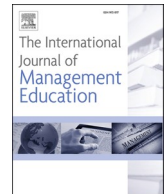




Contents lists available at ScienceDirect

The International Journal of Management Education

journal homepage: www.elsevier.com/locate/ijme

Teaching Resource

Entrepreneurship and management education: Exploring trends and gaps

Vanessa Ratten^a, Paul Jones^{b,*}^a Department of Management, Sport and Tourism La Trobe Business School, La Trobe University, Melbourne, Australia^b School of Management, Swansea University, Bay Campus, Fabian Way, Swansea, Wales, SA18EN, UK

ARTICLE INFO

Keywords:

Education

Entrepreneurship

Management education

ABSTRACT

Entrepreneurship education is one of the most popular management education subjects due to its ability to link practice with theory. Despite its popularity, research on the topic is still in its infancy due to the interdisciplinary nature of the field that makes it unique to study. The aim of this editorial article is to highlight how entrepreneurship education needs to change based on the digital transformation made necessary by the recent COVID-19 crisis. The importance of embedding an entrepreneurship perspective within educational practices is stated that highlights the diversity of the field. The different theoretical underpinnings of entrepreneurship education are also highlighted that suggest a need to think in new directions about possible future pedagogical approaches. This means it is important to stress the research streams that need more attention based on crisis management techniques in order to deal with the current COVID-19 pandemic. The article makes several suggestions that make it evident that there is merit in introducing novel perspectives that change the nature and way entrepreneurship education is understood in society.

1. Introduction

Entrepreneurship education offers a way for societies to progress based on innovation and futuristic thinking. This rapidly growing research area requires further attention due to the changes made recently from the covid-19 pandemic. This is due to rapid digital transformation impacting the way entrepreneurship is taught and learnt (Dana & Ratten, 2017). The popularity of entrepreneurship education has grown significantly in the past decade and it is now generally understood that entrepreneurship can be taught. For example, Mwasalwiba (2010:30) states that “the question of whether entrepreneurship can or cannot be taught is now irrelevant, since it has been proved that it can”. However, in a study of 141 entrepreneurship lecturers, Bennett (2006) found that there was no consensus on the right method to teach entrepreneurship. This means entrepreneurship courses need to take a proactive and holistic view in encouraging outreach activities in the community that promote societal well-being (De Faoite, Henry, Johnston, & Van der Sijde, 2003). This editorial article discusses how it is expected that the interest in entrepreneurship education will continue in the future due to the need to teach creativity and innovation in business settings. Given the impact of the covid-19 pandemic it is expected that this trend will continue.

Today, society faces a number of problems caused by the covid-19 crisis that requires new knowledge and strategies. Entrepreneurship education plays a key role in acquiring knowledge that can help manage the crisis. Human learning in the context of

* Corresponding author.

E-mail addresses: v.ratten@latrobe.edu.au (V. Ratten), w.p.jones@swansea.ac.uk (P. Jones).<https://doi.org/10.1016/j.ijme.2020.100431>

Received 14 October 2020; Accepted 15 October 2020

1472-8117/© 2020 Published by Elsevier Ltd.

entrepreneurship education can be defined as “a broad term pertaining to the process of acquiring (or advancing) knowledge and knowledge structures, skills, attitudes (along with values, beliefs, habits and others depending on the holistic nature of learning)” (Kakouris & Liargovas, 2020, p. 4). Entrepreneurship education equips students with learning required about how competencies are needed to discover new opportunities (Ferreira, Fayolle, Ratten and Raposo, 2018). This means students learn and obtain knowledge about how to conduct business.

There is a variety of ways to define entrepreneurship education. Some researchers take the view that entrepreneurship education is essentially about teaching and training activities. This is reflected in Linan (2004:166) defining entrepreneurship education as “the whole set of education and training activities within the education system or not that try to develop in the participants the intention to perform entrepreneurial behaviours, or some of the elements that affect that intention, such as entrepreneurial knowledge, desirability of the entrepreneurial activity or its feasibility”. This holistic definition emphasizes the desire to promote a culture of entrepreneurial learning. This entrepreneurial spirit is reflected in other definitions that recognise the need for a proactive attitude. For example, Iacobacci and Micozzi (2012:678) stating entrepreneurship education is “the process of providing individuals with the ability to recognise commercial opportunities and the insight, self-esteem, knowledge and skills to react on them”. There also tends to be an emphasis on starting business ventures in definitions. This is evident in Ramayah, Ahmad, and Fei (2012:69) stating that entrepreneurship education is “the collection of formalized teachings that inform, train and educate learners who are interested in setting up a business”.

There is a constant interest amongst policy makers on how to foster entrepreneurship due to the way it contributes to economic and social growth (Ferreira, Fernandes, & Ratten, 2017). This is due to entrepreneurship education being important for two main reasons. Firstly, courses on entrepreneurship teach practical skills that are required for employability reasons. This means the focus in entrepreneurship education is bridging the theory-practice gap. Due to changing environmental conditions resulting from digital transformation more entrepreneurial skills are required (Jones, Jones, Williams-Burnett, & Ratten, 2017). This is particularly evident in knowledge intensive industries that are characterised by the need for innovation. Secondly, the covid-19 pandemic requires an entrepreneurial mindset to cope with the change. This helps to build creative thinking but also resilience required in the new economic context (Jones, Klapper, Ratten, & Fayolle, 2018). Currently, the actual way entrepreneurship education is being utilised to help with the effects of covid-19 are still being considered. New research is required on this topic to illustrate the impact of covid-19 restrictions on entrepreneurship education. This means developing an entrepreneurial mindset is crucial in shaping attitudinal biases for the future. This helps build resilience and supports mindsets aimed at focusing on positive outcomes (Jones, Ratten, & Hayduk, 2020). There is potential to design new entrepreneurship programs based on the new normal caused by covid-19.

The structure of this article is as follows. In the next section, the importance of entrepreneurship to society is stated. This leads to a discussion about what entrepreneurship education is and how it can be defined. The articles in the special journal issue are then summarised that leads to future research suggestions.

2. Role of entrepreneurship in global management practices

In recent years this has been global interest in encourage entrepreneurial behaviour in all national economies (Jones, Pickernell, Fisher, & Netana, 2017). Entrepreneurship is aimed at improving the competitiveness of businesses through innovation, risk taking and competitiveness (Ratten, 2017). Many anecdotes exist about the role of entrepreneurship in strategy and stakeholder engagement, thus demonstrating the importance of entrepreneurship. There are three fundamental motivations for entrepreneurship: reinvigorate, integrate and value creation. Reinvigoration is required in businesses that have become slow to adapt to changing societal needs. Entrepreneurship offers a way for businesses to change the status quo and place more emphasis on innovation. Integrate means to utilise existing business functions in a new way. This helps to build momentum for businesses that complements prior processes (Ratten & Ferreira, 2017). Value creation is the key goal for most businesses although the emphasis is on social or financial forms may differ. For this reason, it is useful to integrate value creation into all business decisions. Hoarau-Heemstra and Eide (2019:160 defines values as “the actor’s concepts of the relative worth, utility or importance of something”. Values are a way of understanding what matters to an individual. Values develop over time and refer to an individual’s wellbeing. Individuals have different values depending on what is important to them. This means that values are guiding principles that play a prominent position in individuals lives.

There is more global acknowledgement about entrepreneurship being a knowledge area needed in all educational programmes (Fejes, Nylund, & Wallin, 2019). This is due to entrepreneurial skills being required by students to manage their lives. Tipu (2017) suggests that entrepreneurs face strategic and non-strategic forms of uncertainty. Strategic uncertainty relates to competitive dynamics in the marketplace that impede progression. This means there are lower levels of trust existing amongst market participants. Non-strategic forms of uncertainty refer to ambiguity in the direction of a marketplace. This includes an assumption that there is more risk involved in taking a certain form of action.

Entrepreneurs use different approaches to manage risks including increasing rewards or focusing on financial gain. Entrepreneurial risk can be categorised into two types of downside risk: missing-the-boat and sinking-the-boat (Dickson & Giglierano, 1986). Missing-the-boat risks refers to not taking advantage of an opportunity. This means missed potential profitable business ventures are not persuaded. Sinking-the-boat refers to the failure of a business venture that limits future possibilities. This means existing ventures are stopped due to the likelihood of failure.

Entrepreneurs face some degree of risk in every decision they make. The level of this risk can range from low to high depending on the situation. Given that a high percentage of new business ventures fail in their first year, it is important that entrepreneurs continually assess risk levels. This can improve decision-making and lower the rate of failure. Keh, Foo, and Lim (2002:126) states that risk “is the probability that an entrepreneur is able to successfully turn an idea into an opportunity”. In stable market environments, risk can be predicted in a more reliable manner. This helps to reduce uncertainty and to fulfil market opportunities. In dynamic environments,

there tends to be more risk caused by uncertainty. This makes it harder to progress on projects due to unknown outcomes.

Knowledge is a key component of economic development. Entrepreneurship is a way to transmit knowledge and can contribute to the formation of regional growth strategies (Beynon, Jones, & Pickernell, 2016). The effectiveness of knowledge is determined by how networks of people interact in society. In regions, clusters of industries will exist as a way of fostering knowledge flows amongst geographically close firms (Beynon, Jones, Pickernell, & Huang, 2020). A dynamic economy will encourage knowledge transmission amongst firms as a way of encouraging competitiveness. A major predictor of economic performance especially in knowledge intensive industries is entrepreneurship. Knowledge can be created and exploited commercially in order to foster economic activity.

There is a geographic nature to knowledge due to some regions having more knowledge intensive industries than others. This is reflected in regions such as Silicon Valley in the United States having a higher intensity of technological knowledge than other regions. Knowledge transfer occurs in a deliberate manner and requires market based compensation. When knowledge is transferred the cost of developing the new knowledge is transferred from one entity to another. This means that the benefits of appropriating the knowledge can be less than actually deriving new knowledge that leads to learning. Otache (2019:926) states “*learning is a cognitive process that can take place in a social context through observation, imitation and modelling*”. Learning new forms of knowledge can be spilled over in an unintentional manner. This occurs via face-to-face communication or other mechanism that inadvertently transfer knowledge. Knowledge is embodied in people so when communication occurs there is likely to be some form of knowledge transfer. Knowledge can shift from one individual to another through mobility flows. This means the knowledge is transferred through communication in written or verbal form. Codified knowledge that is evident in written documents can be easier to transfer. Other forms of knowledge such as tacit knowledge rely on face-to-face communication.

3. Importance of entrepreneurship education

Entrepreneurship education provides a way to acquire knowledge and teach skills related to entrepreneurial activities. Part of this knowledge acquisition involves inspiring an entrepreneurial attitude in business. An entrepreneurial mindset is defined as “the ability to be dynamic, flexible and self-regulating in one’s cognitions given dynamic and uncertain task environments” (Haynie, Shepherd, Mosakowski, & Earley, 2010, p. 218). Individuals that have entrepreneurial skills are able to better identify new business opportunities. This enables knowledge to be exploited in a way that benefits social well-being. Entrepreneurship education is being incorporated into different fields of study including business, engineering and science. This has meant an emphasis on learning new skills that can help students adapt to the changing environmental context.

Entrepreneurship education in higher education courses is offered at different levels including bachelors, masters and doctoral degrees. The way entrepreneurship is taught might be different depending on the educational qualifications and experience of the students. Introductory level entrepreneurship courses tend to focus on general issues surrounding entrepreneurship such as opportunity recognition. In more advanced courses entrepreneurship education may be more specific in being directed towards set goals. This includes corporate or small business forms of entrepreneurship that require it to be taught in a different way. Increasingly general entrepreneurship courses are compulsory due to the need for students to receive practical business knowledge. The courses can also be elective when they are part of an optional course. Students who take entrepreneurship courses as electives are more likely to have an active learning posture (Rauch & Hulsink, 2015).

There is a general consensus in society that whilst some individuals are naturally more entrepreneurial than others, individuals can learn how to act in a more entrepreneurial manner. Thus, there is a common understanding amongst policy makers that teaching entrepreneurial skills requires focusing on entrepreneurial intention can make a positive different to society. Intention is defined as “the state of mindset, which guides and directs people’s attention towards performing a particularly behaviour” (Otache, 2019, p. 922). Entrepreneurship educators seek to influence entrepreneurial intentions by teaching specific skills. As intention is linked to behaviour, normally after receiving education related to entrepreneurship, an individual will engage in more forms of entrepreneurship.

Ajzen (1991:181) referred to intention as an “indication of how hard people are willing to try and how much an effort they are planning to exert, in order to perform the behaviour”. Normally when an individual has a strong intention it is more likely they will perform a behaviour. Entrepreneurial intention describes an individual’s feelings towards conducting some form of innovative, risk taking and proactive behaviour. This usually relates to starting a business but can also refer to a mindset. Thus, entrepreneurial intention is a way of behaving that results in some form of business change. The nature of this intention will depend on the kind of objectives an individual wants to achieve. This means the decision to act in an entrepreneurial way is a conscious process that is dependent on action. As a mental process, entrepreneurial intention is deliberate and planned. Individuals are motivated to become entrepreneurs due to push and pull factors. Push factors refer to necessity entrepreneurship that is conducted out of need. This means entrepreneurship is a result of a need to obtain an income. Pull factors refer to opportunity entrepreneurship that is conducted by choice. This means individuals become entrepreneurs due to a desire for independence or social status. Other motivators can include a need for autonomy and ambition.

Entrepreneurship education encourages students to pursue opportunities in the marketplace. To do this skills related to how to create and exploit opportunities are needed. Entrepreneurship education involves the development of personal qualities conducive for entrepreneurship and training for entrepreneurial ventures (Fellnhöfer, 2019). There is a diversity of topics in entrepreneurship education due to the multitude of skills it teaches. There is a need for more innovative-driven approaches to understanding the complexity of entrepreneurship education. This is due to the main theories used to study entrepreneurship education being the theory of planned behaviour, human capital theory and the entrepreneurial self-efficacy perspective having been studied extensively. Iyortsuun, Goyit, and Dakung (2020:2) states that human capital theories central argument is that “investment in people creates

economic benefits not just for individuals but for society". Thus, education provides a way of transmitting knowledge through teaching practices. Entrepreneurship education sometimes is not defined properly because it is assumed that others know what it means.

4. Overview of articles

The first article titled 'Revisiting the entrepreneurial ventures through the adoption of business incubators by higher education institutions' by Malek Al-Edenat and Nayel Al Hawamdeh focuses on the role of new ventures in the economy. This contributes to a better understanding about the way incubators contribute to economic growth through entrepreneurship. The second article titled 'Using entrepreneurial self-efficacy as an indirect measure of entrepreneurship education' by Najib Mozahem and Rasha Adlouni discusses the way individual behaviour affects the ability to learn entrepreneurial behaviour. This offers a improved understanding regarding the different ways individuals study entrepreneurship.

The third article titled 'Failed firm founders' grief coping during mentoring: Learning as the single catalyst of their restarting performance narratives' by Antti Kauppinen, Kaarlo Palonie and Anito Juho focuses on the role of mentors in entrepreneurship education. This understudied topic deserves more attention in the management education research regarding entrepreneurship behaviour. The fourth article titled 'The effect of entrepreneurship training on entrepreneurial orientation: Evidence from a regression discontinuity design on micro-sized businesses' by Mohammed Al-Awlagi, Ammar Aamer and Nasser Habtoor focuses on the role of very small sized business in their pursuit of entrepreneurship education. Thereby the article offers a new perspective on how entrepreneurial training can change a business's culture.

The fifth article titled 'Enhancing entrepreneurial education: Developing competencies for success' by Antonina Bawman and Carol Lucy is a review article that provides an overview of competencies needed for entrepreneurship. The review suggests that business school graduates need to value entrepreneurship. The sixth article titled 'Towards a responsible entrepreneurship education and the future of the workforce' by Paul Igwe, Ugochukwu Okolie and Chioma Nwokore provides an overview of entrepreneurship education that takes a progressive view about teaching techniques. This includes focusing on the entrepreneurship skills that future graduates will need.

The seventh article titled 'Management trends and gaps- A case study of a community education provision in London (UK)' by Nnamdi Madichie and Omosola Fiberesima discusses future educational provisions related to entrepreneurship. The authors do this by suggesting that there needs to be more emphasis on community forms of education. The eighth article titled 'Entrepreneurship educators curriculum and lecturer competency as antecedents of student entrepreneurial intention' by Chux Iwu, Promise Opute, Ryllyne Nchu, Chuks Eresia-Eke, Robertson Tengeh, Olumide Jaiyeoba and Olayemi Aliyu discusses the way students learn entrepreneurship through career fairs and employer talks. This helps to provide a real life perspective about the way entrepreneurship education can be strategically aligned with real life objectives.

The ninth article titled 'Student consultancy projects playbook: Learning outcomes and a framework for teaching practice in an international entrepreneurial context' by Martin Lycko and Kostas Galanakis focuses on the role of experiential learning through consultancy projects. This offers a way to understand how teaching practices can be applied to real life situations. The tenth article titled 'Entrepreneurship education: Time for a change in research direction?' by Vanessa Ratten and Petrus Usmanij discusses how the gig economy and digitalization are affecting entrepreneurship. This means highlighting how educators and managers need to take more of an industry focus.

The eleventh article titled 'Sport management education through an entrepreneurial perspective: Analysing its impact on Spanish sports science students' by Maria Gonzalez-Serrano, Ferran Moreno and Josep Hervás discusses the need for entrepreneurship education in the sport sector. Thereby highlighting the need for more specific industry contexts in entrepreneurship education research. The twelfth article titled 'How entrepreneurship influences other disciplines: An examination of learning goals' by Bonnie Canziani and Dianne Welsh focuses on understanding the relationship entrepreneurship education has with other fields. This provides a holistic understanding about the way entrepreneurship has become necessary in higher education studies. The thirteenth article titled 'The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: The mediating role of inspiration and the role of educational attributes' by Jun Cui, Junhua Sun and Robin Bell stresses the need for perseverance in entrepreneurship education.

The fourteenth article titled 'Corporate entrepreneurship educations impact on family business sustainability: A case study in Brazil' by Glauciana Gomes Soares, Vitor Braga, Carla Marques and Vanessa Ratten discusses the role of entrepreneurship education in family businesses. Thereby emphasising the importance of examining different contexts when studying entrepreneurship education. The article discusses the need to understand country specific contexts in the study of entrepreneurship education. The fifteenth article titled 'The future of management education: The role of entrepreneurship education and junior enterprises' by Joao Almeida, Ana Daniel and Claudia Figueiredo highlights the need for junior enterprises in entrepreneurship education courses. This highlights the way extra curricular activities contribute to management education.

The sixteenth article titled 'The teacher of entrepreneurship as a role model: Students and teachers perceptions' by Paula San-Martin, Ana Fernandez-Laviada, Andrea Perez and Estefania Palazuelos discusses the way perceptions influence self-discovery. This means acknowledging that teachers need to communicate properly in order to facilitate entrepreneurship. The seventeenth article titled 'Model of teachable entrepreneurship competencies (M-TEC): Scale development' by Geraldina Silveyra, Angel Herrero and Andrea Perez focuses on the need to teach different competencies related to entrepreneurship. This means highlighting how behavioural competences can help individuals become entrepreneurs. The last article by Ratten and Jones critically examines the linkage between entrepreneurship education and COVID-19 in order to help understand future research and practice paths.

Table 1

Key issues in covid-19 entrepreneurship research.

Topic	Issues	Areas to address
Vulnerability	How quickly entrepreneurship education become susceptible to market change from the covid-19 crisis. Difference in student engagement resulting from the change	How do entrepreneurship educators protect themselves from change? Are entrepreneurship educators more vulnerable than other education fields in times of crisis?
Shocks	How shocked were entrepreneurship educators in terms of responding to the covid-19 crisis? How prepared were entrepreneurship educators to face the covid-19 crisis?	What types of short term activity resulted from the covid-19 crisis? What was the effect of the covid-19 crisis on teaching and learning morale?
Disturbance	What aspect of the entrepreneurship education curriculum was disturbed by the covid-19 crisis?	What kind of losses or gains did entrepreneurship educators receive?
Dynamics	What kind of changes occurred in the entrepreneurship education environment?	How flexible or agile were entrepreneurship educators in responding to the covid-19 crisis?
Resistance	How far did entrepreneurship educators resist change?	What was the reaction of entrepreneurship educators to the crisis?
Robustness	How strong were entrepreneurship educators in dealing with change?	What kind of structural and market orientation occurred because of the crisis?
Recovery	How did entrepreneurship educators recover from the crisis?	What steps or stages did entrepreneurship educators go through?
Resilience	Why are some entrepreneurship educators more resilient than others?	What factors shaped entrepreneurship educators resilience level?

5. Future research

Entrepreneurship education focuses mostly on the business and economic context so a broader interdisciplinary perspective should be considered. Currently the research on entrepreneurship education still focuses mostly on one context without considering the synergy building collaboration that takes place regarding entrepreneurship. Entrepreneurial values like independence and self-employment affect an individual's personal happiness. This means there are both mental and physical reasons for engaging in entrepreneurial activities.

Other research areas including agriculture and biology have the potential to enrich entrepreneurship education by bringing in different perspectives. This is already shown with concepts such as entrepreneurial ecosystems gaining popularity in the entrepreneurship education literature. Entrepreneurship is similar in nature to the biological sciences as it grows depending on the context. This means there are opportunities for theoretical input from the biology literature. The existing entrepreneurship education literature is biased towards business activities rather than educational pursuits. This limits its applicability to other contexts such as the medical sciences that utilise different approaches. Thus, entrepreneurship educators need to balance both entrepreneurship and education perspectives in teaching methods (Bechard & Gregoire, 2005).

Theories about entrepreneurship and education need to be taught in a practical way. This can be conducted by integrating theoretical content with entrepreneurial decisions in order to see the impact. Entrepreneurship is an interesting topic but in order for it to be taught effectively there needs to be consideration about its usefulness. A way to do this can include innovative learning techniques that incorporate novel approaches such as virtual reality or gaming.

In emerging countries, entrepreneurship education is required for businesses to develop innovative activities particularly around commercialization. Due to the focus of entrepreneurship education being on developing an entrepreneurial mindset, more research is required on other special areas such as how to develop intellectual property capabilities. Entrepreneurship education contributes to the development of creative problem solving skills that are required in new market conditions but due to the covid-19 crisis new topics and issues need to be addressed in future research. This is summarised in Table 1 below.

5.1. Research stream: digital technology

Entrepreneurship scholars need to reconfigure how digital transformation has taken place because of covid-19. Prior to the start of the covid-19 pandemic there was much interest in digital technology and its usefulness in the business environment. However, this interest accelerated with the onset of covid-19 requiring an increase in usage of digital devices. The current high usage of digital technology is heightening awareness about its importance in society particularly for business purposes. This has considerable implications for entrepreneurs on the management and structure of business practices. There is likely to occur more digital transformation as society adjusts to the need for digital market transactions.

Due to increased usages of digital technology there is expected to be further new technologies that disrupt existing business models. Covid-19 has placed emphasis on how new technologies are adopted, enhanced or changed during times of crisis. The magnitude of covid-19 caught the world unprepared and resulted in significant disruptions to business activity. To try and stop the spread of covid-19 communities were locked down and businesses closed. In order to avoid a complete shutdown of the economy, the use of virtual reality and digital technologies increased. Technologies such as zoom virtual meetings and virtual team work have been implemented. These technologies enabled business to survive by managing projects remotely.

Table 2
Approaches to measuring entrepreneurship educators resilience from covid-19.

Method	Topic area
Case study	In-depth analysis of how specific entrepreneurship educators responded at different points in time. Enables a holistic understanding about environmental and other flow on effects
Indices	Comparative measures of resilience based on key variables
Time series	Statistical analysis of response to the crisis, the impact and the after effect

5.2. Research stream: crisis management

Compared to other academic disciplines such as organisational behaviour, crisis studies have only recently been explored in an entrepreneurship setting. This has meant that whilst crises are evident in practice, less knowledge exists about its linkage to entrepreneurship in the academic literature. This editorial article on the impact of covid-19 on entrepreneurship represents the first systematic research effort by entrepreneurship education scholars linking entrepreneurship to the covid-19 pandemic. Entrepreneurship as a field is already quite diverse and is well known for its ability to incorporate new perspectives. Thus, embedding a covid-19 perspective into entrepreneurship studies should be a relatively easy task. This is important as the covid-19 environment represents a new and novel way of understanding crisis management. More attention is required on the covid-19 context due to the profound way it has affected society. This means it is essential to study covid-19 from an entrepreneurship standpoint in order to understand societal change.

As a result of covid-19 individuals have had to adjust to a new way of life that is significantly different to the past. This new life is referred to as the new normal as it reflects how individuals now interact in society. There was little prior warning or knowledge about covid-19. The quick progression of covid-19 from China to Europe then other parts of the world was not previously forecasted or known. This meant individuals have had to quickly adapt to new environmental conditions. As a result, there has been an impact on the mental and physical wellbeing of individuals that takes time to adjust. [He and Harris \(2020:176\)](#) states “covid-19 could potentially change how we see the world, the way in which we think and how we conduct our lives”. This means new methodologies and approaches are required to understand how entrepreneurship educators have responded to the crisis. This is summarised in [Table 2](#) below.

5.3. Research stream: Covid-19 and entrepreneurship education

Covid-19 entrepreneurship can be viewed as a conglomerate of several sub-concepts such as value creation, market orientation and innovation. These sub-concepts distinguish covid-19 entrepreneurship from other forms of entrepreneurship and emphasise the concurrent need to focus on multiple activities. Covid-19 entrepreneurship is emerging as an active area of research due to its current applicability as being an issue of global concern. More businesses are promoting covid-19 entrepreneurship by establishing new business ventures in order to encourage the formation of innovative ideas. As increasing number of entrepreneurs are focusing on health and digital innovation regarding covid-19. This has meant a concerted global effort by entrepreneurs devoted to finding solutions to problems caused by covid-19.

There have been dramatic changes resulting from covid-19 that have significant implications for entrepreneurship studies. The economic and social reverberations are continuing to be felt by entrepreneurs around the world. Due to covid-19, entrepreneurship is required more than ever due to the way it encourages creative and positive thinking ([Kraus et al., 2020](#)). Entrepreneurship is required in society as it brings about fundamental change that is required to keep pace with societal developments. As a result of covid-19 the current assumptions regarding entrepreneurship education need to change. This is due to the crisis and changed societal conditions arising from covid-19 never been seen before. Previous economic projections did not take into account a crisis of this magnitude, so new practice and theory regarding entrepreneurship is needed. There are several ways that the entrepreneurship field needs to change in terms of addressing areas of societal and practical importance. This will enable the field of entrepreneurship to be redirected to pressing issues.

A challenging issue that needs further research is the way cross-country, cross-industry and cross-societal research designs can be applied to covid-19 entrepreneurship studies. This will advance our understanding of how covid-19 can be studied in comparative contexts. To do this an array of evaluation tools and methodologies should be used to evaluate the performance of covid-19 related research work. This will enable a improved understanding about the way entrepreneurship has provided hope in times of hardship.

6. Conclusions

This editorial article has discussed the way entrepreneurship education needs to move forward in order to take into account new environmental contexts. The articles in the special journal issue were summarised that highlights the diversity and impact entrepreneurship education has in society. Future research suggestions were stated that stress the need to incorporate more thinking about digital transformation and crisis management in entrepreneurship education research.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Bechard, J., & Gregoire, D. (2005). Entrepreneurship education research revisited: The case of higher education. *The Academy of Management Learning and Education*, 4(1), 22–43.
- Bennett, R. (2006). 'Business lecturers' perceptions of the nature of entrepreneurship'. *International Journal of Entrepreneurial Behavior & Research*, 12(3), 165–188.
- Beynon, M., Jones, P., & Pickernell, D. (2016). Country-level investigation of innovation investment in manufacturing: Paired fsQCA of two models. *Journal of Business Research*, 69(11), 5401–5407.
- Beynon, M., Jones, P., Pickernell, D., & Huang, S. (2020). Growth and innovation of SMEs in local enterprise partnerships regions: A configurational analysis using fsQCA. *The International Journal of Entrepreneurship and Innovation*, 21(2), 83–100.
- Dana, L. P., & Ratten, V. (2017). International entrepreneurship in resource-rich landlocked African countries. *Journal of International Entrepreneurship*, 15(4), 416–435.
- De Faioite, D., Henry, C., Johnston, K., & Van der Sijde, P. (2003). Education and training for entrepreneurs: A consideration of initiatives in Ireland and The Netherlands. *Education & Training*, 45(8/9), 430–438.
- Dickson, P., & Giglierano, J. (1986). Missing the boat and sinking the boat: A conceptual model of entrepreneurial risk. *Journal of Marketing*, 50(3), 58–70.
- Fejes, A., Nylund, M., & Wallin, J. (2019). How do teachers interpret and transform entrepreneurship education? *Journal of Curriculum Studies*, 51(4), 554–566.
- Fellnhöfer, K. (2019). Toward a taxonomy of entrepreneurship education research literature: A bibliometric mapping and visualization. *Educational Research Review*, 27, 28–55.
- Ferreira, J. J., Fayolle, A., Ratten, V., & Raposo, M. (Eds.). (2018). *Entrepreneurial universities*. Cheltenham, United Kingdom: Edward Elgar Publishing.
- Ferreira, J. J., Fernandes, C. I., & Ratten, V. (2017). The influence of entrepreneurship education on entrepreneurial intentions. In *Entrepreneurial universities* (pp. 19–34). Cham: Springer.
- Haynie, J., Shepherd, D., Mosakowski, E., & Earley, P. (2010). A situated metacognitive model for the entrepreneurial mindset. *Journal of Business Venturing*, 25(2), 217–229.
- He, H., & Harris, L. (2020). The impact of covid-19 pandemic on corporate social responsibility and marketing philosophy. *Journal of Business Research* (in press).
- Hoarau-Heemstra, H., & Eide, D. (2019). Values and concern: Drivers of innovation in experience-based tourism. *Tourism and Hospitality Research*, 19(1), 15–26.
- Iyortsuun, A., Goyit, M., & Dakung, R. (2020). Entrepreneurship education programme, passion and attitude towards self-employment. *Journal of Entrepreneurship in Emerging Economies* (in press).
- Jones, P., Jones, A., Williams-Burnett, N., & Ratten, V. (2017). Let's get physical: Stories of entrepreneurial activity from sports coaches/instructors. *The International Journal of Entrepreneurship and Innovation*, 18(4), 219–230.
- Jones, P., Klapper, R., Ratten, V., & Fayolle, A. (2018). Emerging themes in entrepreneurial behaviours, identities and contexts. *The International Journal of Entrepreneurship and Innovation*, 19(4), 233–236.
- Jones, P., Pickernell, D., Fisher, R., & Netana, C. (2017). A tale of two universities: Graduates perceived value of entrepreneurship education. *Education + Training*, 59(7/8), 689–705.
- Jones, P., Ratten, V., & Hayduk, T. (2020). Sport, fitness, and lifestyle entrepreneurship. *The International Entrepreneurship and Management Journal*, 1–11.
- Kakouris, A., & Liargovas, P. (2020). On the about/for/through framework of entrepreneurship education: A critical analysis. *Entrepreneurship Education and Pedagogy*, 2515127420916740.
- Keh, H., Foo, M., & Lim, B. (2002). Opportunity evaluation under risky conditions: The cognitive processes of entrepreneurs. *Entrepreneurship: Theory and Practice*, 27(2), 125–148.
- Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., & Tiberius, V. (2020). The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis. *International Journal of Entrepreneurial Behavior & Research*, 26(5), 1067–1092.
- Mwasalwiba, E. (2010). Entrepreneurship education: A review of its objectives, teaching methods and impact indicators. *Education & Training*, 52(1), 20–47.
- Otache, I. (2019). Enhancing the effectiveness of entrepreneurship education: The role of entrepreneurial lecturers. *Education & Training*, 61(7/8), 918–939.
- Ramayah, T., Ahmad, N. H., & Fei, T. H. C. (2012). Entrepreneur education: Does prior experience matter? *Journal of Entrepreneurship Education*, 15, 65.
- Ratten, V. (2017). Entrepreneurial universities: The role of communities, people and places. *Journal of Enterprising Communities: People and Places in the Global Economy*, 11(3), 310–315.
- Ratten, V., & Ferreira, J. J. (2017). Future research directions for cultural entrepreneurship and regional development. *International Journal of Entrepreneurship and Innovation Management*, 21(3), 163–169.
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *The Academy of Management Learning and Education*, 14(2), 187–204.
- Tipu, S. (2017). Entrepreneurial risk taking: Themes from the literature and pointers for future research. *International Journal of Organizational Analysis*, 25(3), 432–455.