earlier, most entrepreneurship faculty are housed in management, business, strategy or other departments. A future research direction might be to explore whether faculty in a separate department of entrepreneurship reflects stronger commitment to role identity than those who are in a department within which Entrepreneurship is a sub-discipline. In addition, a study might be designed to explore the relationship between the strength of entrepreneurship educator identity and student learning outcomes, and to identify the factors that influence this relationship. For example, to examine the role of institutional support and resources in shaping entrepreneurship educator identity and its impact on student learning.

6.3 Limitations

As with all research, this study has limitations. First, we acknowledge that role identities are situational, and we have less information on the nature of the academic environment in terms of the context-culture, traditions and expectations-within different settings that will shape role perceptions (Ibarra, 1999), another avenue for future research. Second, our study did not include measures of institutional context or the structural reward systems, or support of the department, which would likely influence job satisfaction, self-efficacy and role identity. Relatedly, the extent to which an entrepreneurial department is separate within an institution or if entrepreneurship as a subject is embedded within another discipline (e.g. management, or strategy) might also have an influence on the antecedents to role identity and role identity as an entrepreneurship educator. These would also be topics for future investigation. Third, our cross-sectional sample of entrepreneurial educators was identified by those who had taught entrepreneurship for the past 5 years, on the premise that identity is socially enacted. However, we did not ask participants directly as to how they "see their identity as an entrepreneurship educator" which might yield a richer understanding of educator self-perceptions of role identity. Further, it may also be useful to compare entrepreneurship educators to those in other disciplines to have a better understanding of their role identity.

7. Conclusions

Based on identity theory, this paper empirically explores and analyzes the personal factors influencing entrepreneurship educators' role identity. The findings of the study provide several insights into contemporary theoretical debates of entrepreneurship education and the role of entrepreneurship educators. Firstly, the study identifies self-efficacy (having the strongest impact on role perception), job satisfaction and personal values as significant factors that shape the role identity of entrepreneurship educators (Canrinus *et al.*, 2011; Richter *et al.*, 2021). This finding is relevant to contemporary debates in the field of entrepreneurship education because it highlights the importance of personal characteristics and beliefs, and how an individual's sense of self and professional identity as an entrepreneurship educator is shaped by their beliefs in their own abilities, their level of satisfaction with their job and the values they hold (Flores and Day, 2006; Minor *et al.*, 2002). It suggests that educators who have higher levels of self-efficacy and job satisfaction, and who align with the values of entrepreneurship education, are more likely to be effective in their roles. Further, given that entrepreneurship educators frequently work in a department other than entrepreneurship and may be expected to be the advocate for all things entrepreneurial, stronger role identity and confidence in this role will allow them to be more successful in leading entrepreneurial activities in their school (Gibb, 2002).

Secondly, the results show that the link between job satisfaction to role identity is mediated via self-efficacy. This suggests that universities and colleges should strive to improve educator self-confidence, so that they can apply student-centric, experiential and collaborative learning pedagogies in the classroom. Workshops or pedagogical, role-modeling and mentoring may be implemented, especially for more junior faculty or those with less entrepreneurial teaching experience. This finding contributes to the existing literature on entrepreneurship education by providing a deeper understanding of the factors that influence the role perception of educators in this field (Liñán *et al.*, 2011). By identifying key personal influences on role identity perceptions, the study provides insights into how educators can be supported to be more effective in their roles. This insight is important for the development of training and professional development program for entrepreneurship educators, as it can help ensure that they have the necessary knowledge, skills and attitudes to be effective in the role as an entrepreneurship educator (Yitshak and Kropp, 2019; Pittaway *et al.*, 2023).

Thirdly, the study contributes to the broader literature on role identity and professional development by providing a more nuanced understanding of how role identity is shaped by a complex interplay of different factors. This insight is important because it suggests that educators' role identity is not solely determined by their job title, but rather by a combination of personal factors and beliefs. This finding is relevant to contemporary debates on the professionalization of entrepreneurship education and the development of a professional identity for entrepreneurship educators (Flores and Day, 2006; Sachs, 2001, 2005).

Overall, our study contributes to the literature by deepening our understanding of the "who" of entrepreneurship education. It goes beyond examining instructional methods or curricula and delves into the personal factors that shape the role identity of educators. By identifying the significance of self-efficacy, job satisfaction and personal values, we provide actionable insights for educational institutions, policymakers and administrators to better support entrepreneurship educators and enhance the overall learning experience for students. This understanding calls for a holistic approach that focuses not only on developing pedagogical strategies but also on empowering educators and fostering a positive work environment. By addressing these aspects, we can advance the field of entrepreneurship education and improve the effectiveness of educators in cultivating entrepreneurial skills and mindsets among students.

Notes

1. https://sites.google.com/a/slu.edu/eweb/entrepreneurship-infrastructure/doctoral-programs-in-entrepreneurship?authuser=0
2. https://files.eric.ed.gov/fulltext/EJ1263638.pdf
3. https://www.babsoncollaborative.org/
4. Brown, J. 2016. The percentage of women as full-time faculty at U.S. business schools: Surging ahead, lagging behind or stalling out. Retrieved at AACSB Blog Site: http://aacsbblogs.typepad.com/dataandresearch/2016/02/the-percentage-of-women-as-full-time-faculty-at-us-business-schools-surging-ahead-lagging-behind-or-.html

References

Agho, A.O., Muller, C.W. and Price, J.L. (1993), "Determinants of employee job satisfaction: an empirical test of a causal model", *Human Relations*, Vol. 46 No. 8, pp. 1007-1027, doi: 10.1177/001872679304600806.

Aparicio, G., Iturralde, T. and Maseda, A. (2019), "Conceptual structure and perspectives on entrepreneurship education research: a bibliometric review", *European Research on Management and Business Economics*, Vol. 25 No. 3, pp. 105-113, doi: 10.1016/j.iedeen.2019.04.003.

Bandura, A. (1994), "Self-efficacy", in Ramachaudran, V.S. (Ed.), *Encyclopedia of Human Behavior (Reprinted in H. Friedman [Ed.], Encyclopedia of Mental Health*, Academic Press, San Diego, Vol. 4, pp. 71-81.

Bandura, A. (1997), *Self-Efficacy: the Exercise of Control*, 1st ed., Worth, New York.

Beauchamp, C. and Thomas, L. (2009), "Understanding teacher identity: an overview of issues in the literature and implications for teacher education", *Cambridge Journal of Education*, Vol. 39 No. 2, pp. 175-189, doi: 10.1080/03057640902902252.

Béchard, J.P. and Grégoire, D. (2007), "Archetypes of pedagogical innovation for entrepreneurship in higher education: model and illustrations", in Fayolle, A. (Ed.), *Handbook of Research in Entrepreneurship Education, a General Perspective*, Edward Elgar, Cheltenham, Vol. 1, pp. 261-284.

Beijaard, D. (1995), "Teachers' prior experiences and actual perceptions of professional identity", *Teachers and Teaching*, Vol. 1 No. 2, pp. 281-294, doi: 10.1080/1354060950010209.

Beijaard, D. and De Vries, Y. (1997), "Building expertise: a process perspective on the development or change of teachers' beliefs", *European Journal of Teacher Education*, Vol. 20 No. 3, pp. 243-255, doi: 10.1080/0261976970200304.

Beijaard, D., Meijer, P.C. and Verloop, N. (2004), "Reconsidering research on teachers' professional identity", *Teaching and Teacher Education*, Vol. 20 No. 2, pp. 107-128.

Bell, R. and Bell, H. (2020), "Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education", *Journal of Small Business and Enterprise Development*, Vol. 27 No. 6, pp. 987-1004, doi: 10.1108/jsbed-01-2020-0012.

Binks, M., Starkey, K. and Mahon, C.L. (2006), "Entrepreneurship education and the business school", *Technology Analysis and Strategic Management*, Vol. 18 No. 1, pp. 1-18, doi: 10.1080/09537320500520411.

Bosman, L. and Fernhaber, S. (2018), "Defining the entrepreneurial mindset", in *Teaching the Entrepreneurial Mindset to Engineers*, Springer, Cham, pp. 7-14.

Burke, P.J. and Reitzes, D.C. (1981), "The link between identity and role performance", *Social Psychology Quarterly*, Vol. 44 No. 2, pp. 83-92, doi: 10.2307/3033704.

Burke, P.J. and Stets, J.E. (2009), *Identity Theory*, Oxford University Press, New York.

Burke, P.J. and Tully, J.C. (1977), "The measurement of role identity", *Social Forces*, Vol. 55 No. 4, pp. 881-897, doi: 10.2307/2577560.

Burton, J.P., Bamberry, N.-J. and Harris-Boundy, J. (2005), "Developing personal teaching efficacy in new teachers in university settings", *Academy of Management Learning and Education*, Vol. 4 No. 2, pp. 160-173, doi: 10.5465/amle.2005.17268563.

Canrinus, E., Helms-Lorenz, M., Beijaard, D., Buitink, J. and Hofman, A. (2011), "Self-efficacy, job satisfaction, motivation, and commitment: exploring the relationship between indicators of teachers' professional identity", *European Journal of Psychology of Education*, Vol. 27 No. 1, pp. 115-132, doi: 10.1007/s10212-011-0069-2.

Capara, G., Dodge, K., Pastorelli, C. and Zelli, A. (2006), "The effects of marginal deviation on behavioral development", *European Psychologist*, Vol. 3 No. 2, pp. 79-89.

Caprara, G.V., Barbaranelli, C., Borgogni, L., Petitta, L. and Rubinacci, A. (2003), "Teachers', school staff and parents' efficacy beliefs as determinants of attitudes toward school", *European Journal of Psychology of Education*, Vol. 18 No. 1, pp. 15-31, doi: 10.1007/bf03173601.

Day, C., Stobart, G., Sammons, P., Kington, A., Gu, Q., Smees, R. and Mujtaba, T. (2006), *Variations in Teacher's Work, Lives and Effectiveness*, Final Report for the VITAE Project, Nottingham.

Erikson, E.H. (1994), *Identity and the Life Cycle*, W. W. Norton & Company, New York.

Fayolle, A. and Klandt, H. (2006), *International Entrepreneurship Education: Issues and Newness*, Edward Elgar Publishing, Massachusetts.

Fayolle, A., Verzat, C. and Wapshott, R. (2016), "In quest of legitimacy: the theoretical and methodological foundations of entrepreneurship education research", *International Small Business Journal*, Vol. 34 No. 7, pp. 895-904, doi: 10.1177/0266242616649250.

Finkle, T.A., Kuratko, D.F. and Goldsby, M.G. (2006), "An examination of entrepreneurship centers in the United States: a national survey", *Journal of Small Business Management*, Vol. 44 No. 2, pp. 184-206, doi: 10.1111/j.1540-627x.2006.00163.x.

Flores, M.A. and Day, C. (2006), "Contexts which shape and reshape new teachers' identities: a multi-perspective study", *Teaching and Teacher Education*, Vol. 22 No. 2, pp. 219-232, doi: 10.1016/j.tate.2005.09.002.

Forbes, C.T. and Davis, E.A. (2007), "Beginning elementary teachers" learning through the use of science curriculum materials: a longitudinal study", *Annual meeting of the National Association for Research in Science Teaching*, April, New Orleans.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50, doi: 10.2307/3151312.

Gabrielsson, J., Hägg, G., Landström, H. and Politis, D. (2020), "Connecting the past with the present: the development of research on pedagogy in entrepreneurial education", *Education + Training*, Vol. 62 No. 9, pp. 1061-1086, doi: 10.1108/et-11-2019-0265.

Gecas, V. (2000), "Value identities, self-motives, and social movements", in Stryker, S., Owens, T.J. and White, R.W. (Eds), *Self, Identity, and Social Movements*, University of Minnesota Press, pp. 93-109.

Gibb, A. (2002), "In pursuit of a new entrepreneurship paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge", *International Journal of Management Reviews*, Vol. 4 No. 3, pp. 233-269, doi: 10.1111/1468-2370.00086.

Gibb, A. (2011), "Concepts into practice: meeting the challenge of development of entrepreneurship educators around an innovative paradigm", *International Journal of Entrepreneurial Behavior and Research*, Vol. 17 No. 2, pp. 146-165, doi: 10.1108/13552551111114914.

Gibbs, G. and Coffey, M. (2004), "The impact of training of university teachers on their teaching skills, their approach to teaching and the approach to learning of their students", *Active Learning in Higher Education*, Vol. 5 No. 1, pp. 87-100, doi: 10.1177/1469787404040463.

Goldstein, B. (2021), *"Experiential learning as a training model for entrepreneurship educators"*, Unpublished dissertation, Johns Hopkins University, Baltimore, Maryland.

Greenberg, D.N., Clair, J.A. and Maclean, T.L. (2007), "Enacting the role of management professor: lessons from Athena, Prometheus, and Asclepius", *Academy of Management Learning and Education*, Vol. 6 No. 4, pp. 439-457, doi: 10.5465/amle.2007.27694945.

Groves, R.M. (2005), *Survey Errors and Survey Costs*, John Wiley & Sons, Hoboken, New Jersey.

Hägg, G. and Gabrielsson, J. (2020), "A systematic literature review of the evolution of pedagogy in entrepreneurial education research", *International Journal of Entrepreneurial Behavior and Research*, Vol. 3 No. 2, pp. 129-153.

Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, 5th ed., Prentice Hall, Upper Saddle River, NJ.

Hair, J.F., Henseler, J., Dijkstra, T., Sarstedt, M., Ringle, C., Diamantopoulos, A., Straub, D., Ketchen, D., Gtm, H. and Calantone, R. (2014), "Common beliefs and reality about partial least squares", *Comments on Rönkkö and Evermann, Organizational Research Methods*, Vol. 17 No. 2, pp. 182-209, doi: 10.1177/1094428114526928.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: indeed, a silver bullet", *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139-152, doi: 10.2753/mtp1069-6679190202.

Hair, J.F., Ringle, C.M. and Sarstedt, M. (2012), "Partial least squares: the better approach to structural equation modelling?", *Long Range Planning*, Vol. 45 Nos 5-6, pp. 312-319, doi: 10.1016/j.lrp.2012.09.011.

Henry, C. (2020), "Reconceptualizing the role of the future entrepreneurship educator: an exploration of the content challenge", *Entrepreneurship and Regional Development*, Vol. 32 Nos 9-10, pp. 1-20, doi: 10.1080/08985626.2020.1737416.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modelling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135, doi: 10.1007/s11747-014-0403-8.

Hiemstra, R. (1988), "Translating personal values and philosophy into practical actions", in Brockett, R.G. (Ed.), *Ethical Issues in Adult Education, Teachers College*, Columbia University, New York, NY.

Hitlin, S. (2003), "Values as the core of personal identity: drawing links between two theories of self", *Social Psychology Quarterly*, Vol. 66 No. 2, pp. 118-137, doi: 10.2307/1519843.

Hogg, M.A., Terry, D.J. and White, K.M. (1995), "A tale of two theories: a critical comparison of identity theory with social identity theory", *Social Psychology Quarterly*, Vol. 58 No. 4, pp. 255-269, doi: 10.2307/2787127.

Hoppe, M., Westerberg, M. and Leffler, E. (2017), "Educational approaches to entrepreneurship in higher education: a view from the Swedish horizon", *Education + Training*, Vol. 56 Nos 7/8, pp. 751-766, doi: 10.1108/et-12-2016-0177.

Hynes, B. and Richardson, I. (2007), "Entrepreneurship education: a mechanism for engaging and exchanging with the small business sector", *Education + Training*, Vol. 49 Nos 8/9, pp. 732-744, doi: 10.1108/00400910710834120.

Ibarra, H. (1999), "Provisional Selves: experimenting with image and identity in professional adaptation", *Administrative Science Quarterly*, Vol. 44 No. 4, pp. 764-791, doi: 10.2307/2667055.

Ibarra, H. and Barbulescu, R. (2010), "Identity as narrative: prevalence, effectiveness, and consequences of narrative identity work in macro work role transitions", *Academy of Management Review*, Vol. 35 No. 1, pp. 135-154, doi: 10.5465/amr.35.1.zok135.

Jones, C. and Matlay, H. (2011), "Understanding the heterogeneity of entrepreneurship education: going beyond Gartner", *Education + Training*, Vol. 53 Nos 8/9, pp. 692-703, doi: 10.1108/00400911111185026.

Kabongo, J.D. and McCaskey, P.H. (2011), "An examination of entrepreneurship educator profiles in business programs in the United States", *Journal of Small Business and Enterprise Development*, Vol. 18 No. 1, pp. 27-42, doi: 10.1108/14626001111106415.

Katz, J.A. (2008), "Fully mature but not fully legitimate: a different perspective on the state of entrepreneurship education", *Journal of Small Business Management*, Vol. 46 No. 4, pp. 550-556, doi: 10.1111/j.1540-627x.2008.00256.x.

Kelchtermans, G. (2009), "Who I am in how I teach is the message: self-understanding, vulnerability, and reflection?", *Teachers and Teaching: Theory and Practice*, Vol. 15 No. 2, pp. 257-272, doi: 10.1080/13540600902875332.

Kelchtermans, G. (2014), "Narrative biographical pedagogies in teacher education, international teacher education: promising pedagogies (Part A)", in *Advances in Research on Teaching*, Emerald Group Publishing, Bingley, Vol. 22, pp. 273-291.

Klassen, R.M. and Chiu, M.M. (2010), "Effects on teachers' self-efficacy and job satisfaction: teacher gender, years of experience and job stress", *Journal of Educational Psychology*, Vol. 102 No. 3, pp. 741-756, doi: 10.1037/a0019237.

Klassen, R.M., Bong, M., Usher, E.L., Chong, W.H., Huan, V.S., Wong, I.Y.F. and Georgiou, T. (2009), "Exploring the validity of a teachers' self-efficacy scale in five countries", *Contemporary Educational Psychology*, Vol. 34 No. 1, pp. 67-76, doi: 10.1016/j.cedpsych.2008.08.001.

Kreber, C. (2010), "Academics' teacher identities, authenticity and pedagogy", *Studies in Higher Education*, Vol. 35 No. 2, pp. 171-194, doi: 10.1080/03075070902953048.

Krueger, N.F. Jr (2007), "What lies beneath? The experiential essence of entrepreneurial thinking", *Entrepreneurship Theory and Practice*, Vol. 31 No. 1, pp. 123-138, doi: 10.1111/j.1540-6520.2007.00166.x.

Kuratko, D.F. and Hoskinson, S. (2014), *Innovative Pathways for University Entrepreneurship in the 21st Century*, Emerald Group Publishing, Bingley.

Lamonte, C. and Engels, N. (2010), "The development of student teachers' professional identity", *European Journal of Teacher Education*, Vol. 33 No. 1, pp. 3-18, doi: 10.1080/02619760903457735.

Liñán, F., Rodríguez-Cohard, J.C. and Rueda-Cantuche, J.M. (2011), "Factors affecting entrepreneurial intention levels: a role for education", *International Entrepreneurship and Management Journal*, Vol. 7 No. 2, pp. 195-218, doi: 10.1007/s11365-010-0154-z.

Liu, M., Gorgievski, M.J., Qi, J. and Paas, F. (2022), "Increasing teaching effectiveness in entrepreneurship education: course characteristics and student needs differences", *Learning and Individual Differences*, Vol. 96, 102147, doi: 10.1016/j.lindif.2022.102147.

Loher, B.T., Noe, R.A., Moeller, N.L. and Fitzgerald, M.P. (1985), "A meta-analysis of the relation of job characteristics to job satisfaction", *Journal of Applied Psychology*, Vol. 70 No. 2, pp. 280-289, doi: 10.1037/0021-9010.70.2.280.

Macht, S. and Ball, S. (2016), "'Authentic Alignment'- A new framework for entrepreneurship education", *Education + Training*, Vol. 58 No. 9, pp. 926-944, doi: 10.1108/et-07-2015-0063.

MacKenzie, S.B. and Podsakoff, P.M. (2012), "Common method bias in marketing: causes, mechanisms, and procedural remedies", *Journal of Retailing*, Vol. 88 No. 5, pp. 542-555, doi: 10.1016/j.jretai.2012.08.001.

McCall, G.J. and Simmons, J.L. (1971), *The Dynamics of Interactions. Sociological Perspectives: Selected Readings, Middlesex*, Penguin Books, Harmondsworth, London, pp. 159-179.

McCall, G.J. and Simmons, J.L. (1978), *Identities and Interactions*, Free Press, New York.

Miller, A.D., Ramirez, E.M. and Murdock, T.B. (2017), "The influence of teachers' self-efficacy on perceptions: perceived teacher competence and respect and student effort and achievement", *Teaching and Teacher Education*, Vol. 64, pp. 260-269.

Minor, L.C., Onwuegbuzie, A.J., Witcher, A.E. and James, T.L. (2002), "Preservice teachers' educational beliefs and their perceptions of characteristics of effective teachers", *The Journal of Educational Research*, Vol. 96 No. 2, pp. 116-127, doi: 10.1080/00220670209598798.

Morris, M.H. and Liguori, E. (2016), "Preface: teaching reason and the unreasonable", in *Annals of Entrepreneurship Education and Pedagogy–2016*, Edward Elgar Publishing.

Mueller, S. and Anderson, A.R. (2014), "Understanding the entrepreneurial learning process and its impact on students' personal development: a European perspective", *The International Journal of Management Education*, Vol. 12 No. 3, pp. 500-511, doi: 10.1016/j.ijme.2014.05.003.

Mwasalwiba, E.S. (2010), "Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators", *Education + Training*, Vol. 52 No. 1, pp. 20-47, doi: 10.1108/00400911011017663.

Myrah, K.K. and Currie, R.R. (2006), "Examining undergraduate entrepreneurship education", *Journal of Small Business and Entrepreneurship*, Vol. 19 No. 3, pp. 233-253, doi: 10.1080/08276331.2006.10593369.

Nabi, G., Liñán, F., Krueger, N., Fayolle, A. and Walmsley, A. (2017), "The impact of entrepreneurship education in higher education: a systematic review and research agenda", *Academy of Management Learning and Education*, Vol. 16 No. 2, pp. 277-299, doi: 10.5465/amle.2015.0026.

Neck, H.M. and Corbett, A.C. (2018), "The scholarship of teaching and learning entrepreneurship", *Entrepreneurship Education and Pedagogy*, Vol. 1 No. 1, pp. 8-41, doi: 10.1177/2515127417737286.

Neck, H., Brush, C. and Greene, P. (2021), *Teaching Entrepreneurship: A Practice-Based Approach*, Vol. 2, Edward Elgar Publishing, Northampton, MA.

Neck, H.M., Greene, P.G. and Brush, C.G. (2014), *Teaching Entrepreneurship: A Practice-Based Approach*, Edward Elgar Publishing, Cheltenham.

Oshagbemi, T. (1998), "The impact of age on the job satisfaction of university teachers", *Research in Education*, Vol. 59 No. 1, pp. 95-108, doi: 10.1177/003452379805900110.

Otache, I. (2019), "Enhancing the effectiveness of entrepreneurship education: the role of entrepreneurial lecturers", *Education + Training*, Vol. 61 Nos 7/8, pp. 918-939, doi: 10.1108/et-06-2018-0127.

Petter, S., Straub, D. and Rai, A. (2007), "Specifying formative constructs in information systems research", *MIS Quarterly*, Vol. 31 No. 4, pp. 623-656, doi: 10.2307/25148814.

Peura, K. and Hytti, U. (2022), "Identity work of academic teachers in an entrepreneurship training camp: a sensemaking approach", *Education and Training*, Vol. 65 No. 4, pp. 548-564, doi: 10.1108/ET-06-2021-0203.

Pittaway, L. and Cope, J. (2007), "Entrepreneurship education: a systematic review of the evidence", *International Small Business Journal*, Vol. 25 No. 5, pp. 479-510, doi: 10.1177/0266242607080656.

Pittaway, L., Brush, C., Corbett, A.C. and Tantawy, M.M. (2023), "Doctoral programs in entrepreneurship: building cognitive apprenticeships", *Entrepreneurship Education and Pedagogy*, Vol. 6 No. 4, pp. 608-642, 25151274231153487, doi: 10.1177/25151274231153487.

Podsakoff, P.M. and Organ, D. (1986), "Self-reports in organizational research: problems, and prospects", *Journal of Management*, Vol. 12 No. 4, pp. 531-544, doi: 10.1177/014920638601200408.

Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903, doi: 10.1037/0021-9010.88.5.879.

Ratten, V. and Usmanij, P. (2021), "Entrepreneurship education: time for a change in research direction?", *International Journal of Management Education*, Vol. 19 No. 1, 100367, doi: 10.1016/j.ijme.2020.100367.

Richter, E., Brunner, M. and Richter, D. (2021), "Teacher educators' task perception and its relationship to professional identity and teaching practice", *Teaching and Teacher Education*, Vol. 101 No. 2021, pp. 1-10, doi: 10.1016/j.tate.2021.103303.

Riley, A. and Burke, P.J. (1995), "Identities and self-verification in the small group", *Social Psychology Quarterly*, Vol. 58 No. 2, pp. 61-73, doi: 10.2307/2787146.

Robinson, S., Neergaard, H., Tanggaard, L. and Krueger, N. (2016), "New horizons in entrepreneurship: from teacher-led to student-centered learning", *Education + Training*, Vol. 58, pp. 7-8.

Rosso, B.D., Dekas, K.H. and Wrzesniewski, A. (2010), "On the meaning of work: a theoretical integration and review", *Research in Organizational Behavior*, Vol. 30, pp. 91-127, doi: 10.1016/j.riob.2010.09.001.

Sachs, J. (2001), "Teacher professional identity: competing discourses, competing outcomes", *Journal of Education Policy*, Vol. 16 No. 2, pp. 149-161, doi: 10.1080/02680930116819.

Sachs, J. (2005), "Teacher education and the development of professional identity: learning to be a teacher 1", in *Connecting Policy and Practice*, Routledge, pp. 5-21.

Sax, L.J., Gilmartin, S.K. and Bryant, A.N. (2003), "Assessing response rates and nonresponse bias in web and paper surveys", *Research in Higher Education*, Vol. 44 No. 4, pp. 409-432, doi: 10.1023/a:1024232915870.

Schein, E.H. (1978), *Career Dynamics: Matching Individual and Organizational Needs*, Vol. 6834, Addison-Wesley, London.

Schwartz, S.H. (1994), "Are there universal aspects in the structure and contents of human values?", *Journal of Social Issues*, Vol. 50 No. 4, pp. 19-45, doi: 10.1111/j.1540-4560.1994.tb01196.x.

Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J. and Rytkola, M. (2010), "Promoting entrepreneurship education: the role of the teacher?", *Education + Training*, Vol. 52 No. 2, pp. 117-127, doi: 10.1108/00400911011027716.

Settlage, J., Southerland, S.A., Smith, L.K. and Ceglie, R. (2009), "Constructing a doubt-free teaching self: self-efficacy, teacher identity, and science instruction within diverse settings", *Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching*, Vol. 46 No. 1, pp. 102-125, doi: 10.1002/tea.20268.

Shulman, L.S. and Shulman, J.H. (2004), "How and what teachers learn: a shifting perspective", *Journal of Curriculum Studies*, Vol. 36 No. 2, pp. 257-271.

Simpson, B. and Carroll, B. (2008), "Re-Viewing 'role' in processes of identity construction", *Organization*, Vol. 15 No. 1, pp. 29-50, doi: 10.1177/1350508407084484.

Sirelkhatim, F. and Gangi, Y. (2015), "Entrepreneurship education: a systematic literature review of curricula contents and teaching methods", *Cogent Business and Management*, Vol. 1 No. 1, pp. 1-11, doi: 10.1080/23311975.2015.1052034.

Staples, S.D. and Higgins, C.A. (1998), "A study of the impact of factor importance weightings on job satisfaction measures", *Journal of Business and Psychology*, Vol. 13 No. 2, pp. 211-232, doi: 10.1023/a:1022907023046.

Stets, J.E. and Burke, P.J. (2000), "Identity theory and social identity theory", *Social Psychology Quarterly*, Vol. 63 No. 3, pp. 224-237, doi: 10.2307/2695870.

Stets, J.E. and Burke, P.J. (2014), "The development of identity theory", in *Advances in Group Processes*, Emerald Group Publishing.

Stets, J.E. and Trettevik, R. (2014), "Emotions in identity theory", in Stets, J.E. and Turner, J.H. (Eds), *Handbook Of the Sociology of Emotions: Volume II*, Springer, pp. 33-49.

Stryker, S. (1980), *Symbolic Interactionism: A Social Structural Version*, Benjaminl Cummings, Palo Alto, CA.

Stryker, S. (2001), "Traditional symbolic interactionism, role theory, and structural symbolic interactionism: the road to identity theory", in Turner, J.H. (Ed.), *Handbook of Sociological Theory*, Springer US, pp. 211-231.

Stryker, S. and Serpe, R.T. (1982), "Commitment, identity salience, and role behavior: theory and research example", in Ickes, W. and Knowles, E.S. (Eds), *199-218, Personality, Roles and Social Behavior*, Springer-Verlag, New York.

Sudman, S. and Bradburn, N.M. (1982), *Asking Questions: A Practical Guide to Questionnaire Design*, Jossey-Bass, San Francisco.

Tavakoli, M., Radu-Lefebvre, M., Fayolle, A. and Friedemann, C. (2018), "Entrepreneurship education effectiveness and educators' role", *Proceedings of 3E Conference–ECSB Entrepreneurship Education Conference (No. CONFERENCE)*, 16-18 May 2018.

Thomassen, M.L., Middleton, K.W., Ramsgaard, M.B., Neergaard, H. and Warren, L. (2019), "Conceptualizing context in entrepreneurship education: a literature review", *International Journal of Entrepreneurial Behavior and Research*, Vol. 26 No. 5, pp. 863-886, doi: 10.1108/ijebr-04-2018-0258.

Toding, M. and Venesaar, U. (2018), "Discovering and developing conceptual understanding of teaching and learning in entrepreneurship lecturers", *Education + Training*, Vol. 60 Nos 7/8, pp. 696-718, doi: 10.1108/et-07-2017-0101.

Toropova, A., Myrberg, E. and Johansson, S. (2021), "Teacher job satisfaction: the importance of schoolworking conditions and teacher characteristics", *Educational Review*, Vol. 73 No. 1, pp. 71-97, doi: 10.1080/00131911.2019.1705247.

Tourangeau, R., Rips, L.J. and Rasinski, K. (2000), *The Psychology of Survey Response*, Cambridge University Press, Cambridge.

Tschannen-Moran, M. and Woolfolk Hoy, A. (2001), "Teacher efficacy: capturing an elusive construct", *Teaching and Teacher Education*, Vol. 17 No. 7, pp. 783-805, doi: 10.1016/s0742-051x(01)00036-1.

van Lankveld, T., Schoonenboom, J., Volman, M., Croiset, G. and Beishuizen, J. (2017), "Developing teacher identity in the university context: a systematic review of the literature", *Higher Education Research and Development*, Vol. 36 No. 2, pp. 325-342, doi: 10.1080/07294360.2016.1208154.

Watt, H.M. and Richardson, P.W. (2007), "Motivational factors influencing teaching as a career choice: development and validation of the FIT-Choice scale", *The Journal of Experimental Education*, Vol. 75 No. 3, pp. 167-202, doi: 10.3200/jexe.75.3.167-202.

Wraae, B. and Walmsley, A. (2020), "Behind the scenes: spotlight on the entrepreneurship educator", *Education + Training*, Vol. 62 No. 3, pp. 255-270, doi: 10.1108/et-01-2019-0009.

Wraae, B., Brush, C. and Nikou, S. (2020), "The Entrepreneurship educator: understanding role identity", *Entrepreneurship Education and Pedagogy*, Vol. 5 No. 1, pp. 3-35, doi: 10.1177/2515127420979662.

Wright, T.A. and Cropanzano, R. (2000), "Psychological well-being and job satisfaction as predictors of job performance", *Journal of Occupational Health Psychology*, Vol. 5 No. 1, pp. 84-94, doi: 10.1037/1076-8998.5.1.84.

Wrzesniewski, A., McCauley, C., Rozin, P. and Schwartz, B. (1997), "Jobs, careers, and callings: people's relations to their work", *Journal of Research in Personality*, Vol. 31 No. 1, pp. 21-33, doi: 10.1006/jrpe.1997.2162.

Yitshaki, R. and Kropp, F. (2019), "Entrepreneurial passions and identities in different contexts: a comparison between high-tech and social entrepreneurs", in *Entrepreneurial Identity and Identity Work*, Routledge, pp. 30-57.

Further reading

Bhatia, A.K. and Levina, N. (2020), "Diverse rationalities of entrepreneurship education: an epistemic stance perspective", *Academy of Management Learning and Education*, Vol. 19 No. 3, pp. 323-344, doi: 10.5465/amle.2019.0201.

De Vries, Y. and Beijaard, D. (1999), "The development of teacher beliefs about student learning", in Teoksessa, M., Olson, J.L., Hansen, H. and Bünder, W. (Eds), *Changing Schools/changing Practices: Perspectives on Educational Reform and Teacher Professionalism*, Garant, Louvain, pp. 201-208.

Stryker, S. and Statham, A. (1985), "Symbolic interaction and role theory", in Lindzey, G. and Aronson, E. (Eds), *Handbook of Social Psychology*, 3rd ed., Random House No. 1, pp. 311-378.

Tajfel, H., Turner, J.C., Austin, W.G. and Worchel, S. (1979), "An integrative theory of intergroup conflict. Organizational identity", *A Reader*, Vol. 56 No. 65, pp. 56-65.

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