

# A Thematic Review on the Pattern on Trends on Entrepreneurial Research in Technical and Vocational Education and Training (TVET) from 2010 to 2020

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## Abstract

Analysis of Technical and Vocational Education and Training (TVET) experiences numerous reviews and deliberations. In the earlier publications, these analyses introduce the diversity of research trends. Nevertheless, no review paper examines TVET research trends in the literature following its far-reaching studies. However, the critical drive to satisfy youth's economic demands now compels complete execution in the entrepreneurial education domain to create awareness of its weight to revive the economy. Therefore, this systematic review aimed to present literature from 2010 to 2020 associated with TVET research trends following thematic review. The researcher attended a keyword search, supported by a filter applying inclusion criteria from Scopus, Mendeley, Science Direct, Eric and Emerald Insight databases, and recognised 69 scholarly articles. Consequently, its thematic review confirmed six central themes; the need to revise current TVET educational approaches and strategies, entrepreneur intentions, the need for substantial networking with industry players, promote self-employment, foster self-efficacy and entrepreneurship motivations. It then authenticates the discussion trends in the TVET literature. This field requires prospective studies on TVET to review additional questions that arise.

**Keywords:** TVET, trends, thematic review, entrepreneurial education.

## Introduction

Entrepreneurship education is gaining momentum worldwide where, it is increasingly emphasised to students and policymakers (Mwasalwiba, 2010). Social aspect is a vital part to influence entrepreneurship education (Global Entrepreneurship Monitor, 2012). Entrepreneurship education comprises lectures and assignments that equip entrepreneurs with the skills, abilities, and insights to excel in entrepreneurship (Keat et al., 2011). It is important to educate entrepreneurs properly, hence policymakers should create supportive systems and regulations to foster entrepreneurship and viable firms (Chen et al., 2015). Thus, entrepreneurship education is very crucial and requires serious emphasis. This is

because, it provides pupils the knowledge and skills to establish their own business and minimise their reliance on employers to hire them.

Kirzner (1973) described entrepreneurship as the pursuit of profit. Entrepreneurship, according to Fritsch (2017), is a creative deconstructing process. Moreover, entrepreneurs help bring new ideas to life by delivering products and services to the market, resulting in wealth and jobs (Willie et al., 2009). Entrepreneurship also is the process of starting a lawful business to make money (Valerio et al., 2014). According to Schoof (2006), entrepreneurship is an economic process that involves identifying opportunities, creating value, and pursuing them. An entrepreneur

invests time and energy in product development while reaping financial, personal, and social gains. Johnson (2001) stated that entrepreneurial position encompasses the following concepts. They are available and willing to help others attain their goals, even when they struggle. Basically, entrepreneurship is entrepreneur's desire to establish a firm (Krueger et al., 2000). Based on these stated definitions, it is observed that entrepreneurship is entrepreneur's persistence to start a firm, driven by financial rewards for their efforts.

Government's role is crucial to intensify the efficiency of entrepreneur education. They should provide an adequate learning framework for entrepreneurship education in schools (Pittaway & Cope, 2007). Effective entrepreneurial curriculum and properly trained teachers in educational institutions are needed to improve the quality of entrepreneurship education. Government funding of entrepreneurship education is necessitated. However, private sector involvement and aid in entrepreneurship educational programmes are also demanded (Cho & Honorati, 2014; Martin et al., 2013). Furthermore, TVET stakeholders should consider effectively integrating entrepreneurial education into all vocational education stages to generate committed and capable entrepreneurs (Shikalepo, 2019). It is suggested that experiential learning and assessment of language used to deliver entrepreneurship education, are implemented in colleges (Mawonedzo et al., 2021). Despite this, one cannot assume that TVET students will have the entrepreneurial ambition to become entrepreneurs in the future (Ramdzan et al., 2020). Thus, entrepreneurial research in TVET is essential to benefit TVET institutions and TVET graduates both nationally and internationally. This study investigated topics raised in TVET literature from 2010 to 2020. Accordingly, it suggested focusing on common

themes for policymakers to consider further revisions.

In this particular study too, some research gaps are present. There is a relatively little research identified a connection between entrepreneurship and student education and entrepreneurship and success (Henry et al., 2005). It is essential to note the lack of experimental research emphasising the effectiveness of entrepreneurial training intervention programmes and few tracer studies available to examine the students' entrepreneur status (Gundlach & Zivnaska 2010). Recently, some other researchers attended studies on the components of intellectual, spiritual and emotional notions among Malaysian and Indonesian TVET students (Nursiah et al., 2020). Thus, it confirmed gaps in the entrepreneurship education domain, and it necessitated more studies on it like TVET. Furthermore, based on the literature obtained, it is confirmed that entrepreneurial research in TVET obtained more attention from the scholars annually, which added to its pertinence in the education realm. Therefore, this research presented its common central themes from 2010 to 2020 associated with TVET research trends. It too presented the uncommon theme discussed that calls for further exploration in research in TVET – Business Exit.

## Methodology

The researcher attended a thematic review employing ATLAS.ti. The literature was completed based on multiple selection features: 1) Publication from 2010-2020, 2), Hold at least keyword(s) such as Entrepreneurial, Entrepreneurship, Technical and Vocational Education and Technical and Vocational Education and Training.

Table 1. Search strings from Scopus, Mendeley, Science Direct, Eric and Emerald Insight

Search strings	Keywords	Document results
SCOPUS	(TITLE-ABS-KEY ("Entrepreneurial") OR TITLE-ABS-KEY ("Entrepreneurship") AND TITLE-ABS-KEY ("Technical and Vocational Education and Training")) AND DOCTYPE (ar) AND PUBYEAR > 2009 AND PUBYEAR < 2021	11
	(TITLE-ABS-KEY ("Entrepreneurial") OR TITLE-ABS-KEY ("Entrepreneurship") AND TITLE-ABS-	27

	KEY ("TVET")) AND DOCTYPE (ar) AND PUBYEAR > 2009 AND PUBYE AR < 2021	
Mendeley	"Entrepreneurial" AND "TVET" AND year: [2010 TO 2020]	42
Science Direct	Year: 2010-2020 "Entrepreneurial" AND "TVET"	2
	"Entrepreneurship" AND "Vocational"	28
Emerald Insight	title: "Entrepreneurial AND Vocational" Year: 2010-2020	3
	title: "Entrepreneurship AND Vocational" Year: 2010-2020	4
ERIC	TI "Entrepreneurial" AND TI Vocational	5

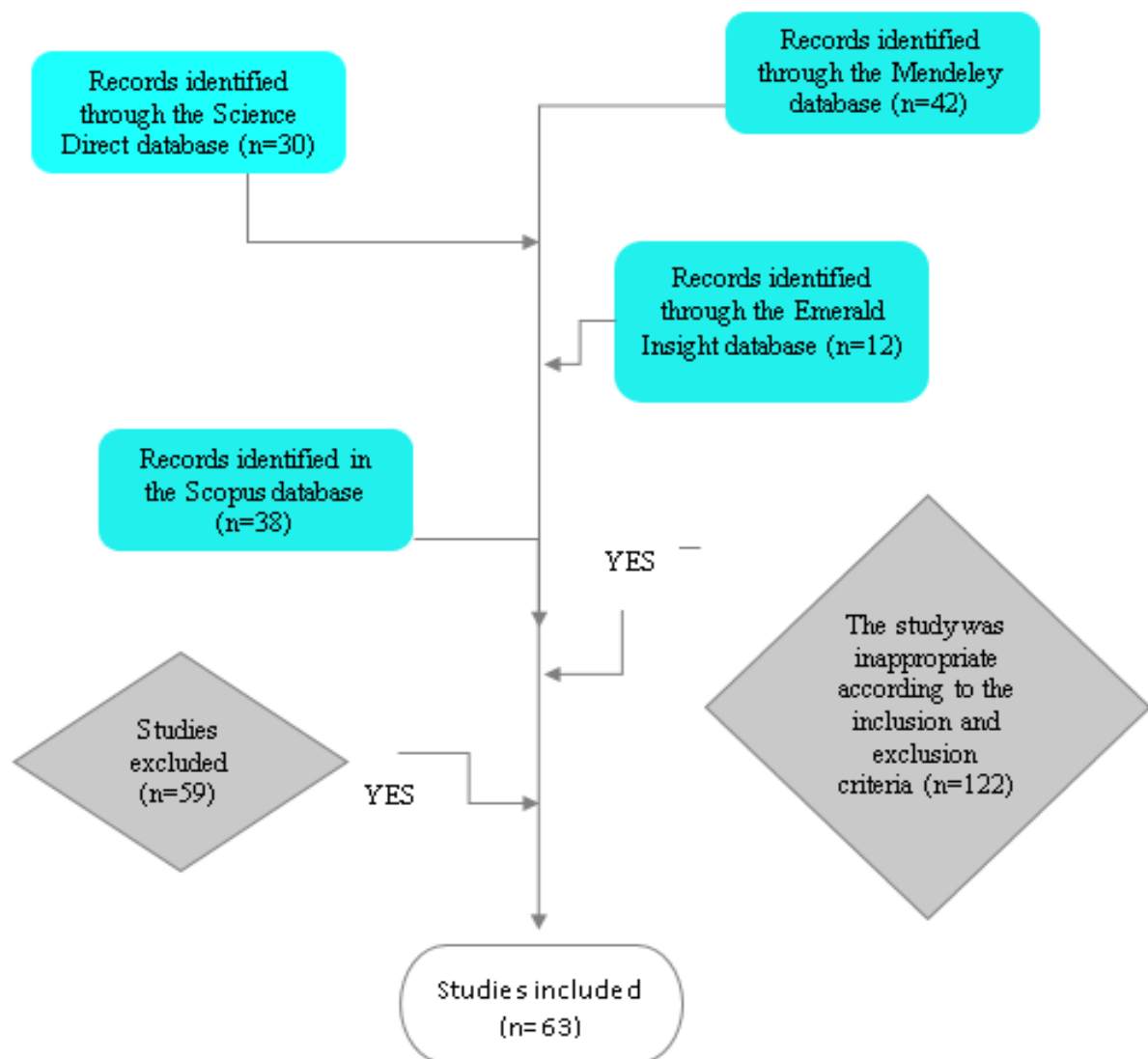


Figure 1. Inclusion and exclusion criteria in the thematic review

The researcher attended a thematic review employing ATLAS.ti. It is crucial to recognise the patterns of trends in entrepreneurial research in Technical and Vocational Education and Training (TVET) from 2010 to 2020. In an attempt to demonstrate the actions committed in a thematic review, this paper conducted the analysis based on individual determination guidelines: 1) Publications from 2010-2020, and 2) Hold keyword(s) of “Entrepreneurial” or “Entrepreneurship” or “Technical and Vocational Education and Training” in the content. The literature discovery was performed in the SCOPUS and Mendeley literature search using the following search strings (Table 1).

Based on Science Direct search, the Year: 2010-2020 and used “Entrepreneurial” AND “TVET” “Entrepreneurship” AND “Vocational” and collected 30 articles. From the Mendeley literature search, the initial search came out with the term “Entrepreneurial” and “TVET” and year: [2010 TO 2020], gathering 42 articles. Meanwhile, based on the search of Emerald Insight, it collected 12 articles with the “Entrepreneurial AND Vocational”, Year: 2010-2020 and “Entrepreneurship AND Vocational”, Year: 2010-2020. Then, from the SCOPUS search, the TITLE-ABS-KEY (“Entrepreneurial” AND “Entrepreneurship” AND Technical and Vocational Education and Training (Limit -TO (PUBYEAR, > 2009) AND (PUBYEAR < 2021) generated 38 articles that discuss TVET from 2010-2020. Fifty-three overlapping articles were removed, resulting in further filtration from both SCOPUS and Mendeley search, resulting in 69 articles regarding TVET from 2010 to 2020 (Figure 1). Hence, this paper chose articles from journals and theses which were reviewed thematically.

## Results and Discussion

This paper reviewed the patterns and trends in entrepreneurial research in Technical and Vocational Education and Training (TVET) from 2010 to 2020. After recalling the 63 articles, the trends and patterns have produced 17 initial codings. However, following several rounds of re-coding and code merging in ATLAS. Ti 8, the final trends and patterns delivered six main themes as stated in the next section.

## Themes Discussed

From 2010 to 2020, the researcher identified numerous trends in entrepreneurial research in Technical and Vocational Education and Training. Themes included revising present TVET educational methodologies and strategies, examining entrepreneur intentions, studying entrepreneur motivations, promoting self-employment, networking with industry players, and fostering self-efficacy.

Generally, in 2019, TVET received the most publication. In the 4th Industrial Revolution, students were found to face obstacles (Shabbir et al., 2019). Another study examined entrepreneurship skill competency (Abdullah et al., 2019). Construction technology instructors from 45 vocational colleges across Peninsular Malaysia were involved in this research. In 2019, there is a study that examined the impact of entrepreneurship programmes and entrepreneurial skills. The study included 300 undergraduate students chosen at random as respondents (Afferro et al., 2019). In the same year, other study in South Africa investigated entrepreneurship theories, providing realities, difficulties, and entrepreneurship development agenda in South African Higher Education (Thobeka, 2019). Then, Shikalepo (2019) studied how entrepreneurship may be exercised and supported across the TVET system. The approach considers both institutional and industry dynamics to ensure the sustainability of innovation and entrepreneurship among TVET trainees and graduates. The necessity to revise current TVET educational methodologies and strategies was a prevalent theme in all studies. Likewise, in the same year, (Mack et al., 2019) attended corresponding research. This study focused on entrepreneurial education in Trinidad and Tobago’s TVET institutions. It also conducted quantitative research with 446 TVET students. According to the survey, 98% of respondents wanted to be entrepreneurs (Dheer & Lenartowicz, 2019). This study emphasised entrepreneur intentions. Another analysis on a similar issue was conducted by (Batisa, 2019). This study’s principal aim was to determine how personality qualities, social norms, financial access, schooling, and government administration impact college students’ entrepreneurial intent. Students from Tercha Industry Colleges were polled quantitatively and qualitatively about their

projected plans to start corporations. Another research looked at the impact of entrepreneurship education on creating an entrepreneurial attitude among Chinese university students (Cui et al., 2019). Thus, this study focused on entrepreneurship motivations among 1428 valid samples of Chinese university students. An entrepreneurship education programme increased students' entrepreneurial inspiration, which in turn increased students' entrepreneurial psychology. They also investigated the perceived barriers Chinese vocational college educators face in constructing and delivering constructivist active, experiential entrepreneurship training. In four different vocational colleges in four other regions in China, 24 focus groups of educators were requested to embrace revisionist entrepreneurial education into their teaching and curriculum. It emphasised the significance of extensive networking with industry players.

Accordingly, based on the literature throughout 2010 until 2020, many scholars made several publications on diverse issues globally. These studies looked at various topics, using a variety of approaches, and yielded a variety of data and significance. Thus, it proved its study relevance. Hence, the scholars eventually realised TVET's importance in stimulating the economy, lessening the need for employing, and encouraging others to hire instead. The researcher examined other patterns from 2010 to 2020 in the sub-points below.

### **The need to revise current TVET educational approaches and strategies**

Many studies emphasised the need to revise present TVET educational methodologies and strategies following a thematic review of trends in entrepreneurial research from 2010 to 2020. Various studies analysed the importance of TVET in alleviating poverty, unemployment and consequently expanding the economy. These studies discovered that preparing students for effective TVET education is one of the most reliable solutions to overcome the economic downturn. They concluded that efficient TVET educational techniques and strategies help young people become skilled and choose self-employment rather than relying on others to hire them. It is vital because graduates with TVET skills can assist grow the economy. They (Kelechi & Titus 2010) suggested that one may become a job creator rather than a job seeker and

therefore raise one's standard of living above poverty. A related study (Maigida, 2013) evaluated how entrepreneurial skills in TVET may be leveraged to empower Nigerian youth and combat unemployment. The subsequent research identified the characteristics that helped MARA become a powerful organisation for Technopreneurship Development. According to the report, an effective strategy was required for the agency to boost the number of technopreneurs. It suggested that with the right policies, TVET can be used to educate future human resources, assisting Malaysia in its economic rebirth (Suradi et al., 2017). In South African, Thobeka (2019) research on entrepreneurship theories revealed reality, difficulties, and entrepreneurship development agenda in South African Higher Education. To address unemployment and under-utilisation of human resources in Lusaka Province, Zambia, Mubanga et al. (2019) recommended combined TVET and entrepreneurship education. Furthermore, Rikke and Simone (2020) examined a Business Development (BD) programme designed to foster entrepreneurship and reduce youth unemployment in Sierra Leone. This study employed semi-structured interviews. Nevertheless, this BD initiative failed to solve unemployment. It criticised existing TVET education's relevance. Also, in 2020, Kissi et al. (2020) outlined ways for boosting entrepreneurship skills among technical and vocational students in underdeveloped nations. To increase entrepreneurial skills and education among TVE students in Ghana, the data identified four essential methodologies, including learner/student-centred education, problem-based learning, intellectual aptitude development classrooms, and activity-based learning (ABL).

To tackle its fiscal challenges, these studies emphasised effective TVET education. The educational components should teach students to create jobs rather than seek jobs. Thus, these experts emphasised the need to change current TVET educational methodologies and tactics to achieve reliable economic solutions.

Moreover, some researchers questioned TVET's sustainability. This example speaks to the content of education and how the system can adapt to be used throughout one's life. Using the Delphi approach, Muridan et al. (2019)

evaluated the essential elements that support the sustainability of vocational topics in secondary school in Malaysia. Similarly, Usman et al. (2015) investigated ways to improve the skills of undergraduate TVET students in Nigeria by better collaborating with industry. This study recommended lifelong learning and training to stay relevant in the workplace. Alexandros (2015) advocated lifelong learning to help varied demographics learn entrepreneurship. Shikalepo (2019) studied how entrepreneurship may be practised and nurtured across the TVET system. The approach considers both institutional and industry dynamics to ensure the sustainability of innovation and entrepreneurship among TVET trainees and graduates. Hence, the scholars needed a long-term TVET system that performs drastically throughout one's life. To own well-built TVET education, current TVET educational methodologies and strategies have to be revised.

Secondly, these researchers identified several flaws in TVET education. Soyşekerçi and Erturgut (2010) used content analysis to uncover such a flaw. This study focused on the role of NGOs in helping the public sector. Social entrepreneurship is non-profit and provides students vital exposure following graduation. Zaidatol and Afsaneh (2011) used a descriptive research methodology with 315 teachers and 3,000 students from technical and vocational secondary schools and recommended more purposeful and effective entrepreneurship teaching and learning interventions. Moreover, Lenita and Taina (2015) verified a scarcity of research on lower educational levels, especially non-business basic education. However, Grindsted (2018) found a lack of coordination between policy sectors relevant to sustainable development. Better commercial, education, environmental, and regional development plans must be coordinated urgently. Muhe et al. (2016) investigated the impact of entrepreneurial learning design on students' entrepreneurial competency in Makassar state vocational high schools. Then, it concluded that entrepreneurial learning design benefited them. Also, Gamede and Uleanya (2017) investigated secondary school entrepreneurship education and advocated that education stakeholders fully support secondary school entrepreneurship education. Morselli (2018) then investigated how educators may integrate initiative and entrepreneurship into obligatory education.

Wan Jaafar et al. (2017) reviewed community colleges efficiency as an alternate pathway for community development through entrepreneurship education programmes. Shabbir et al. (2019) investigated the issues for graduates' students in the 4th industrial revolution. Abdullah et al. (2019) examined entrepreneur skill competency. Construction technology lecturers from 45 vocational colleges across Peninsular Malaysia were involved in this study. The efficacy of entrepreneurship programmes and their entrepreneurial skills was also examined in 2019 (Affero et al., 2019). The study included 300 undergraduate students chosen at random as respondents.

These experts suggested that current TVET educational methodologies and strategies need to be revised due to policy inconsistencies, the need to incorporate other parties such as NGOs and stakeholders, the need for new tools such as models, and the inefficiency of the current TVET system. Achieving accountability in TVET Education requires revising current educational approaches and strategies.

It also explored TVET's difficulties and predictors. The impact of entrepreneurial pedagogy teaching styles on fostering technical entrepreneurship was studied (Asykin et al., 2019). To develop students' entrepreneurial goals and skills, the lecturer must have solid pedagogical topic understanding, especially entrepreneurship. The researchers also evaluated how entrepreneurship education strategies in apparel and textile programmes are applied in selected Technical Colleges in Zimbabwe (Mawonedzo et al., 2021). Three department heads, three lecturers, and 36 students were chosen from apparel and textile programmes. However, the research revealed a failure in entrepreneurship education. The Singaporean perspective was also studied in Nattavud (2019). These difficulties include power and inequity in teaching partnerships, industry engagement and the attitude shift required to build global perspectives. Rahimi et al. (2019) investigated the relationship between environmental factors, entrepreneurial experiences, and entrepreneurial attitude. To increase entrepreneurial teaching in vocational colleges, these three factors are essential.

Thus, these experts debated TVET techniques, difficulties, and predictors under the theme of

revising present TVET educational methodologies and strategies. It then prompted various calls for revising current TVET educational practices. In conclusion, the most prominent theme of the studied publications is updating current TVET educational methodologies and strategies. From 2010 to 2020, it obtained 26 publications out of 63 articles, or 41%. Many studies around the world

emphasised the inadequacy of contemporary TVET education aspects. Government must adjust a country's education system to address a specific challenge. TVET educational methodologies and strategies will make it the ultimate problem-solver for nations. The number of publications from 2010 to 2020 is summarised in Table 2.

Table 2. *Theme 1: The number of publications from 2010 to 2020*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 1	3	0	0	2	0	3	2	2	2	9	3	26

### Entrepreneur intentions

On the list of most frequent themes is entrepreneur intention. In this theme, they looked into the motivations of students who wanted to be entrepreneurs. These include entrepreneurship education, family business impact, student attitude and spiritual notion. These characteristics do help pupils want to be entrepreneurs.

For example, Asghar et al. (2016) performed an informal comparison survey of entrepreneurship education participants (n=198) and non-participants (n=202). The results demonstrated that entrepreneurship education influenced students' desire to be entrepreneurs. Gebremedhn and Satya (2016) found that the majority wanted to be entrepreneurs among 194 TVET students at a Mekelle public university. Their decisions were ascribed to academics and attending entrepreneurship classes. Ni and Ye (2018) found that students rated their entrepreneurial competence and intention as high. Notably, they agreed to be entrepreneurs despite having "vague" entrepreneurial knowledge and claiming to have had various entrepreneurship education. This analysis found that motivation, leadership, and business knowledge influence entrepreneurial intention. Also, Mack et al. (2019) looked into TVET entrepreneurship education practices. They, too, conducted a quantitative study with 446 TVET students in four Trinidad and Tobago TVET colleges. According to the survey, 98 per cent of respondents were interested in entrepreneurship as a future. Dheer and Lenartowicz (2019) conducted comparative research. Next, a similar

notion was researched by (Batisa, 2019). This study's main goal was to discover how education, training, and government policy influence college students' entrepreneurial spirit. According to this quantitative and qualitative study conducted among Tercha industry college students, these variables influence their future intentions to become entrepreneurs. According to Saibon et al. (2019), entrepreneurship education provides graduates with entrepreneurial knowledge and abilities, which may entice them to become entrepreneurs if they are unemployed.

Handayati et al. (2020) concluded that entrepreneurship education encourages students' entrepreneurial intentions. Entrepreneurship education also significantly improves students' entrepreneurial ambitions and mindset. Similarly, Roslan et al. (2020) found a link between entrepreneurship activities, role models, entrepreneurship education, teaching and learning methodologies and entrepreneur intention. Ibrahim et al. (2015) found no significant differences between students from community colleges and National Youth and Skill Training Institutes in their entrepreneurial goals, proving that both institutions create graduates with entrepreneurial ambitions. Although Galvão et al. (2018) disagreed in their study, the literature confirmed that entrepreneurship education does contribute to students' desire to be entrepreneurs, therefore validating its value in the education system.

Further research indicated that earlier exposure to family companies inspired students to become

entrepreneurs (Gebremedhn & Satya, 2016; Roslain et al, 2021). Simila, Galvão et al. (2018) revealed that family background influences students' desire to become entrepreneurs. Determinants of entrepreneurial attitude include family or parents who own firms, certificate and diploma levels, and involvement in the business. Conversely, Issa and Tesfaye (2020) implied there is no statistically significant relationship between parental occupation and educational level and entrepreneurial intent among graduating class students. In general, the student's desire to be entrepreneurs is influenced by their family businesses.

The researcher also discovered that student attitudes influence their desire to be entrepreneurs. Gebremedhn and Satya (2016) and Batisa (2019) agreed. Nishantha (2020) found that TVET students' attitudes toward entrepreneurship are positive since they believe TVET boosts their entrepreneurship training. He studied 138 TVET students from three Sri Lankan TVET institutes. In addition, Nursiah et al. (2020) found that variables such as intellectual, emotional, and spiritual intelligence, subjective norms, and perceived

behavioural control influence entrepreneurial intention. Professionalism is one of the fundamental elements of subjective career space, according to Chan et al. (2012). Thus, it confirmed that student mindset influences their desire to be entrepreneurs.

From another angle, Mohamad et al. (2019) concluded that they failed despite government measures to foster student entrepreneurship. This study concluded that students' motivation to become graduate entrepreneurs, especially TVET students, is influenced by spirituality. Positive attitudes and actions based on trust in Allah SWT develop positive attitudes and activities in the practice of entrepreneurship.

Based on the literature, it appears that they researched the intentions for students to become entrepreneurs. The researcher discovered that intentions fluctuate depending on the situation: student attitude, family business influence, and spiritual notion all impact these students' intentions. The number of publications from 2010 to 2020 is summarised in Table 3.

Table 3. *Theme 2: The number of publications from 2010 to 2020*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 2	0	0	1	0	1	1	2	0	2	5	5	17

### Entrepreneur motivations

Another common theme in TVET literature is entrepreneurship motivation. This theme represents the variables that drive TVET programmes to be effective. van Dam et al. (2010) investigated the impact of school atmosphere on teachers' skills and entrepreneurial behaviour. TVET education is more efficient when teachers are entrepreneurially minded and have a flexible career outlook. The renaming of vocational schools to Vocational Colleges (VC) is also addressed by Ruhizan et al. (2013). Since VC is new, conclusions revealed that certain assessment techniques are still common and need to be corrected. The Production-based Learning Model in TVET in Higher Education

was also defined by Kusumaningrum et al. (2015) to improve students' entrepreneurial interest. They proposed this model to enhance competencies' understandings. It allows students to be more daring and creative in their work. Ana et al. (2017) also explored the impact of personal qualities on students' entrepreneurship intentions. This led them to discover that students' entrepreneurship intentions are driven by their self-confidence. Thus the TVET system needed to develop confidence in TVET programmes. The influence of self-efficacy and family support in entrepreneurial intentions among Vocational High School students was also explored by Tentama and Paputungan (2019). The findings confirmed the link between self-efficacy, family support, and entrepreneurial intent. Another



second study examined the effect of entrepreneurship education on creating an entrepreneurial attitude among Chinese university students (Cui et al., 2019). This study focused on entrepreneurship motivations among 1428 Chinese university students. An entrepreneurship education programme increased students' entrepreneurial motivation, which in turn boosted students' entrepreneurial mentality. Muridan et al. (2019) investigated the psychological, social, and economic factors influencing TVET entrepreneurs' career choices. Nishantha (2020) revealed that TVET students' attitudes toward entrepreneurship are positive since they believe TVET boosts their entrepreneurship training. He studied 138 TVET students from three Sri Lankan TVET institutes.

As a result, entrepreneurship motivations are a common element in TVET teaching. It stated

that the TVET programme requires a unique approach and drive to succeed. This issue highlights the need for rebranding vocational schools, fostering confidence, self-efficacy, family support, entrepreneurship education, psychological, social, and economic drivers, and student attitudes. Every country has its challenges to conquer globally, notably in terms of economics. Most governments decide that their citizens must be capable of running their businesses and being entrepreneurs. They realise that training young minds is the most reliable method. This calls for a comprehensive TVET system. It is vital to remember that no TVET system can be generalised as each nation faces unique challenges. It also demonstrates that the TVET system requires fundamental reforms or issues that will continue regardless of study. The number of publications from 2010 to 2020 is summarised in Table 4.

Table 4. *Theme 3: The number of publications from 2010 to 2020*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 3	1	0	0	0	1	1	0	1	0	3	1	8

### Promote self-employment

Promoting self-employment is the second central theme in this study. TVET graduates should develop practical business skills to combat poverty, unemployment, and job rejection. Thus, adequate skills are required during their education. For example, Ahmad et al. (2015) recognised that empowering young on vocational education should emphasise addressing poverty and unemployment. In addition, Asghar et al. (2016) investigated the impact of entrepreneurship education on students' mindset to start their firm. Therefore, entrepreneurship education influenced students' thinking to become entrepreneurs. Furthermore, Assefa (2016) found that 967 graduating students planned to work for the government or commercial sector. It then urged for enhanced

entrepreneurial education, as the courses covered failed to inspire, motivate, and prepare students to create jobs. Sandirasegarane et al. (2016) suggested a more context-driven and integrated entrepreneurial approach for VET in Sub-Saharan Africa. It is essential since many vocational schools only develop skills without addressing business operations. This emphasised market demands for both practical and transferrable skills, helping to minimise youth unemployment. To lessen dependency on the public sector for employment, Salisu (2020) discovered similar conclusions. It also affirmed TVET's education curriculum must promote entrepreneurship motivations to reduce reliance on the public and private sectors. Therefore, it produces well-equipped future entrepreneurs. The number of publications from 2010 to 2020 is summarised in Table 5.

Table 5. *Theme 4: The number of publications from 2010 to 2020*

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 4	0	0	0	1	1	0	2	0	0	0	1	5

### The need for substantial networking with industry players

The next theme is the requirement for substantial networking with industry players. This issue typically refers to the graduates' need to work closely with industry players. It covers the educators' or institutions' relationships with third parties offering graduate career chances or early exposure while still in school. A comparison of 448 Finnish (VET) teachers showed that the teachers' business background or work experience does not lead to more reliable practises for employing separate external stakeholders (Oikkonen et al., 2015). Buli and Yesuf (2015) found that TVET programmes must teach a comprehensive spectrum of entrepreneurial skills through active partner involvement and robust mobilisation of

interest groups to promote economic and social change. Contents like decision making, effective communication, entrepreneurial negotiation and technology innovation are too highlighted. Muladi et al. (2018) examined the relationship between vocational high school and information technology firms. The partnership, which included internships and job placement, greatly aided the grads. The conclusion highlights the role of such a link on vocational education quality. Bell and Liu (2019) studied 24 focus groups from four distinct higher vocational institutions in four different Chinese provinces for their subsequent study. Based on the literature, it is obvious that the theme of substantial networking with industry players is essential to the study context. The relationship is vital. The number of publications from 2010 to 2020 is summarised in Table 6.

Table 6. Theme 5: The number of publications from 2010 to 2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 5	0	0	0	0	0	2	0	0	1	1	0	4

### Foster self-efficacy

The next well-debated TVET theme is fostering self-efficacy. This topic focused on using TVET to help students see themselves as entrepreneurs. In Turkey, Top et al. (2012) discovered that various components impact students' self-efficacy; parents, teachers, and friends. Creating

a solid business takes self-efficacy. Besides, an impressive analysis of entrepreneurs in two emerging entrepreneurial groups revealed that a culturally inappropriate atmosphere hampers entrepreneurship expansion. A fresh component in TVET studies emerged: culture (Värlander et al., 2020). The number of publications from 2010 to 2020 is summarised in Table 7.

Table 7. Theme 6: The number of publications from 2010 to 2020

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
No. of Publications for Theme 6	0	0	1	0	0	0	0	0	0	0	1	2

As a result, the themes addressed have not examined Business Exit to bridge the gap further. The systematic review of TVET research trends from 2010 to 2020 did not identify such a topic. It carries much weight for such studies and contributes to the whole domain. One should realise that it is part of the business cycle and not separated. Accordingly,

this research could fill a gap in the literature and introduce a new significant study in entrepreneurship - Business Exit.

## Conclusion and Future Studies

From 2010 to 2020, global TVET publications were substantially based on trends. The main concern was revising current TVET educational practices. It is vital to emphasise the practical TVET approach's concrete economic plan that encourages students to start their firm after graduation. It is required to deal with COVID-19 and its repercussions. With thousands of graduates unemployed, TVET graduates need to be hired or self-employed. Endless debates may be futile without a real plan to address the enigmatic fiscal climate. Among the concepts highlighted, this one stands out and demands immediate attention.

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