

Entrepreneurship education: systematic literature review and future research directions

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Abstract

Purpose – The purpose of the study is to further understanding of entrepreneurship education, highlighting current trends and directions for further research.

Design/methodology/approach – This paper used systematic literature review of published articles to collect, evaluate, and interpret entrepreneurship education literature from selected databases between 2009 and 2019. The study reviewed 90 articles from the entrepreneurship education literature. There are several different topics that have been analyzed; with the most researched topic being analyzed was focusing on entrepreneurship education development.

Findings – Entrepreneurship education programs have become an increasingly important focus of attention in recent years. This paper deeply investigates the literature on entrepreneurship education to help entrepreneurship education decision makers to develop better solutions.

Research limitations/implications – It must be noted that this study has some limitations, which suggest avenues for further research. In reviewing the articles, the study used only four databases and only considered papers published between 2009 and 2019. Other studies may include more databases and a longer time frame.

Originality/value – Regarding the theories most used in the reviewed articles, TPB and social learning theory (SLT) were most used in relation to entrepreneurship education. This shows that researchers were focusing on the influence of entrepreneurship education in relation to the entrepreneurial intention, behavior and attitude of the individuals.

Keywords Entrepreneurship education, Systematic literature review, Entrepreneurial learning

Paper type Literature review

1. Introduction

Entrepreneurship education has quickly emerged as a highly important topic in recent years. Entrepreneurship education supports students intending to start businesses and, thus, job creation. Ajzen (1991), Fayolle and Gailly (2008) and Van Praag and Versloot (2007) stated that entrepreneurship has a substantial role in the promotion of innovation and the growth of the economy. Several researchers have also asserted that higher levels of entrepreneurship can be achieved through education (e.g. Jack and Anderson, 1999; Wach, 2014).

In the context of the global and rapid development in higher education, one of the recent new areas for investigation has been entrepreneurship education programs (Fayolle, 2013; Neck and Greene, 2011). This field is maturing and has been the focus of research since the early 1990s (Charney and Libecap, 2000; Fayolle, 2005; Honig, 2004; Kuratko, 2005; McMullan and Long, 1987; Shepherd, 2004). Athayde (2009), Fayolle (2008), Heinonen and Poikkijoki (2006), Jones and Iredale (2010), Matlay (2006) and Neck and Greene (2011) have all carried out researches exploring activating learners' methods and entrepreneurship education.



Entrepreneurship education offers its students a combination of different experiences (Walter *et al.*, 2013). Different studies have revealed that entrepreneurship education enhances the intention to be an entrepreneur, behavior and attitude through improving entrepreneurial attention and competency (Bae *et al.*, 2014; Kuratko, 2005; Martin *et al.*, 2013).

The advancement of entrepreneurship education in recent years is closely related to research on entrepreneurial learning, which has received significant research attention since the start of the twenty-first century, and has since been an increasingly important basis for developing pedagogy in entrepreneurship education. Different learning theories were influenced on teaching entrepreneurship, including as action learning (Revans, 1982), transformative learning (Paprock, 1992), experiential learning theory (Kolb, 1984), and additional theories of learning focusing on action and change. In this context, local private enterprise has been recognized as a significant mechanism for the economic development of, for example, Africa (Brixiová *et al.*, 2015; Oluwatobi *et al.*, 2015; Rooke *et al.*, 2011). Based on this, governments, universities and international agencies have formulated entrepreneurship agendas to reduce the high rate of unemployment in the continent (Swaziland, 2013) as well as highlighting the importance of informal activities (Bawuah *et al.*, 2006). In Nigeria, which is a developing country, the traditional approach to teaching has been adopted in higher education, i.e. a passive teaching method (Blanton *et al.*, 2006; Gorghiu *et al.*, 2015). This predominant traditional teaching method, through its passivity, leads students to simply reproduce the same knowledge through evaluation or examinations (Gorghiu *et al.*, 2015).

Given the increasing diversity of scholarship regarding entrepreneurship education, this study aims to use a systematic literature review to assess research published in the last decade and to evaluate its general involvement in, and impact on, the field. This paper has three main objectives. First, it aims to systematically collect, summarize, analyze, and synthesize the information from previous studies published between 2009 and 2019. Second, it aims to examine in detail the findings of these systematically collected studies to offer a detailed picture of the present situation of entrepreneurship education. Finally, it aims to identify the research gaps that require further investigation and reveal opportunities for future research in entrepreneurship education.

The paper is structured as follows. Section 2 provides the background of entrepreneurship education. Section 3 describes the main methodological considerations of the study. Section 4 details the results of the systematic literature review. Section 5 analyzes and discusses these results. Section 6 provides the paper's conclusions.

To achieve these aims of the paper, the following research questions (RQs) are addressed:

- RQ1. What theories or frameworks have been used in entrepreneurship education?
- RQ2. What are the different research areas that have been researched in entrepreneurship education?
- RQ3. What are the challenges and obstacles related to entrepreneurship education?
- RQ4. What gaps and limitations exist within current research regarding entrepreneurship education?

2. Background

An extensive body of research was conducted in entrepreneurship education: entrepreneurship education research (Yatu *et al.*, 2018); entrepreneurship's influence on other disciplines (Canziani and Welsh, 2019); students' entrepreneurship-education mind-set (Cui *et al.*, 2019); entrepreneurship education and student intention (Küttim *et al.*, 2014); entrepreneurship education and job creation (Matlay and Owusu-Mintah, 2014); status of entrepreneurship education (Alakaleek, 2019).

Entrepreneurship education has been given various definitions. [Fayolle and Lassas-Clerc \(2006\)](#) indicated that entrepreneurship education is an educational method related to entrepreneurs' attitude and skills, and that it can also be used to improve the qualities of individuals. Entrepreneurship education is also referred as developing behaviors, skills, and attitudes that the individual can use in an entrepreneurship-based career ([Wilson, 2008](#)), also [Bechard and Toulouse \(1998\)](#) EE is defined as formal teachings that inform, educate and train those who want to start businesses or develop small ventures. Based on all this definitions the researchers of this paper defined entrepreneurship education as developing entrepreneurship skills for enhancing entrepreneurial intention to improve employability and educate entrepreneurs for starting a successful businesses.

[Martin et al. \(2013\)](#) indicated that entrepreneurship education plays a major role in entrepreneurial development and is one of the most fundamental tools for increasing entrepreneurial attitudes among entrepreneurs. According to [Liñán et al. \(2011\)](#), entrepreneurship education is an important way to acquire the knowledge, experience, and skills required for coming up with an idea, followed by starting and operating a successful business. Many scholars also agree that entrepreneurship education is a certain way to increase the population of the graduates ([Matlay, 2005](#); [Matlay and Westhead, 2005](#); [Urbano, 2008](#)). However, several studies have asserted that entrepreneurship education will not usually match graduates' expected outcomes concerning the attitudes, knowledge and skills developed during the entrepreneurial education process ([Oosterbeek et al., 2010](#); [Smith et al., 2006](#); [Solomon and Matlay, 2008](#)).

Entrepreneurship education has the potential to make a significant contribution to economic growth, which supports the value of increasing awareness of this field ([Carland and Carland, 2004](#); [Hall et al., 2010](#)). [Gartner and Vesper \(1994\)](#) indicated that the provision of entrepreneurial education programs, both to undergraduates and post-graduates, has grown significantly in Asia, North America, New Zealand, Europe and Australia. Entrepreneurship education's influence, however, varies based on the national and local context ([Ahmad et al., 2018](#); [Chen and Agrawal, 2018](#)). Notably, [Nabi et al. \(2017\)](#) revealed that studies related to the influence of entrepreneurship education in rapidly developing counties are only used in 5% of empirical samples (e.g. Four of the BRICS countries "China, Russia, India, and Brazil"). In the 1980s, management education appeared in a few universities in China while, in the early 1990s and the mid-1990s management schools were established and MBA programs were introduced, respectively. Businesses themselves later helped to further develop entrepreneurship education ([Li et al., 2003](#)). In China, according to [Li et al. \(2003\)](#), entrepreneurship education has been improved recently (it was a new concept till 2001), with testing for entrepreneurship education introduced in nine universities by the ministry of education, which proved successful and has since been developed extensively.

Several studies have explored the contribution of entrepreneurship education to economic development ([Fayolle and Lassas-Clerc, 2006](#); [Izquierdo and Buelens, 2011](#); [Kolvereid and Moen, 1997](#); [Lüthje and Franke, 2003](#); [Peterman and Kennedy, 2003](#); [Souitaris et al., 2007](#)). Researchers have proposed similar frameworks based on the theory of planned behavior (TPB) ([Ajzen, 1991](#)) to assess students' attitude and intention even though the education program content may be different.

In this regard, [Ebewo et al. \(2017\)](#) investigated the impact of entrepreneurship education on the university students' intention to start new enterprises based on TPB. A questionnaire method was used to evaluate 343 senior students studying at the University of Botswana, revealing that perceived behavioral control, attitude toward behavior, and social norms have a direct influence on the entrepreneurial intention. Similarly, another study examined the effect of entrepreneurship education on Turkish students' intentions. The study utilized a sample of 338 undergraduate students, revealing that there was a difference in students' entrepreneurial intention before and after the students had attended the class ([Kalyoncuoğlu et al., 2017](#)).

A research conducted [Sirelkhathim and Gangi \(2015\)](#) on SLR paper of EE curricula contents and teaching methods concluded that the entrepreneurship education content and the methods of teaching can be in three themes. The first theme uses theoretical and teacher centered method, the second and the third themes are teaching for and through entrepreneurship.

3. Method

This study utilized a systematic literature review, following the guidelines of [Kitchenham \(2004\)](#) and [Kitchenham and Charters \(2007\)](#). A systematic literature review refers to stating a research protocol for evaluating and interpreting all relevant researches based on the research question, phenomenon of interest, or area ([Kitchenham, 2004](#)). The review was conducted in three phases: planning; conducting; and reporting. Those three phases has sub-elements, including (1) identification of review questions; (2) formulation a review protocol; (3) developing inclusion and exclusion criteria; (4) reviewing strategy and selection procedures; (5) studying quality assessment; and (6) strategy for data extraction and reporting the answers of [RQ1:RQ4](#). Each step has been explained in turn, through the following sections:

3.1 Search strategy

The study research questions have been stated in the previous sections of the paper. For finding answers to those research questions, a search strategy was formulated: first, the initial search was undertaken using a digital library, then a manual search was conducted from the reference lists of the primary studies. As stated by [Kitchenham and Charters \(2007\)](#), digital libraries can be used as an initial search for the primary studies, but this is not enough for a systematic literature review; a manual search must also be undertaken.

An automated search was conducted using selected databases: Elsevier; Emerald; Inderscience; and Taylor and Francis. These databases were chosen because they have the most relevant researches on entrepreneurship education. A keyword search was developed to obtain researches related to the research questions including “teaching entrepreneurship,” “student entrepreneurship,” “entrepreneurship education,” “entrepreneurship education,” “entrepreneurial learning,” “entrepreneurial skills,” “entrepreneurial mind-set,” “student skills,” and “entrepreneurial attitude.” The review process for selected articles is shown in [Figure 1](#).

3.2 Study selection criteria

The review process of the selected articles was grounded on the issues related to entrepreneurship education for studies conducted between 2009 and 2019. The main aim of this strategy of inclusion and exclusion was to confirm that the systematic literature review was related to the study. The criteria are detailed in the following sub-section.

3.3 Strategy of primary study inclusion/exclusion

This study included online full text articles that were related to the study’s research questions, written in English, and published in the selected digital databases over a period of 11 years (2009–2019).

Therefore, irrelevant articles, articles published outside of the study timeframe, articles not written in English, articles not published in the selected databases, or articles for which the full text was not available were excluded.

3.4 Quality assessment (QA)

[Kitchenham and Charters \(2007\)](#) stated that QA is the process of assessing the quality of the primary studies by using specific criteria and making a decision based on these criteria. Below is the list of five QA questions employed in this study?

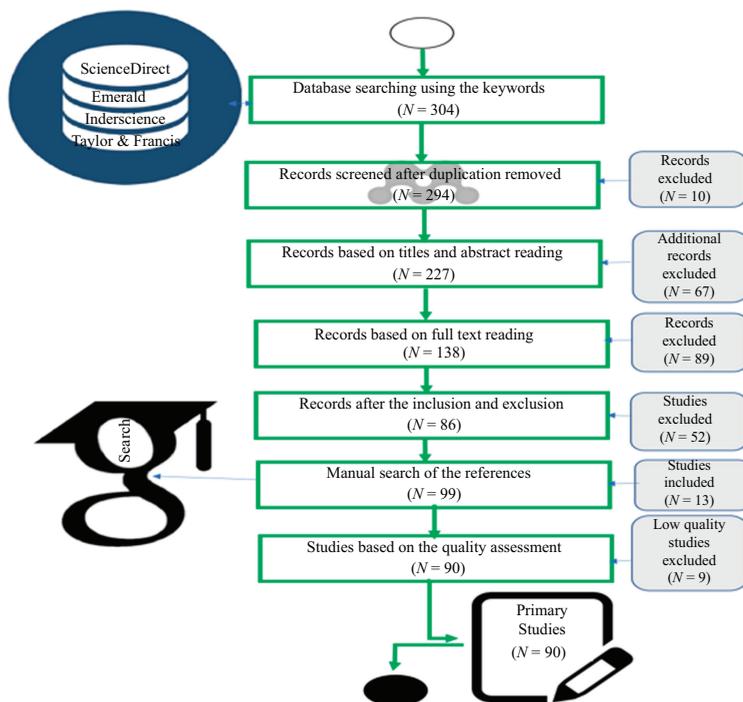


Figure 1.
Review process for
selected articles

- (1) Does the research address entrepreneurship education?
- (2) Is the research context clear?
- (3) Is the research methodology clearly clarified in the study?
- (4) Are the methods of the data collection visibly detailed in the study?
- (5) Is the technique of analyzing the data properly evaluated in the article?

QA was conducted for 99 articles related to entrepreneurship education, with the quality assessed based on the above questions developed and grades given accordingly. According to [Nidhra et al. \(2013\)](#), either high, medium or low quality rankings must be considered for grading the quality standards in the QA. The five questions were each given a maximum score of 2 (2×5). Based on the quality assessment questions employed, papers completely fulfilling the requirement obtained full marks (2) and papers partially fulfilling the requirement were scored as 1; based on this, 67 articles scored high, 23 scored medium, and only nine articles scored low (which were excluded) (see [Figure 2](#)), this states that the primary data is based on 90 articles after excluding those who are qualified low.

4. Data-extraction strategy

The strategy for data extraction utilized Microsoft Excel to record all the information from the articles. [Kitchenham and Charters \(2007\)](#) indicated that the forms used for the extracted data should be utilized for recording the information from the primary studies, as recorded by the researchers.

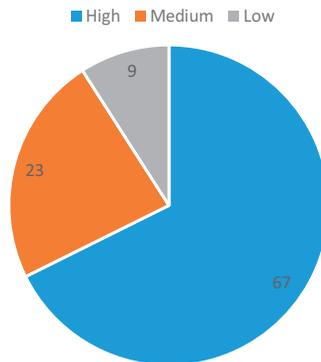


Figure 2.
Quality assessment
(QA) of the
research study

The data extracted from the 90 articles comprised the following:

- (1) The source of the article;
- (2) The author and the country or region of the research;
- (3) The research topic and the year of publication; and
- (4) The methodologies used for the research

4.1 Sources of the articles

From the total of 90 articles selected as the primary studies, as shown in Figure 3, 84 articles were journal publications and only 6 were conference papers, this reveals that the vast majority of the selected articles were journal publications.

4.2 Research regions

The research publications came from more than 30 different countries. As shown in Figure 4, the majority of 90 selected articles were from Europe (39), followed by Africa (18), Asia (13), North America (11), and Australia (4), with five papers coming from other countries/regions.

4.3 Year of publication

Details regarding the year of publication of the 90 papers are shown in Figure 5. Most publications were from the years 2013 and 2016 (12 each), followed by 2017 and 2019 (11 each), 2014 (10), 2015 and 2018 (9 each), 2012 (6), 2011 (5), 2010 (4), and, finally, 2009 (1).

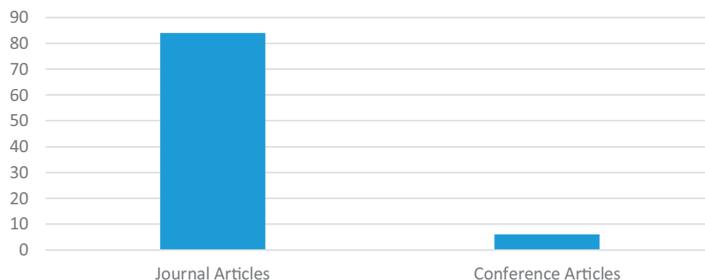


Figure 3.
Publication sources of
the research study

Figure 4.
Regions from which
the papers were
published

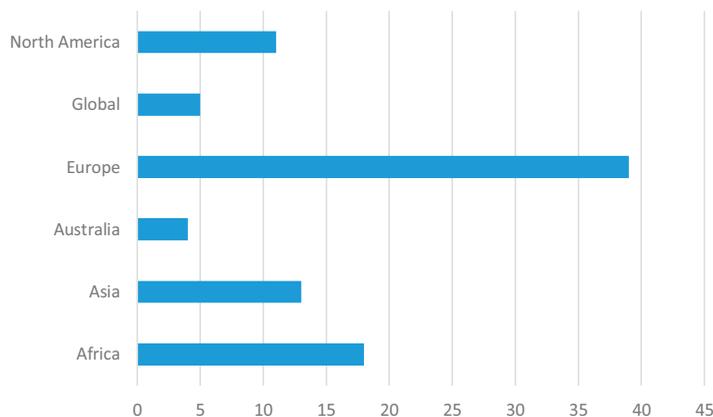


Figure 5.
Publication year of the
primary studies



4.4 Research methodologies

The researchers from the primary study used different methodologies. Of the 90 papers, 29 publications used a quantitative methodology, 22 used a qualitative methodology, 24 were conceptual in nature, and nine used mixed methods, with details being unclear for the remaining six publications (see [Figure 6](#)).

5. Analysis and discussion

A total of 16 theories/models were used in the primary studies, with the majority of researchers basing them on TPB ([Ajzen, 1991](#)). TPB was used for many topics related to entrepreneurship, including entrepreneurial intention, mind-set, skills, motivation, attitude, effectiveness and self-efficacy. Research has indicated that TPB is relevant to human behavior and theories regarding entrepreneurial intention ([Byabashajja and Katono, 2011](#); [Guzmán-Alfonso and Guzmán-Cuevas, 2012](#); [Koçoğlu and Hassan, 2013](#); [Mohamed *et al.*, 2012](#); [Tessema Gerba, 2012](#); [Trivedi, 2016](#)). TPB was mostly adopted for explaining intentions and predicting human behavior ([Kautonen *et al.*, 2013](#); [Kolvereid and Bullvag, 1996](#)). TPB has three main components: attitudes toward behavior, subjective norms and perceived behavioral control.

Social cognitive career theory was also one of the theories used in the primary studies, which focuses on individuals' behavior and has been a recognized as a career theory that has been applied in many different contexts. [Lent *et al.* \(1994\)](#) indicated that social cognitive

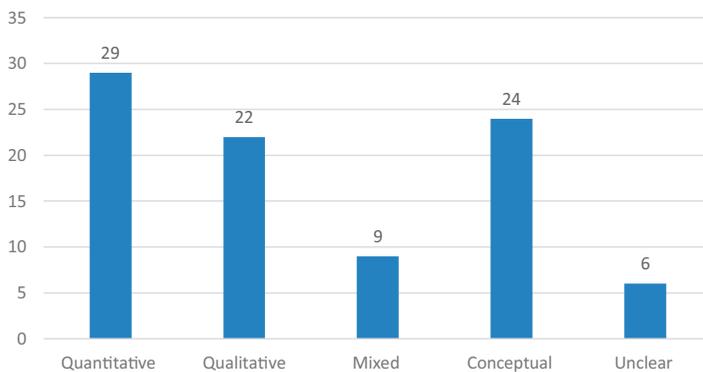


Figure 6.
Research methodology
distribution

career theory is a theory of motivation that has three components: outcome potentials, self-efficacy and activities that are goal-directed. Another theory, the theory of guided preparation, was also used in the primary studies (Chrisman *et al.*, 2005; Chrisman and McMullan, 2000, 2004). The theory of guided preparation is grounded on combining tactics and knowledge resulting from contextual learning, as well skills learned from individuals other than the teacher, which can result in entrepreneurs gaining knowledge about the competitive advantage of sustainable development. The different theories been used in the primary studies are detailed in Table 1.

The study examined the different topics/themes used in the domain of entrepreneurship education and it revealed that researchers used different topics in the primary studies. As shown in Figure 7, there were many topics/themes used, but the majority of the studies were in the area of entrepreneurship education development (32%), highlighting the significance of this topic. According to Ball and Olmedo (2013), entrepreneurship education is significant because it helps generate more businesses and increases the intention of individuals to develop their enterprises. A total of 18% of the studies were focused on the topic of entrepreneurship education benefits. Entrepreneurship education represents a great opportunity for those individuals who are learning to become responsible and to be given the problem-solving skills to shape successful entrepreneurs (Fejes and Dahlstedt, 2017). Entrepreneurship education contribution of was researched in 12% of the primary studies, supporting several studies that have suggested that initial exposure to entrepreneurship subjects contributes to individuals starting businesses and helps to create a culture of entrepreneurship (Ahmad and Buchanan, 2015; Fayolle and Klandt, 2006). Entrepreneurship education and entrepreneurial intention, entrepreneurship education effectiveness, and entrepreneurship education evaluation were also focused on in the selected studies (each representing 9% of the sample). Some researchers have proposed that there is a close connection between students' entrepreneurial intention and entrepreneurship education (Sieger *et al.*, 2016). There remaining, less researched, entrepreneurship education topics/themes were attitude, skills, policy, motivation, venture creation and gender.

6. Challenges and limitations

Entrepreneurship education originated in the US and Europe and has spread to the other regions where the aim is to develop entrepreneurial attitudes, skills, intentions, and knowledge; however, it has faced several challenges. Matlay (2009), Oosterbeek *et al.* (2010) and Smith *et al.* (2006) have asserted that entrepreneurship education does not always lead to the intended outcomes and do not develop knowledge, skills and attitudes required to

Table 1.
Theories used by the
selected researchers

Theory	Reference	Total
Theory of planned behavior	Ahmed <i>et al.</i> (2017), Bandera <i>et al.</i> (2018), Carvalho <i>et al.</i> (2015), Iwu <i>et al.</i> (2019), Kariv <i>et al.</i> (2018), Kolade (2018), Mamun <i>et al.</i> (2017), Michelle and Tendai (2017), Nowiński <i>et al.</i> (2017), Otache (2019a, b), Shinnar <i>et al.</i> (2014), Testa and Frascheri (2015), von Graevenitz <i>et al.</i> (2010), Walter and Dohse (2012)	14
Social learning theory	Carvalho <i>et al.</i> (2015), Dou <i>et al.</i> (2019), González-Serrano <i>et al.</i> (2018), Nowiński <i>et al.</i> (2017)	4
Pedagogy theory	Bandera <i>et al.</i> (2018)	1
Learning theory	Hägg <i>et al.</i> (2016)	1
Contingency theory	Barnard <i>et al.</i> (2019)	1
Theory of guided preparation	Chrisman <i>et al.</i> (2012)	1
Social cognitive career theory	Kassean <i>et al.</i> (2015)	1
Theory of based teaching	Bauman and Lucy (2019)	1
Theory of practice learning	Askun and Yildirim (2011)	1
Theory of suited learning	Jensen (2014)	1
Human capital theory	Hahn <i>et al.</i> (2017)	2
Institutional theory	Walter and Block (2016)	1
Social cognitive career theory	Bauman and Lucy (2019), Welsh <i>et al.</i> (2016)	2
Action regulation theory	Dakung <i>et al.</i> (2017)	1
The entrepreneurial event model	Ahmed <i>et al.</i> (2017)	1
Theory of transformative entrepreneurship	Kolade (2018)	1
Total		34

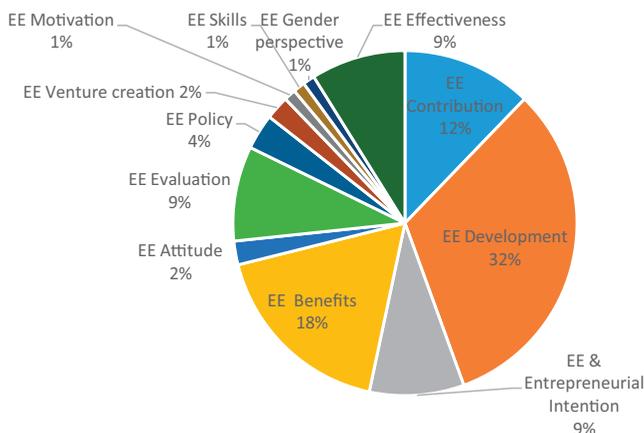


Figure 7.
Entrepreneurship
education topics

engender entrepreneurial intention in students. Further, interest and activity in entrepreneurship education among students in higher education is low (Heinonen and Poikkijoki, 2006). Studies have also found that some students have an attitude that is negative toward entrepreneurship education (Hannon, 2005).

Some limitations of entrepreneurship education were mentioned in the studies reviewed. According to Honing (2004), a lot of researchers indicated that there is a lack of studies determining EE effectiveness and outcomes. Entrepreneurship education research has received much attention recently based on the benefits that it can bring to individuals and

countries; however [Fayolle \(2013\)](#) and [Rideout and Gray \(2013\)](#) have stated that entrepreneurship education suffers from the lack of a coherent conceptual research framework that is comprehensively grounded on the knowledge of general education and the philosophy of entrepreneurship education. In relation to this point, very few of sample studies were based on a mixed-methodology approach.

Based on the researches reviewed, it is clear that the topics that the researchers have discussed relate to different contexts, with most focusing on entrepreneurship education development but very view discussing entrepreneurship education policies or the entrepreneurship education gender perspective. Notably, a study conducted [Alakaleek \(2019\)](#) regarding the level of entrepreneurship education in the Jordan Universities stated that, although Jordan had reformed its education system, there remained a gap between the real-world implementation and the formal policies of improving higher education.

7. Conclusion

Based on the systematic-literature-review process, this study conducted many steps, starting from the research questions, and, after the QA and exclusion and inclusion criteria, 90 papers were selected between 2009 and 2019 from four different data bases (Elsevier, Emerald, Inderscience, and Taylor and Francis). The topic was deemed valuable given that interest in entrepreneurship education has increased since the 1970s, and universities have started offering significantly, more entrepreneurship courses since the 2000s ([Rasmussen and Sørheim, 2006](#)).

Regarding the theories most used in the reviewed articles, TPB and social learning theory (SLT) were most used in relation to entrepreneurship education. This shows that researchers were focusing on the influence of entrepreneurship education in relation to the entrepreneurial intention, behavior, and attitude of the individuals. However, different topics/themes emerged from the studies, falling onto 12 categories, with the three most researched categories being entrepreneurship education development, benefits, and contribution. This is probably because of the importance of investigating the development of entrepreneurship (and thus entrepreneurship education) to their respective regions, given its significance to job creation and graduate employment. [Solomon \(2007\)](#) indicated that the development of the education of entrepreneurship emanated from USA, and that it has since spread to the other parts of the world, including Europe ([Volkman and Audretsch, 2017](#)), China ([Li and Liu, 2011](#)), Philippines ([Velasco, 2013](#)), Ghana ([Matlay and Owusu-Mintah, 2014](#)) and Malaysia ([Ahmad and Buchanan, 2015](#)). Entrepreneurship education contributes to the well-being of society and provides greater benefits for students who study entrepreneurship compared to those who do not attend entrepreneurship courses. In the meantime it is based in three provisions, According to [Piperopoulos and Dimov \(2014\)](#), theoretical-oriented courses that teach “about” entrepreneurship, and practical-oriented courses that teach “for” entrepreneurship and (3) “through” entrepreneurship, can teach real life entrepreneurship to graduate entrepreneurs ([Vincett and Farlow, 2008](#)).

Finally, it must be noted that this study has some limitations, which suggest avenues for further research. In reviewing the articles, the study used only four databases and only considered papers published between 2009 and 2019. Other studies may include more databases and a longer timeframe. Further, the selected research came primarily from Europe; other studies can focus on specific regions like Africa (for which a gap in the literature was noticed) in this context to provide a clearer understanding of entrepreneurship education and its implementation in this developing region. Notably, there were very few researches focused on Africa ([Brijlal, 2008](#); [Davies, 2001](#); [Gouws, 2002](#); [Isaacs et al., 2007](#); [Jesselyn Co and Mitchell, 2006](#); [Kabongo and Okpara, 2010](#)).

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AppendixEntrepreneurship
education

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