

# Entrepreneurial Intentions of Students: Review of Academic Literature

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**Abstract--** Entrepreneurship can be taught or at least directed through entrepreneurship education. Entrepreneurship education aspire to motivate and nurture the students to be entrepreneurs. It is more effective when administered at university level. Because graduate students have more potential to become entrepreneurs and they are relatively close to the stage of career choice. Despite the fact that most of the higher education institutes are conducting entrepreneurship courses, very less prominence was given to the findings towards the effect of entrepreneurship education and their intentions to become entrepreneurs. Overall changes are required in course curriculum. Entrepreneurial skills and activities should be spurred along with education and training for desired results. An attempt is made to review the academic and research studies published (both offline and online) to ascertain firstly **the crucial role played by entrepreneurial intention in decision making process to start a new business venture and secondly**, whether entrepreneurship education at higher education institutions/universities has been able to increase student entrepreneurial intention. Research conducted across 25 countries covering all continents during the period from 2014 to 2019 among the graduate students of Administrative Sciences, Business Administration, Commerce, Engineering, Economics, Tourism, Science & Technology streams were scanned. Around 100 very relevant studies were selected for the purpose. This paper seeks to understand whether and how entrepreneurship education affects the intention of the student community. The outcome may be used as a guiding tool to enhance entrepreneurship among youth in developing nations.

**Key Words:** Entrepreneurship, Education, Entrepreneurial Intention, Students, Curriculum

## RESEARCH PROBLEM

Despite the developments in education system, research in entrepreneurship education is a young field and still in need of legitimization. The pedagogy do not elucidate the teaching methods and approaches in entrepreneurship education are adapted to the various types of learners. There is no evidence on the expected outcomes or contextual factors contribute to increased effectiveness. United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2012) lay emphasis that education should focus not only on preparing students for employment but more importantly towards developing employability skills.

Successful entrepreneurship education requires an integrated approach with major emphasis on changing the behaviours and modifying the attitudes of students. Entrepreneurship as a pillar and key driver of economy, it is important for Governments and Universities to find out innovative ways to promote entrepreneurial intention among the students.

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Such actions will in the long run address problems such as unemployment and poverty. Hence, fostering

entrepreneurial culture among students may encourage graduates to become masters of their own business venture.

## OBJECTIVES

1. To study the entrepreneurship content gaps in curriculum of University/Higher education system
2. To document the latest research findings on entrepreneurial intention of university students across the nationalities
3. To suggest the policy and programmatic measures to improve the impact of entrepreneurship education on entrepreneurial intention of university students

## RESEARCH METHODOLOGY

This paper is based on secondary data explored from reputed research journals of national and international repute, articles and reports published by several governments. The rationale behind this paper is to review the scholarly literature available in the field of Entrepreneurial Intention (EI) with special reference to students and conduct a content analysis of the same.

Around 100 relevant research papers describing entrepreneurial intention published between 2014 to 2019 were studied carefully. In spite of great number of publications and their diversity, the review paper

recognizes two main areas of research, viz., Entrepreneurship Education and Entrepreneurship Intention. Literature published (off line and online) under these two themes were only analysed. The present paper covers essential features of entrepreneurship, importance of entrepreneurship education, significance of inducing entrepreneurial intention among student community, research findings, limitations, gaps, strategies for promoting entrepreneurship culture for a developed and sustainable world were discussed.

## MAJOR FINDINGS

1. The first special issue devoted to entrepreneurship education was only published in 1991 (Katz, 2003; Kuratko, 2005).
2. Available studies are mostly of a descriptive nature.
3. The pedagogical objectives and expected outcomes are complex and hard to define without a broad consensus on the nature of the entrepreneurship phenomenon and its associated soft skills.
4. Changes in personal attributes will have positive effects on entrepreneurial intention.
5. Entrepreneurial Intention of females and males are influenced by diverse factors. For female students, the EIs are determined by social norms whereas, self-efficacy was found to be predicting the EIs of the male students.
6. Family support was found to be positively related to perceived desirability as well as feasibility in starting a new enterprise.
7. The offer in entrepreneurship education increases constantly but remains fragmented.
8. Entrepreneurship education undoubtedly has impact on entrepreneurial intentions of university students. Seminars and lectures are not much appreciated but practical sessions and networking are expected more by the students in entrepreneurship course.
9. Entrepreneurship could also be progressed with a blend of political, cultural and socio-economic situations.
10. Entrepreneurship has also captured the attention of policy-makers, educators and researchers in the last few decades.
11. Higher Education Institutions and Universities are considered as perfect platform for shaping entrepreneurial culture among students (Mahlberg, 1996). Hence, universities must create an

entrepreneurial ecosystem to foster entrepreneurial culture.

## 1 INTRODUCTION

### 1.1 Entrepreneurship

Entrepreneurship is an important source to improve the economy. It is evident from the literature of Bird (1988); Morris, Lewis & Sexton (1995); Mitchell (2005) that entrepreneurship has been the career choice for many over the years. Experimental evidences support the assumption that Need for Achievement contributes to entrepreneurial success. Hence, there is a need for developing achievement motivation among students for promoting entrepreneurship in an economy. As per Global Entrepreneurship Monitor (GEM) survey (2016) conducted in 60 countries, 66% of adults regard entrepreneurship as a good career choice and 50% out of them believe they have the competence to take up entrepreneurial activity. As entrepreneurship yielded positive results in past decade, a good number of developing nations are considering entrepreneurship as prospective solution to address the serious issues like high unemployment rates, excess number of graduates, lack of economic improvement and inability of both public and private sectors to provide employment for graduating students. The magnitude of entrepreneurship development in a fast developing nation like India is remarkable.

### 1.2 Entrepreneurship Education

Shigeru Fijii made history by introducing and teaching entrepreneurship education much earlier during 1938 at Kobe University, Japan (Alberti *et al.*, 2004). Entrepreneurship education was further developed in American universities and it only started surfacing during 1940s. Kirby and Ibrahim (2011) reported that initial courses on entrepreneurship were offered around early 1980s in Western Europe and United Kingdom. Subsequently, in 2012, Kirby and Ibrahim detailed the introduction of first entrepreneurship course in the United States of America at Harvard Business School by Myles Mace in February 1947. Since 2000s, states across the world have intensified prescriptive measures to develop education in and through entrepreneurship at all levels of their education systems from primary school to higher education (Kyro 2015; Rizza and Amorim 2011).

It is apparent from the study by Akinbola *et al* (2015) that EE has a significant relationship with the entrepreneurial

intention of university graduates. Round the world it has been argued that contextual factors in relation to educational support and informal networks have contributed enormously for the progress of entrepreneurial intention of students.

David C. McClelland, an eminent Behavioural Scientist, USA strived to induce the spirit of achievement motivation in adults and urged them to take up business ventures. Kakinada Experiment of 1964 was considered as the seed for Entrepreneurship Development Programmes (EDPs) in India. Need and importance of EDP was appreciated by the people as it induce motivation and entrepreneurial competence among prospective entrepreneurs. Since then, there is no looking back in this front. At present there are approximately 686 National and State level institutions engaged in organising EDPs in hundreds imparting training to the beneficiaries in thousands. National Knowledge Commission (NKC, 2008) has also stressed the importance of entrepreneurship education to overcome the challenges concerning the productivity of education.

### 1.3 Entrepreneurship Intention

Entrepreneurial Intention (EI) is enthusiasm and first choice of an individual to set up a new business. Further, it is defined as one's passion to be occupied in self-employment, start a business activity and make it a successful venture (Engle *et al.*, 2010). Entrepreneurial Intention is one of the rapidly emerging field of research and quite a few studies use EI as a powerful academic framework in academic circles. Recognising the factors impacting a person's EI has a high level of significance in indicating the extent to which an individual is interested in starting a enterprise. Intention leads to actions, means if there is no intention, there cannot be action. The intentional process is initiated from an individual's personal needs, wants, values beliefs and habits (Bird, 1988). If there is a high level of intention, it is more likely that the behaviour will result (Ajzen, 1991). People that are more confident, independent and ready to take risks normally possess greater intention towards becoming entrepreneurs (Autio *et al.*, 2001). The decisive role played by entrepreneurial intention in decision making process to launch a new business is confirmed by several research studies across the nations (Nurdan & Nancy 2016).

The intention of this paper is to review the academic literature available on entrepreneurial intention with special reference to graduate students round the world and

conduct a content analysis of the same. In 2015, Francisco and Alain conducted a review of 409 papers on entrepreneurial intention published between 2004 and 2013. In this paper, only research papers published from 2014 to 2019 were studied carefully and a total of 100 studies describing entrepreneurial intention were considered for documentation. An attempt is made to cover all the continents for global perspective. Experimental studies conducted over 30 countries on entrepreneurial intention of university students are documented. Research gaps are identified to persuade new perspectives in the field of entrepreneurial intention which will be helpful to plug these gaps. This paper will be helpful to students, scholars, academicians, universities, practitioners and policy makers for taking forward the research in the field of Entrepreneurial Intention .

## 2 ENTREPRENEURIAL INTENTION

The factors and perceptions elucidated by researchers are categorised to the possible extent and presented here under. This exercise will be helpful to the scholars and researchers for future studies in this direction.

### 2.1 Factors & Perceptions

In a web based study by Abir *et al* (2014) "Identifying the factors impacting individuals' entrepreneurial intention" has a high level of significance in specifying the extent to which individuals are attracted to start a new business. Important results emerged from this study is personality traits (factors): innovativeness, need for achievement, self confidence, risk-taking propensity, internal locus of control and autonomy. These factors are the most examined ones in the literature. This study will help researchers to consider these factors while examining the intention of individuals toward entrepreneurship.

An attempt is made by Ezekiel *et al* (2014) to understand the perceptions of students in Turkish Republic of Northern Cyprus (TRNC) universities, identified the factors that affect their perceptions. Four factors determined are University Education, Familiarity, Capital and Survival. The above four factors were found to influence students towards entrepreneurship.

The empirical study by Serra *et al* (2014) on "Willingness to take risk and entrepreneurial intention of university students" found that risk loving has a positive and modest effect on entrepreneurial intentions. Though entrepreneurship could be progressed with a blend of

cultural, political and socio-economic conditions, focusing only on willingness to take risk could be inadequate to forecast future behaviour of students.

Aliyu *et al*, 2015 reported that the determining factors such as attitude and subjective norms should get more attention since they affect, directly entrepreneurial intention of the students. The research was carried out during 2015 on "Entrepreneurial Intention among Nigerian University Students".

Bagheri and Pihie (2015). "Factors influencing students' entrepreneurial intentions: The critical roles of personal attraction and perceived control over behavior". The results highlight the key role played by perceived control and personal attraction over behavior in moulding students' intentions to become an entrepreneur. Specifically, subjective norms affect students' entrepreneurial intentions through its impact on their perceived control over the performance of entrepreneurial tasks and personal attraction towards entrepreneurship. In addition, entrepreneurial skills have a low contribution towards perceived behavioral control (PBC) and subjective norms. It is concluded that intention to become an entrepreneur is a complex and personal decision. It could only be navigated by students' attitude (attraction) towards entrepreneurship and PBC. Hence, there is an immediate need to provide Malaysia university students with experiential entrepreneurship learning activities in order to improve their skills as an entrepreneur.

Research findings of the study titled "Developing attitudes and intentions among potential entrepreneurs" by Bahadur and Naimatullah (2015) explicate that by using Pearson's correlations, EI was found to be positively and significantly correlated to attitude towards entrepreneurship. High correlation was found between entrepreneurship intentions and attitudes towards behaviour and low correlation was noticed between innovation and attitudes towards behaviour. However, all independent variables were found positively and significantly related to dependent variable except personal control. Another contribution is to test the model at the higher educational institutions level. This may be the first study to test individuals' attitudes and intentions towards entrepreneurship in the developing country and testing in Asian country can provide more insights in to the extant literature. This study supports the entrepreneurial approach in providing the employment and solving economic crisis to some extent.

Dawn and Michelle (2015) developed a instrument to measure the Entrepreneurial Orientation (EO) of students and other individuals. The scale developed has confirmed the validity and reliability with three distinct factors pro-activeness, innovativeness and risk-taking ability. All three are statistically correlated with measures of entrepreneurial intention.

"A Comparison of Entrepreneurial Intentions of Generation Y Students in South Africa and Zimbabwe" by Esther (2015) concluded that perceived behavioural control and personal attitude has positively impacted the entrepreneurial intentions of students. Whereas the subjective norm made an insignificant impact on entrepreneurial intention. The results show that students of both the countries have required attitudes and behavioural control to start their own business. Nevertheless, South African students seem to have a greater tendency to start their own business compared to Zimbabwe students. Zimbabwean students lower entrepreneurial inclination may be attributed to the lack of entrepreneurial emphasis in their curriculums.

Research carried out by Nisha (2015) on "Entrepreneurial Intentions" in Tamil Nadu, India. The objective was to identify the factors and their impact on the entrepreneurial intention. The findings recommend policy changes and intervention measures at university level to increase the intention level of students. Further, the entrepreneurial intention among students have shown significant influence on attitude, feasibility and desirability. A few factors like age, education, motivation and role model have significant influence on feasibility and desirability towards entrepreneurship. Modifications of these factors will have positive influence on entrepreneurial intention.

Entrepreneurial passion captures the collective effect of degree which involves pro-activeness, innovativeness & risk taking ability and frequency consisting of number of times entrepreneurial act is repeated. Prakash *et al* (2015) observed that both internal and external locus of control differs significantly with frequency of entrepreneurship, innovativeness, pro-activeness and entrepreneurial intensity of students. It was also observed that if students consider government long term policies as support to start their business; degree and frequency of entrepreneurship by the students will also differ significantly.

The study by Saeed *et al* (2015) on "The Role of Perceived University Support in the Formation of Students' Entrepreneurial Intention" illustrate that perceived educational support exercise highest influence on

entrepreneurial self-efficacy, followed by concept development support, business development support and institutional support. Self-efficacy successively had a significant effect on entrepreneurial intention. Individual motivation factors like role model recognition and self-realization had an additional impact on intention. On the other hand, intention was not related to innovation, independence and financial success. The results recommend a holistic approach for more considerate role of perceived university support in improving entrepreneurial intention of students.

The results of a study on "Determinants of Entrepreneurial Intention among Undergraduate Students in Malaysia" by Sylvia *et al* (2015) reveal that personal attitude, perceived behavioural control and perceived relational support are the imperative indicators to entrepreneurial intention.

Awang *et al* (2016) carried out a study among public university students in Malaysia on "Individual Entrepreneurial Orientation Impact on Entrepreneurial Intention: Intervening Effect of PBC and Subjective Norm" focuses on the intervention of attitude towards entrepreneurship, participation in entrepreneurial education, perceived behavioral control (PBC) and subjective norm with students' grade and individual entrepreneurial orientation (EO) in influencing students' entrepreneurial intention (EI). Results explain that students' grade, individual EO comprises of proactive personality and risk taking propensity were proven important in explaining attitude towards entrepreneurship, participation in entrepreneurship education, PBC and subjective norm. Subsequently, PBC and subjective norm proved as significant mediators in individual EO and EI relationships. The results are helpful to university management in redesigning the curriculum and programs that suits to students' concern in shaping their future as an entrepreneur.

Ng *et al* (2016) reported that the elements of entrepreneurial motivation affecting entrepreneurial intentions are behavioral control, subjective norm and attitude towards entrepreneurship. The rate of behavioral control is very good; both subjective norm and attitude towards entrepreneurship are at good level. Attitude and subjective norm to self-employment are significantly related to both student immediate and future entrepreneurship intention. But entrepreneurial motivation and behavioral control are found to be significantly related to student immediate career intention but not related to entrepreneurship career intention. Planned Behavior model could be used as a tool

to make out the would be entrepreneur and motivate them for entrepreneurial progress.

The article by Esther *et al* (2017) "Drivers of entrepreneurial intentions amongst generation Y students in Zimbabwe" examines the influence of four factors i.e., personal attitudes, subjective norms, perceived behavioural control and entrepreneurship education. Research results explain that personal attitudes, perceived behavioural control and entrepreneurship education significantly forecast entrepreneurial intentions. However, subjective norms did not confirm any significant relationship with EI. The results can be used as a tool to boost entrepreneurship among young people in developing countries.

Ghulam Nabi *et al* (2017) conducted "A Systematic Review and Research Agenda on the Impact of Entrepreneurship Education in Higher Education" to present the latest directions which can be understandable, experimented, greatly promising, with novel emphasis for future research on the impact of university based education system. Application of latest impact indicators related to mind-set, emotion and focus on the impact indicators related to intention, behavior transition and investigating the reasons for some contradictory findings. The impact studies include person, context and instructive model as specific moderators.

The objective behind this paper "Investigating entrepreneurial intention among public sector university students of Pakistan" by Naimatullah & Bahadur (2017) is to identify the factors that may influence students' entrepreneurial intentions. The results of multiple regression analysis and Pearson's correlation show that attitudes toward behavior and subjective norms have a positive and significant relationship with entrepreneurial intention, while perceived behavioral control has no significant relationship. These research findings may contribute to the literature of entrepreneurship, particularly within Asian culture. The findings may provide useful insights about young generation, policy makers and curriculum planners in universities and governments, particularly considering the problem of unemployment among students.

"A Study on the Factors Affecting Entrepreneurial Intentions Among Students in Higher Education Institutions in Northern region of Malaysia" was carried out by Lim *et al* (2017) with an aim to understand how the independent variables, namely attitude towards behavior, desirability and feasibility of self-employment, family

business background, entrepreneurship education and environment, affect entrepreneurial intentions of students in Malaysian higher education institutions.

It can be concluded that factors such as attitude towards the behavior, desirability, feasibility of self-employment, entrepreneurship education and family business background exhibit significant relationships towards students' entrepreneurial intentions, but not the environmental factor.

The intention of this research titled "Effects of Entrepreneurship Education on Students' Entrepreneurial Intentions: A Case of Botswana" by Patrick *et al* (2017) is to measure the influence of entrepreneurship education on university students' intentions towards entrepreneurship. The results reveal that all three direct factors attitude towards entrepreneurship, subjective norm and perceived behavioural control (perceived entrepreneurial abilities) influence entrepreneurial intention of university students.

"Students' entrepreneurial regulation and intention to become an entrepreneur: A comparison between public and private universities" by Pihie & Bagheri (2018) is the first of its kind study that integrates promotion focus and entrepreneurial self-efficacy and relates it to students' intention to become an entrepreneur intend to assess entrepreneurial self-efficacy, self-regulation and intention to become an entrepreneur in university students. Analysis of data reveal a significant relationship between students' entrepreneurial self-efficacy, promotion focus and entrepreneurial intentions. Besides, public universities students entrepreneurial regulation and intentions is significantly higher than their counterparts of private universities. By measuring entrepreneurial regulation and intention among public and private university students as potential entrepreneurs, the findings demonstrate the entrepreneurial capacity of young generation in Malaysia.

## 2.2 Business Management Students Perceptions

A survey was conducted by Abubakar *et al* (2014) at School of Management Studies, Kano State Polytechnic, Nigeria on the study titled "To examine students' entrepreneurial intentions". From the results it is evident that perceived desirability has statistically significant relationship with entrepreneurial intention whereas perceived feasibility has no significant relationship with entrepreneurial intention.

This explanatory research on "Freshmen Students' Entrepreneurial intentions in the college of Economics and Administrative Sciences (CESA) at Allmam

Mohammad bin Saudi Islamic University" by Choukir *et al* (2017) treats the freshman students' entrepreneurial intention through extended Theory of Planned Behaviour (TPB). This research contributes empirically to highlight students' entrepreneurial intention, and to test extended TPB model. The research findings illustrate that TPB is an accepted and validated tool to predict entrepreneurial intentions of Saudi Freshmen Students. A significant relationship between students' entrepreneurial intention, social norms, career choice intention and gender was also recorded. Furthermore, findings suggest a Saudi entrepreneurial undergraduate student profile which revealed that the entrepreneurship socialization in Saudi context operated more and more throughout relatives and friends for both male and female students called by sociologist's agents of socialization. These findings allowed to compare CEAS students' entrepreneurial intention to the international standard such as GUESS.

Tariq *et al* (2017) in the study on "Specialized entrepreneurship education: does it really matter? Fresh evidence from Pakistan" applied theory of planned behaviour as a conceptual framework to compare the differences in entrepreneurial attitude, subjective norms, perceived behavioural control and intentions of students who have participated in entrepreneurship education program (EEP) with a control group of Master of Business Administration (MBA) students. MBA students contain higher entrepreneurial intentions (EIs) than EEP students and EIs are statistically significant. However, both the groups possess similar level of attitude, perceived control behaviour and subjective norms towards entrepreneurship. Social pressure had influenced the MBA students intentions in contrast to EEP students who are influenced by perceived control behaviours towards entrepreneurship.

The study on "Entrepreneurial-intention constraint model: A comparative analysis among post-graduate management students in India, Singapore and Malaysia" by Trivedi (2017) seeks to appreciate the impact of three most vital factors, viz. (a) endogenous barriers (b) exogenous environment; (c) university environment and support on the entrepreneurial intention of management students. The results specify that along with positive attitude and perceived behavioral control, endogenous barriers, university environment and support also have an indirect but significant impact on determining the entrepreneurial intention of students. Exogenous environment recorded a negative relationship with perceived behavioral control and attitude towards behavior in all three nations. Findings of

the study are of great help to entrepreneurship trainers, educational institutes and policy makers to remove cognitive barriers and other obstacles to new venture creation.

The focus of the empirical study "Entrepreneurial Attitude Among Management Students" by Arunkumar *et al* (2018) is to analyse how an individual's entrepreneurship attitude varies from others and also to study the relationship between entrepreneurial attitudes and entrepreneurial opportunities-entrepreneurial environment. It was found out from the results that attitudes towards entrepreneurship can significantly influence the overall positive attitudes in the direction of entrepreneurship.

Ghulam *et al* (2018) examined the role of inspiration and learning in developing students' entrepreneurial intentions in the First Year of Higher Education. The authors tried to explore research gaps of early university experiences on EE and its impact on entrepreneurial intentions. The purpose is to infuse entrepreneurial capability and intentions to augment entrepreneurial career prospects (a neo-liberal educational purpose) among students. In this research, the key element is not necessarily the design of the course, but the personal characteristics and experiences of the students. Some of them react negatively, whereas others will react positively to the same activity. Students with different value priorities may interpret the entrepreneurship teaching differently.

### 2.3 Engineering Students Perceptions

"Identifying Factors Affecting the Entrepreneurial Intention among Engineering Technology Students" (Salwah *et al* 2015). It was noticed that engineering students possess high attitude towards entrepreneurship compared to other factors like subjective norm, need for achievement, locus of control, support and resistance, instrumental readiness and entrepreneurship intention. Students' high attitude to self-employment reflects the willingness of student more towards self-employment than wage employment. However, the students were not accessed to capital, social network and supporting information to start as entrepreneurs.

This study on "Entrepreneurship Traits among Engineering Students: Instrument Development and Validation Procedure using Structural Equation Modelling" by Siti *et al* (2019) contributes to the measurement of ET construct, particularly in the context of entrepreneurship traits among the engineering students in Malaysia. The EFA results of the study produced a structure that extracted two

dimensions of ET. The dimensions of ET are perseverance and social and cultural awareness. These dimensions perseverance and social and cultural awareness can be measured by 9 items developed in this study. The reliability measures for the two dimensions of ET construct showed high Cronbach's Alpha value. The validation procedures and development of scale have ensured that new ET instrument is internally consistent and stable across samples. The integrity of fit index for the ET measurement model demonstrated that the model fit the data well and CFA results of the study produced a path model that achieved the required fitness index.

The research attempts to investigate "Impacts of innovativeness and attitude on entrepreneurial intention: among engineering and non-engineering students in Hong Kong" by Kris and Kristijan (2016 &17). There are four important findings. (1) The learning motivation robustly correlates with innovativeness, that in-turn influences the entrepreneurial intention. (2) The educational programs designed for the final year students should be slightly different from that of first year students, while the first year students may need more facilitation to motivate their learning. (3) The innovativeness of engineering students is significantly correlated to attitude while it is significantly and strongly to self-efficacy. The attitude of engineering students is found more significantly contributing to their 'entrepreneurial intention'. (4) Attitude seems to influence the female students more towards entrepreneurial intention, whereas the more influencing factor among male students is 'innovation'.

### 2.4 Polytechnic Students Perceptions

A study from Malaysia on "Determinants of Entrepreneurial Career: Experience of Polytechnic Students" verifies that economic environmental condition and Theory of Planned Behavior (TPB) are the two main factors of entrepreneurial career among polytechnic students. The economic environment also explains greater intention in students who opted for entrepreneurship as their career choice. Economic environment facilitates entrepreneurs with venture creation, venture rejuvenation, market opportunity, financial availability and growth potentials (Amran *et al* 2014).

### 2.5 Science & Technology Students Perceptions

This research on "Entrepreneurial Intention among Science and Technology Students in India: Extending the theory of Planned Behaviour" by Roy *et al* (2017) attempts to figure

out the intention of S&T graduates' towards entrepreneurial career. It was attempted to integrate three additional constructs viz., entrepreneurial personality traits, entrepreneurial knowledge and perceived career option to explain the relationship between a directory of antecedents and EI. Structural Equation Modelling (SEM) technique was used to analyse the data. Results show that positive attitude towards entrepreneurship when reinforced by essential entrepreneurial knowledge and entrepreneurial career options significantly influence EI. The influence of subjective norms is weak but positive on intention formation. It was also recognised that perceived self-efficacy is mediating factor between entrepreneurial personality traits and EI. As per moderating effect, student's perceived self-efficacy accelerate the entrepreneurial personality traits to EI relationship.

## 2.6 Tourism Students Perceptions

The research by Hu *et al* (2015) on "Planned behaviour of tourism students' entrepreneurial intentions in China" aims to explore the impact of personal variables and planned behaviour on entrepreneurial intention in order to explain and improve low entrepreneurial intention of tourism students. On the basis of structural equation modelling (SEM), a statistically significant relationships exists between personal attitude, perceived behavioural control, subjective norm and entrepreneurial intention. Multi-group analysis exposed the differences between personal attitude, perceived behavioural control and subjective norm according to diverse personal variables. The study stress on the subdividing approach method for research to find out the factors that influence entrepreneurial intention. Most effective implications like creating entrepreneurial atmosphere in universities, enhancing tourism students' self-efficacy, setting student-centred policies were recommended in promoting and developing entrepreneurial intention.

Kourosh *et al* (2019). "Understanding entrepreneurial intentions: A developed integrated structural model approach". The results of partial least squares estimations illustrate that desirability is the key determinant of Entrepreneurial Goal Intention (EGI), followed by attitude, self-efficacy, collective-efficacy, feasibility, opportunity and social norms do not persuade EGI. Moreover, EGI strongly influences entrepreneurial implementation intention. The findings offer important insights for policy makers on improvement of tourism students' EIs through

educational programs. This study suggests a novel integrated entrepreneurial intention model. Desirability ranks higher than feasibility on students' entrepreneurial intention. Social norms do not affect desirability and EGI. Collective efficacy and self-efficacy have almost equal impact on feasibility.

## 2.7 Relationship between Entrepreneurship Education Programs and Personal Factors

The findings of the research study titled "The Effectiveness of the Entrepreneurship Education Program (EEP) in Upgrading Entrepreneurial Skills among Public University Students of Malaysiya" suggest a strong relationship between self-efficacy, risk taking capacity, business plan preparation and effectiveness of EEP. Further, a modest relationship is noticed with locus of control and need for achievement (Badariah *et al*, 2015).

Altaf *et al* (2017) has assessed the role entrepreneurial learning from the viewpoint of entrepreneurial education which effects on the antecedent of entrepreneurial intentions. This study evaluated the moderating impact of entrepreneurial learning on relationship between subjective norms on attitude and PBC using the data of global university entrepreneurial student spirit survey, Pakistan. The findings of the study suggested that entrepreneurial learning can play a substitution role for subjective norms in development of attitude and PBC towards generation of entrepreneurial intentions. The entrepreneurial learning moderating effect on attitude and PBC may have implication for the universities, educator and academia for developing the entrepreneurial environment, curriculum for developing entrepreneurial learning among the students.

Preeti *et al* (217) in a validation study on "Relationship between Entrepreneurship Education and Entrepreneurial Intentions" reported that though many higher education institutions in India launched entrepreneurship courses, least prominence has been given to find out the impact of entrepreneurship education and the strong intentions to become entrepreneurs. This paper tries to examine whether and how entrepreneurship education influence the intention of students in India. Multiple regression analysis is applied to confirm the relationship between independent variables (attitude towards behaviour,



perceived behavioural control subjective norms and entrepreneurship education) and dependent variable (entrepreneurship intention).

Tobin and Peter (2017), "Entrepreneurship Unleashed: Understanding Entrepreneurial Education outside of the Business School". This study advocate that individual attributes are equally important on par with Blended Entrepreneurial Programs (BEP) for better entrepreneurial outcomes.

Based on the data from recent graduates of BEP, it is inferred that personal attributes and individual's entrepreneurial passion could increase the likelihood of entrepreneurial intention among students. It is suggested that BEPs need to consider applicant characteristics for expected entrepreneurial outcomes.

The objective of the paper "Entrepreneurial self-efficacy and intention: do entrepreneurial creativity and education matter?" by Shahab *et al* (2019) is to present a moderated-mediation model that covers the nexus between entrepreneurial self-efficacy (ESE) and entrepreneurial intentions (EIs) by comparing a mature market in Spain and an emerging market of China. Based on theory of planned behaviour and self-efficacy, it is hypothesized that entrepreneurial creativity (EC) and attitudes towards entrepreneurship (ATE) mediate the relationship between ESE and EIs; besides, entrepreneurial education (EE) moderates these relationships. The results indicate that EC and ATE positively mediate the relationship between ESE and EI. Moreover, with EE, students can resourcefully widen their EC to successfully foster their EIs, irrespective of their countries' economic status. Being able to recognize the importance of EC and education for future entrepreneurs is the prime concern for all business ecosystems: from intentions of students, budding entrepreneurs, governments, facilitators and approaches, e.g. policies will be able to be adopted.

## 2.8 Gender Studies on Entrepreneurial Intention

Muhammad *et al* (2016) conducted research on "Determinants of individuals' entrepreneurial intentions: a gender-comparative study". This is the first study of its kind which reveal that the EIs of females and males are influenced by different entrepreneurial and personal factors. This study also try to clarify the relationship between self-efficacy, social norms and EIs by positioning entrepreneurial attitude as mediator. Perceived entrepreneurial self-efficacy has a larger impact on the attitude of males toward entrepreneurship than on the

attitude of females. It was evident that social norms are the key factors in determining the EI of females and self-efficacy plays a vital role in predicting the EI of male students.

"Entrepreneurship education and entrepreneurial intention: do female students benefit?" Westhead and Solesvik (2016) explores the connection between Entrepreneurship Education (EE), participation, alertness, risk-taking skills and amount of entrepreneurial intention to grow as an entrepreneur. Business students participating in EE modules were compared with engineering students who were excluded from such programmes. Hierarchical regression analysis show that EE students contain high intensity of intention; however, EE did not generate equal benefits for all students. Women were significantly less likely to report high intensity of intention. Both male EE and non-EE students have higher intention towards risk perception skills. However, women EE students demonstrated lower intention for risk perception skills.

## 2.9 Family Background and Entrepreneurial Intention

Flavio *et al* (2014) in their research study titled "From Entrepreneurial Intention to Action: Cross-Countries Empirical Evidences" documented a positive relation between family background and business creation. The estimates showed that if father is a private sector professional, there is less interest towards business establishment. However, there is no significant relation between family income and entrepreneurship.

"Exploring the intention-behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics" Shirokova *et al* (2016) highlighted that though research studies of other spheres suggest high level of intention-behavior correlation, there are limited studies on intention-behavior relationship in entrepreneurship. Based on the data of Global University Entrepreneurial Spirit Students' Survey conducted during 2013-14, this study analyse the intention-action gap among student entrepreneurs, attributing it to two contextual factors. (i) Individual characteristics: age, gender and family entrepreneurial background (ii) Environmental characteristics: university environment and uncertainty escaping, which affect the transformation of entrepreneurial intentions into entrepreneurial actions.

"Does family support matter? The influence of support factors on entrepreneurial attitudes and intentions of college students" by Tao *et al* (2017). Results specify that perceived university support is not significantly related to

perceived desirability and feasibility entrepreneurial intentions. This clearly shows that perceived desirability and feasibility of entrepreneurial action remain as significant predictors of college students' entrepreneurial intentions. The new variable perceived family support is positively related to perceived desirability and feasibility of starting a new business. It is evident that perceived structural support by means of economic and political support for entrepreneurs has a positive influence on perceived desirability and feasibility to start a new venture.

The findings propose that policy makers and educators need to consider the role of personal perceptions of family and structural support while promoting entrepreneurial actions of students by amending policies and revising educational programs since the present entrepreneurial education module does not include family support.

### 3 ENTREPRENEURSHIP EDUCATION

The research outcomes on Entrepreneurship Education (EE) is explained country wise for better understanding of the importance of EE on entrepreneurial intention of students to get a global perspective.

#### 3.1 Botswana

Patrick *et al* (2017) "Effects of Entrepreneurship Education on Students' Entrepreneurial Intentions: A Case of Botswana" reported that participation in entrepreneurship education has changed the attitude, increased entrepreneurial abilities and positively influenced students' intention to become an entrepreneur. It is suggested to redesign the university curriculum so as to create a conducive environment for developing positive entrepreneurial attitudes and capabilities. It is recommended that (a) entrepreneurship education should be offered as core subject in the first and final years (b) students' assessments should also include projects at business firms, (c) the University of Botswana Business Clinic should establish a venture accelerator programme by providing seed funding and an entrepreneurship-mentorship programme. Policymakers need to understand that government initiatives will affect business formations only if these initiatives affect attitudes, entrepreneurial abilities, and subjective norms, which could motivate young people to start a promising enterprise. The objective of the entrepreneurship policy in Botswana should be to offer a determined entrepreneurship education programs that motivates more youth to consider business start-ups.

#### 3.2 Brazil

Edmilson *et al* (2014) categorize the opportunities as well as challenges in enhancing higher education for entrepreneurship in view of student perceptions pertaining to both their demand for entrepreneurship education and entrepreneurial intention. Students in Brazilian have higher levels of entrepreneurial intention and are significantly more motivated to study courses and activities in entrepreneurship compared to students of other countries. More practical sessions, opportunity scanning and diversified educational modules besides business plan play a significant role in managing the challenges.

#### 3.3 Ghana

Christina *et al* (2018), "Assessment of Entrepreneurship Education on Entrepreneurial Intentions: Evidence from University of Cape Coast". The University has introduced a entrepreneurship course for all non-business students in its endeavour to minimize the unemployment. The objective was to find out the influence of entrepreneurship course on entrepreneurial intentions of students. Results of the analysis show a significant impact of attitude and perceived behavioral control on entrepreneurial intention but not subjective norms. In total 48% of variance in entrepreneurial intention was observed from antecedent factors.

#### 3.4 China

Chen *et al* (2015) conducted a study to find out whether an entrepreneurship course can improve the entrepreneurial intentions, fulfilment towards the course and learning efficiency of technical university students. In order to achieve these purposes, this study adopted the pre-test and post-test experimental design for one single subject group and conducted experimental teaching for 18 weeks. Practicing entrepreneurs were invited to share their experiences and offer mentorship on top of lectures as part of the experiment. In spite of students high satisfaction and better learning efficacy due to changes in course curriculum. the entrepreneurial intentions of students have not been improved. This clearly specify that EE could not teach students to "practise entrepreneurship as career," but to make use of the knowledge gained in their future work place. Mentor co-teaching sessions improved learning efficacy of students and satisfaction towards the course.

"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" Jun *et al* (2019). Using a mediating model, this article highlights entrepreneurial mindset (EM) as a novel impact of entrepreneurship education (EE) and addresses the scarcity of research on the relationship between EE and EM. EE significantly enhanced students' entrepreneurial inspiration, which, in turn, promoted formation of students' EM.

Entrepreneurial inspiration also mediated the impact of EE on EM at a significant level. In addition, the role of educational attributes, including the type of learning experience, type of course, and type of activity were highlighted. The direct effect of extracurricular activity was found to be significantly positive whilst that of curriculum attendance was significantly negative. The findings contribute to theories of both EE and EM and particularly to the understanding of not only whether, but also how EE affects EM in higher education settings. The findings of this research can help to inform the future design and assessment of EE programs.

Li and Wu (2019). "Entrepreneurial education and students' entrepreneurial intention: does team cooperation matter?" By integrating social cognitive theory and self-regulation theory, this study proposes a dual-process model and investigates the mediating effects of entrepreneurial self-efficacy and entrepreneurial passion on the relationship between entrepreneurial education and entrepreneurial intention. Building on the social cognitive theory and self-regulation theory, our studies tested the mediating role of entrepreneurial self-efficacy and entrepreneurial passion, the moderating role of team cooperation, and moderated mediation effect by team cooperation on the relationship between entrepreneurial education and entrepreneurial intention through both emotional and cognitive pathways. This study extends our knowledge of how entrepreneurial education helps to increase individuals' entrepreneurial education. Furthermore, the findings provide evidence that individuals who perceive high team cooperation may focus more on self-motivational factors (self-efficacy and passion) and in turn affect their entrepreneurial intention in the process of entrepreneurial education. Moreover, the study enhances knowledge of why and how entrepreneurial education improves business students' entrepreneurial intention. It also contributed to the entrepreneurial education literature by testing the role of team cooperation as the boundary condition.

### 3.5 Croatia

Senka and Ivan 2014 reported the results of study being conducted among the students of Croatia, a transition

country which seeks to contribute toward rectifying the gap whether education affects students attitudes, subjective norms about entrepreneurship, and these in turn affect their motivation on becoming an entrepreneur. University should focus on academic entrepreneurship education, provide knowledge and expertise on entrepreneurial practice. Encourage the students more towards entrepreneurship, provide information on starting and running own business and to find a business idea. Planning for quality entrepreneurial practice through training courses. Entrepreneurial dynamics should be taught to the students through projects, encouraging them to take challenges and responsibilities.

### 3.6 Cyprus & Germany

Tugberk and Nadine (2019) performed a cross-cultural comparative study "Entrepreneurial Intentions of Business and Economics Students in Germany and Cyprus". The entrepreneurial decisions of young people are especially important in regions where economic opportunities are restricted and people choose to move from that region. Two of such regions are East Germany and Northern Cyprus. In this article, the authors are interested in analyzing entrepreneurial tendencies of business and economics students from Northern Cyprus and East Germany in order to provide context-specific knowledge. The primary research findings indicated that having an internship experience increases the odds of entrepreneurial action, which is identified as a channel shaping the perception of the students. These findings create opportunities for universities and knowledge centers to focus on becoming entrepreneurial universities, which will also boost the economy, especially the small and poor cities. The study includes with policy implications on the transformation towards entrepreneurial universities to meet the different needs.

### 3.7 Europe

Merle *et al* carried out a study on "Entrepreneurship education at university level and students' entrepreneurial intentions" in the year 2014 and identified that content of entrepreneurship education has impact on entrepreneurial intentions of university students. Results indicated that more number of lectures and seminars offered is not much appreciated but networking and coaching activities are expected more by the students as part of entrepreneurship education. Participation in entrepreneurship education was found to exert a positive impact on entrepreneurial intentions. Understanding entrepreneurship creates the

potential for becoming an entrepreneur, but also for being innovative as an employee or volunteer.

"Entrepreneurial intention among engineering students: The role of entrepreneurship education" Virginia and Carlos (2018). This research work aims to analyze the impact of entrepreneurial motivations on entrepreneurial intentions among future engineers and identify the role of entrepreneurship education that plays in development of the engineers' entrepreneurship.

The results indicate that the need for independence is the key factor in the entrepreneurial intent of future engineers and confirm the positive contribution that entrepreneurship education has on their entrepreneurial intentions. Finally, recommendations are offered which could help the various agents involved increase the effectiveness of actions aimed at promoting firm creation in this area.

### 3.8 Hong Kong

The study on "Impacts of innovativeness and attitude on entrepreneurial intention: among engineering and non-engineering students in Hong Kong" by Kris *et al* (2016) contributes in developing appropriate education measures for entrepreneurship education among engineering students. Although extensive research has been observed on entrepreneurship education, how entrepreneurship courses can be offered to engineering students remain unexplored.

### 3.9 India

Artee Aggrawal (2015) in a review on Employability Skills in Higher Education in India reports that role of education is to prepare a learner for future challenges. The students need to develop eight skill sets viz., creative thinking, emotional thinking, emotional balance, communication skills, computer skills, decision making skills, interpersonal skills and time management in the changing environment. Hence the curriculum should include all the above essential components and exposure to industry. Engineering schools in India should seek to improve the skill set of graduates and shift the focus toward higher-order skills and creativity.

"Education and Skill Development for Faster Growth in India". Yashoda (2015) reported that inadequate attention is given to several sustainability dimensions of the relationship between education and skill development on one hand, and their surrounding environment on the other hand. The two way crucial relationship between education and training and their enabling (or indeed disabling)

environment would suggest that further research would throw valuable light on the aspirations of young people and their families to sustain their commitment to basic and post basic education.

Deepali *et al* (2017) explores the Impact of Entrepreneurship Education on Entrepreneurial Intentions of Potential Entrepreneurs in India by critically examining a government-sponsored skill development programme. It is envisaged that such programmes would advance entrepreneurial intentions among potential entrepreneurs. In order to determine the impact, two groups one which had received a 6-month formal entrepreneurship education and the other which did not were studied. Findings suggest (1) significant contribution of training and skill development on the receiver group and (2) level of general education that has a negative impact on entrepreneurial intentions.

"Relationship between Entrepreneurship Education and Entrepreneurial Intentions: A Validation Study" Preeti *et al* (2017) reports that though entrepreneurship courses were taught in most of the reputed higher education institutes in India, very less emphasis has been given towards finding out the effect of entrepreneurship education and their intentions to become entrepreneurs. Results indicate a positive relationship between entrepreneurship education and entrepreneurial intention. The finding validates the effect of entrepreneurship education on entrepreneurial intentions and also encourages academicians to develop courses on entrepreneurship and to increase the entrepreneurial intentions among their study.

The study "Entrepreneurial Potential and Higher Education System in India" Mukesh *et al* (2018) analyses entrepreneurial potential of students and entrepreneurship education in the higher education system. It also examines whether there exists an alignment among them using the data triangulation method. The findings signify that entrepreneurial potential of students is on the upper side, and entrepreneurship education in higher education system is below average. The outcome of this study highlights the increasing need to focus on entrepreneurship education in higher education.

Pretheeba and Venkatapathy (2018). Entrepreneurial Intentions among Students in India. The authors emphasised that entrepreneurship course should be offered to students of other disciplines through entrepreneurship focused modules without any restriction along with the students in business related majors.

### 3.10 Indonesia

Management and Business Students in Indonesia Universities by Tommy *et al* (2016) show that entrepreneurship education in public universities directly is still not able to increase student entrepreneurial intention. In fact, entrepreneurship education had lower student interest to become an entrepreneur. However, after participating in entrepreneurship education, students can still benefit by increasing self-perception about entrepreneurship abilities to increase student interest to become entrepreneurs. The existence of entrepreneurial role models affect to increase student's entrepreneurial intention through the mediation of perceived desirability and perceived feasibility. In order entrepreneurial role model function become more effective, it is necessary to present role model with close character to students. The character closeness of role model will facilitate students in identification process and self-reflection.

### 3.11 Iran

Karimi *et al* (2016) in their paper "The Impact of Entrepreneurship Education: A Study of Iranian Students' Entrepreneurial Intentions and Opportunity Identification: tried to assess the impacts of elective and compulsory Entrepreneurship Education Programs (EEPs) on students' entrepreneurial intention and identification of opportunities by using an ex ante and ex post survey based on the theory of planned behavior, Both types of EEPs had significant positive impacts on students' subjective norms and perceived behavioral control. Results also indicated that the elective EEPs significantly increased students' entrepreneurial intention, although this increase was not significant for the compulsory EEPs. The findings contribute to the theory of planned behavior and have implications for the design and delivery of EEPs.

### 3.12 Nigeria

"Developing Entrepreneurial Life Skills" by Vaidya (2014) concludes that traditional class rooms and work environments may not be conducive to promote innovative and creative behaviour. A teacher cannot command a student to be creative. But, the classroom environment should be creative to foster the innovation. Activities should be designed to increase self-confidence by focusing on positive ways to handle obstacles and learn from failures. Classroom instruction needs to be achievement oriented. This involves the use of various teaching methods and approaches that allow students to have control over their learning activities. Learning to learn and the

willingness to unlearn and relearn are important as means of responding to new situations in a flexible and creative manner. The entrepreneurship curriculum underlines the processes of constructing knowledge by learners.

"Influence of Contextual Factors on Entrepreneurial Intention of University (Lagos and Ogun state) Students". The study found that entrepreneurial educational support has significant relationship with the entrepreneurial intention of university students. Also the study discovered that informal network have positive significant effect on entrepreneurial intention of university students to start off their desired businesses (Akinbola *et al*, 2015).

Aliyu *et al*, reports that entrepreneurial education and training need to be enhanced further to increase awareness and change the mind-set of the students toward imbibing entrepreneurial culture and reduce over reliance on government and other formal sectors. The study being conducted on "Entrepreneurial Intention among Nigerian University Students" during 2015.

Based on the empirical evidence reported in the measurement and structural models, this study titled "Influence of social entrepreneurship pedagogical initiatives on students' attitudes and behaviours" by Saidi *et al* (2018) submits that social entrepreneurship education has a positive and statistically significant effect on undergraduates behavioural outcomes. The pedagogical initiatives introduced by the universities offering entrepreneurial modules significantly influenced undergraduates' attitudes, intentions, and behaviours towards social venture creation in Nigeria. Based on the pedagogical contents and techniques exposed to during schooling, graduates that have passed through entrepreneurial modules should showcase their abilities to venture into social entrepreneurial activities. This study also revealed that social entrepreneurship education has a strong, positive, and statistically significant effect on students' intentions to start up a new social venture. This study concludes that students' attitudes, intentions, and behaviours are crucial in predicting social entrepreneurial aspirations of students. Results also show that pedagogical contents exert the greatest influence on students' intentions towards creating social ventures.

The purpose of the paper "New horizons in entrepreneurship education: from teacher-led to student-centered learning" authored by Sarah *et al* (2016) is to contribute to the discussion about the complexity and

heterogeneity of entrepreneurship education. This paper combines educational psychology with perspectives from entrepreneurship education research to make explicit educators tacit assumptions in order to understand how these assumptions guide teaching. It was advantageous to invoke and combine different learning theories and approaches in order to promote entrepreneurial awareness and mindset. It is also necessary to move away from entrepreneurship education as being teacher led to being more student-centred and focused on experiential and existential lifelong learning practices. It is suggested to design and delivery of a course that would demonstrate how four diverse learning theories can be combined to consolidate entrepreneurial learning in students invoking experiential and curiosity-based learning strategies.

Salihu (2016). "Effect of Entrepreneurship Education on Graduates' Business Start-Up in North Central Nigeria". An empirical analysis was done to examine the relationships that exist between entrepreneurship education and tertiary institutions graduates' business start-up in North Central Nigeria. The major findings revealed that entrepreneurial career aspirations have a significant impact on graduates' business start-up. More so, the entrepreneurial culture has significant impact on graduate's business start-up.

### 3.13 Malawi

A survey conducted by Ivar and Arne on "Education and Entrepreneurial Success" in 2015 estimated the effect of education on the success of entrepreneurial activity, using survey data from Malawi. An instrument variable approach is used to address the endogeneity of education. There is a significant and substantial effect of an added year of primary education on entrepreneurial profitability. This is consistent with theoretical arguments that primary schooling provides a generalised form of competence that underpins the variety of skills an entrepreneur needs to succeed in business. Results are robust to non-random selection into entrepreneurship.

### 3.14 Malaysia

The results of the survey conducted by Badariah *et al* (2015) shows that the Entrepreneurship Education Program (EEP) offered by University Utara Malaysia (UUM) is very effective in enhancing the entrepreneurial skills of the students. The study also suggest that entrepreneurial skills and activities should be spurred along with entrepreneurship education and training.

Parimala and Ilham (2016). "An Empirical Study on the Effectiveness of Entrepreneurship Education in Developing Entrepreneurial Intention among Malaysian University Students". The study recommends that entrepreneurship course should involve innovative co-curricular programs, outside classrooms, focus on students 'live' entrepreneurial programs as a comprehensive venture accelerator of student run entrepreneurial organisations and forums and entrepreneurial eco-systems as practised in educational institutions of Western countries. Entrepreneurship curricula should incorporate the features on experiential learning methods, critical thinking, start up business ventures, visits to industries and business areas, inviting successful entrepreneurs as guest speakers. Apart from regular entrepreneurship curriculum, students should be exposed to adequate practical orientated training in entrepreneurial activities. The teaching methodology should emphasise on venture creation process in order to scan the business opportunities with regard to money, time, employees and community.

The research on "Factors Affecting Entrepreneurial Intentions Among Students in Higher Education Institutions in Northern region of Malaysia" by Lim *et al* (2017) concludes that entrepreneurship education do have significant relationships towards students' entrepreneurial intentions. The study enhances higher institutions' understanding of the subject study and stimulates policy makers in developing appropriate curriculum in future development of entrepreneurial programs for students in higher education institutions.

Armanurah *et al* (2019) conducted a study on "Entrepreneurship Education as a Way of Cultivating Entrepreneurial Thinking among Students of Malaysian Public Higher Learning Institutions (PHLI)". The findings show that students taking CBE course have a moderately high level of entrepreneurial thinking, but in term of its dimension; opportunity recognition and risk taking have high level. As for creativity & innovative and tolerance of ambiguity demonstrated a moderately high level. The results showed significant differences of entrepreneurial thinking among PHLIs students based on the CBE course taken. The implications of this study showed that in order to cultivate entrepreneurial thinking among students in all fields of studies, the PHLIs should take into consideration to include at least one Basic Entrepreneurship course as a compulsory subject for all students. This study also recommended that to increase the level of

entrepreneurial thinking, and its dimension of creative and innovative, and tolerance of ambiguity, PHLIs should increase the entrepreneurship courses taken as compulsory subject. Malaysian public policy regarding higher education should consider some mindset reformation required in higher learning institutions' entrepreneurship curriculum in the country.

### 3.15 Portugal

"Prior education and entrepreneurial intentions: the differential impact of a wide range of fields of study" Aurora *et al* (2017). This paper develops an integrated intention-based framework and analyzes the impact of fields of study on entrepreneurial intentions. It was found that, beside the attitude towards starting a business, fields of study, considered at a highly detailed level, are relevant (direct and indirect) predictors of entrepreneurial intention. There is a huge hidden potential for new venture creation in fields of study related to creative and leisure activities (arts, humanities, more specifically, literature, linguistics, history, archaeology, audio-visual techniques, media production, sports, architecture and town planning) Law and Health (Pharmacy and Veterinary). Significant differences in the level of intention between students of different fields of study indicate that universities should more extensively focus entrepreneurship education on students in other subject area than business or engineering/technology sciences.

"Entrepreneurship Skills Development in Higher Education Courses for Teams Leaders" Maria (2018). The leadership skills that could be developed to potentiate the entrepreneurial capacity of the students of Portugal when leading their teams were identified by the entrepreneurs and categorized into 3 main categories: ES—Entrepreneurship Skills, MS—Management Skills, and LS—Leadership Skills. Emerging from the results of the questionnaire, it's possible to conclude that all those skills need a higher level of development in innovation and entrepreneurship in higher education courses, and there are significant relationships between perceived entrepreneur's leadership skills development and student's job, but no significant differences have been found between the three skills dimensions—management, leadership, and entrepreneurship—and the type of organization, gender, and employed/unemployed variables.

### 3.16 Romania

This paper titled "Can higher education stimulate entrepreneurial intentions among engineering and business students of Romania?" by Emilia and Daniela (2017) approaches the issue of higher entrepreneurship education in motivating young people to start their own business as a viable alternative to the successful integration of university graduates on the labour market. The fundamental question of this research is if, currently, entrepreneurship education influences students' entrepreneurial intentions and to what extent. The research results, highlight that business students assessed the effectiveness of higher entrepreneurship education and its positive influence on entrepreneurial intentions to a greater extent than the engineering students. Furthermore, entrepreneurial intentions of engineering students are influenced positively much more by entrepreneurial family background than by entrepreneurship education. The findings provide important highlights for future research, in order to identify the most effective ways of approaching, modernising and expanding entrepreneurship education, aiming to increase entrepreneurial intentions among students, regardless of the graduated field of study.

### 3.17 South Africa and Zimbabwe

Evidence from the dissertation on "A Comparison of Entrepreneurial Intentions of Generation Y Students in South Africa and Zimbabwe" by Esther (2015) shows that the subjects and skills taught at universities do not appear to encourage students to become active agents of their own destiny through developing qualities such as independence, creativity, risk-taking, self-motivation and innovation. Further, it was found that curriculum developed by universities do not organize students for self-employment as a career option.

### 3.18 Spain

Education is another important variable as reported by Linan *et al* (2014). Based on the results of the study "Factors affecting entrepreneurial intention levels: a role for education", a number of considerations about the most effective role of education in promoting and developing attitudes and intentions towards entrepreneurship are considered. Results emphasise the importance of entrepreneurial education in fostering business creation by inculcating entrepreneurial competencies and increasing awareness.

"The moderating role of entrepreneurship education on the antecedents of entrepreneurial intention" was analysed by Montserrat and Victor (2016). Interaction between entrepreneurship education and subjective norms shapes the perceptions and attitudes of students toward entrepreneurship (based on theory of planned behavior). Results show that entrepreneurship education has a significant moderating role, mitigating the relationship between subjective norms and perceived behavioral control, and strengthening the relationship between subjective norms and entrepreneurial attitudes. Results also have relevant implications for women's entrepreneurship.

### 3.19 Tunisia

Entrepreneurship Education and Entry into Self-Employment Among University Graduates by Patrick *et al* (2016). In Tunisia, a curricular reform created an entrepreneurship track providing business training and coaching to help university students prepare a business plan. Impact on students' labour market outcomes one year after graduation was identified by randomized assignment of entrepreneurship. The entrepreneurship track led to a small increase in self-employment, but overall employment rates remained unchanged. Although business skills improved, effects on personality and entrepreneurial traits were mixed. The program nevertheless increased graduates' aspirations toward the future.

### 3.20 Turkey

"Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey" (Nurdan & Nancy, 2016). The findings reveal that though the students hold a positive attitude towards entrepreneurship, they show a low level of entrepreneurial intention. Both Turkish and U.S. students expressed the need for more training and education on entrepreneurship to start a new business.

### 3.21 Uganda

"The Mediating Effect of Self-Efficacy on the Relationship Between Entrepreneurship Education and Entrepreneurial Intentions of University Students" by Jacob (2015) investigated the contribution of entrepreneurship education to the development of entrepreneurial self-efficacy and intentions among university students in Uganda. The paper recognizes the development and the teaching of entrepreneurship courses in most universities in Uganda with the aim of rolling out students sufficiently equipped to become job creators. This study provides timely guidance on the entrepreneurial curriculum. It proposes a

quantitative analysis in which entrepreneurship education and entrepreneurial self-efficacy are key factors to develop entrepreneurial intentions in students. The findings revealed that a significant relationship exist between entrepreneurship education and entrepreneurial intention, while self-efficacy was found to partially mediate the entrepreneurship education and entrepreneurial intention.

"Action and Action-Regulation in Entrepreneurship: Evaluating a Student Training for Promoting Entrepreneurship" Michael *et al* (2017). Action plays a central role in entrepreneurship and entrepreneurship education. Based on action regulation theory, the authors developed an action-based entrepreneurship training. The training put a particular focus on action in so far as the participants learned action principles and engaged in the start-up of a business during the training. The training had positive effects on action-regulatory factors (entrepreneurial goal intentions, action planning, action knowledge, and entrepreneurial self-efficacy) and the action-regulatory factors mediated the effect of the training on entrepreneurial action. Furthermore, entrepreneurial action and business opportunity identification mediated the effect of the training on business creation. The study concludes that action-regulatory mechanisms play an important role for action-based entrepreneurship trainings and business creation.

### 3.22 United Kingdom

Piperopoulos and Dimov (2015) study on "Entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intentions" contextualizes the relationship between student's self-efficacy beliefs and entrepreneurial intentions in the content and pedagogy of the entrepreneurship course. The results show that higher self-efficacy is associated with lower entrepreneurial intentions in the theoretically oriented courses, and higher entrepreneurial intentions in the practically oriented courses. We draw a number of implications for the theory and practice of entrepreneurship education.

### 3.23 United States of America

The Individual Entrepreneurial Orientation (IEO) measurement instrument developed by Dawn and Michelle (2015) can be used in entrepreneurship education to assist students in assignments and project. It has value as a factor of influence in determining educational training for various decisions such as career choices and business endeavours. IEO could even be used by venture capitalists who want to support business proposals. Individuals who wish to assess



the strength of their orientation towards entrepreneurship can also use this instrument. IEO would contribute to an analysis of entrepreneurship programmes in higher education. Understanding EO at the individual level could also be valuable to future business owners, business incubators and to potential investors who are considering supporting business ventures. Educators and trainers will have a scale with which to measure IEO that could be used in teaching entrepreneurship as well as training in small-business seminars.

### 3.24 Vietnam

"Promoting The Entrepreneurship Intention of Engineering Students In Vietnam: A Brief Review and proposed measuring Mode" by Trang (2017). This paper studies the basic theoretical view on entrepreneurship intention, the current situation of entrepreneurship education program in Vietnam and propose a model for measuring the effect of entrepreneurship education program on entrepreneurship intention of technical students. The study aimed to contribute to the growing empirical literature on entrepreneurship education programs and entrepreneurship intention of students in the field of engineering in Vietnam by synthesizing results from the literature of entrepreneurial intentions, sustainable entrepreneurship, and entrepreneurship education. Further, the authors will explore how the entrepreneurship education program delivered in Vietnamese universities as exogenous influence affects the antecedents of intentions, and so indirectly entrepreneurial intentions of engineering students, basing on the proposed model.

Doan *et al* (2018) investigated the relationship between entrepreneurship education and innovative startup intentions among university students in northern Vietnam through "Relationship between entrepreneurship Education and innovative start-up Intentions among university students". Three factors of entrepreneurship, (curricular programmes, extracurricular programmes and social education) were adopted as independent variables and were assessed in combination with three factors (entrepreneurial capabilities, attitude and self-efficacy) as mediating factors. Curricular and extra-curricular programmes for entrepreneurship based on self-efficacy, but not social education, had significant effects on innovative start-up intentions. In addition, self-efficacy did not affect the attitude of university students. It can be inferred that university students tend to increase their start-up intention when they study entrepreneurship and are confident in their capabilities and self-efficacy. Entrepreneurial studies at universities may guide students

to pursue entrepreneurial careers. Such courses may increase the self-efficacy of students in understanding entrepreneurship and improve their intention to be entrepreneurs. The findings have important implications for education in the development of entrepreneurship in terms of quality and quantity, preparing the foundation for individuals to succeed in their entrepreneurial future. We hope that this report will contribute to the study of entrepreneurship around the globe and lead to recommendations to help policy makers support entrepreneurial studies and the creation of founders of new businesses.

### 3.25 Other Countries

Francisco and Alain (2015) in their exhaustive "Systematic literature review on entrepreneurial intentions: citation, thematic analyses and research agenda" mention that entrepreneurship education needs to apply differentiated teaching techniques and contents to achieve its full potential.

Farhangmehr *et al* (2016) have studied the main drivers of entrepreneurial motivation among university students to determine whether entrepreneurship education has a moderating effect on improving the impact of knowledge base and entrepreneurship competencies on entrepreneurial motivation. The study reveals that entrepreneurship competencies are a predictor of entrepreneurship motivation but that knowledge base is not. Additionally, entrepreneurship education does not improve the motivation of university students to become entrepreneurs. The findings suggest that, to increase entrepreneurial motivation, pedagogy should emphasize the development of students' entrepreneurial psychological and social skills by covering in particular the emotional dimension and critical thinking.

The article titled "In quest of legitimacy: The theoretical and methodological foundations of entrepreneurship education research" by Fayolle *et al* (2016) offers a response to charges that entrepreneurship education appears to be one of those phenomena where action and intervention have raced far ahead of the theory, pedagogy and research needed to justify and explain it. It can be concluded that challenges and opportunities continue to present themselves in the theoretical and methodological development of entrepreneurship education research.

## 4 LIMITATIONS

1. Despite the extensive efforts, the literature search might have failed to capture all EI papers.
2. The study could cover only 30 countries.
3. Curriculum developed by universities do not organize students for self-employment as a career option.
4. The review could not find any study on students' willingness to take risk and entrepreneurial intentions.
5. The disintegrated approach of government and policies are one big hurdle in the field of employability skill development in higher education.
6. Although extensive research has been observed on entrepreneurship education, how entrepreneurship courses can be offered to engineering students remain unexplored.
7. Entrepreneurship research which has been criticized for lacking robust theoretical foundations for research
8. There is need for future researchers to compare students from entirely different fields on their attitude and entrepreneurial intentions.
7. Do away from teacher led to being more student-centred teaching and focus on experiential and existential lifelong learning practices.
8. It would be useful to examine the relative importance of risk taking propensity compared to other entrepreneurial personality traits.
9. Networking is important for entrepreneurs to gain access to resources, business ideas, capital and information as social network is a business tool that plays a significant role in the success of an entrepreneur.
10. Universities need to establish relation with industry to focus on students abilities, create and develop ideas, increase expertise and self confidence.
11. Educators may need to involve students in business plan writing, case studies and running a small new business rather than stressing only on entrepreneurship theories and traditional methods of teaching entrepreneurship.
12. As the role models are expected to increase interaction intensity with students interest optimally to improve knowledge and skills transfer, more interactions with entrepreneurial role models to be scheduled in curriculum.

## 5 STRATEGIES

1. A revision of content of the curriculum is required to stimulate an environment further to generate a positive entrepreneurial orientation by including learning outcomes which are about and for entrepreneurship.
2. Identify the most effective ways of approaching, modernising and expanding entrepreneurship education, aiming to increase entrepreneurial intentions among students, regardless of the graduated field of study.
3. Entrepreneurship education subjects should be offered as core subjects starting from first year itself other subject areas than business studies at University.
4. Higher Education needs to offer a broad range of entrepreneurship courses either theory or practical or even a combination of both types in order to meet the needs and expectations of wide range of stakeholders, which include students, researchers, academicians regional and national governments, as well as businesses of all types and sizes.
5. However practical approach should be preferred.
6. Blended Entrepreneurial Programs (BEP) may be popularised.
13. Universities should establish Entrepreneurship Development Centers/Clubs that will serve as a platform where students with entrepreneurial intentions can start expressing their intentions.
14. University should establish a Business Clinic and run venture accelerator programme by providing seed funding and an entrepreneurship-mentorship programme.
15. Mentoring should be demonstrated as part the course to enhance the entrepreneurial learning efficacy of students.
16. Parents, friends and relations of these students should provide necessary supports thereby helping the nation to reduce its unemployment and crime rate. To promote the entrepreneurship among the students we need to educate parents too.
17. Educational institutions and government need to play more proactive role by devising a strategy to assist the students that indicate their intention to start enterprise, while in school and after graduation through incubator program. This will encourage graduates career aspiration towards business Start-up and further motivate graduates entrepreneurial attitude towards self-employments.

18. Equal emphasis should be given for awareness programs and training on entrepreneurship to start a new business.
19. Universities are required to have an active role more specifically in implementing educational, research and resource programs on entrepreneurship.
20. Policy makers to formulate entrepreneurship education programmes for potential entrepreneurs who may be unemployed, semi-literate, and underemployed and non-entrepreneurial society.
21. Finally, the findings of this study will guide policy makers on how to take appropriate measures regarding current trends of entrepreneurship education programmes in universities.
22. Policymakers need to consider the role of personal perceptions of family and structural support when seeking to promote entrepreneurial actions of college students through policies.
23. It is important for educators, policy makers and government to understand the need to have a variety of entrepreneurship course modules that will enable students to choose areas on their own rather than having same course for every student.
24. Future generation could have a better planned education that helps enhance their personality traits towards building entrepreneurial career.
25. Annual budget should be allocated for entrepreneurship programs in higher education institutions.

## 6 CONCLUSION

Intention to become an entrepreneur is a complex and personal decision that is only shaped by students' attitudes (attraction) toward entrepreneurship and perceived behavioural control. Hence, it is very important to identify the factors influencing students' entrepreneurial intention and behavior within university framework which will help to develop and implement effective innovative educational strategies. Certainly, this exercise will help entrepreneurial educators, consultants, advisors and policy makers to find the right way to foster entrepreneurship at universities and in society. PBC evidently contributed the most to the prediction of EI in both male and female students. Practical training programs targeting PBC could certainly foster students' EI. External variables are important in business creation in addition to personal traits and earlier circumstances. It is surprising to know that very little research work has been carried out on the factors that

influence university students' intentions to start an enterprising activity (Karimi et al., 2012).

This review recommends that entrepreneurship course should incorporate innovative co-curricular programs, outdoor classroom sessions, focus on students 'live' entrepreneurial programs as a comprehensive venture accelerator of student run entrepreneurial ventures and entrepreneurial eco-systems as practised in educational institutions of Western countries. Entrepreneurship curricula should consider the features to start up business ventures and include critical thinking, experiential learning methods, visits to industries and business areas, inviting guest speakers who are successful entrepreneurs. Students should be given adequate training in entrepreneurial activities along with normal entrepreneurship curriculum. The training courses should be more practical-orientated. The teaching methodology should include business creation process enabling to map the opportunities as per time, money, employees and community.

Finally, exposure to entrepreneurial courses must, to some extent, influence students' start-up intentions. It will advantage students with greater capabilities, greater self-efficacy, and more positive attitudes towards business creation and, most importantly, good networks to help them acquire needed resources to launch a venture. Universities as institutions can create campus entrepreneur networks linked to professional bodies, departments, financial institutions. This can make it possible for students with entrepreneurial intention to connect with others who have similar intentions. Supporting policies, schemes, grants, subsidies, incentives and programs offered by union and local governments should be explained in detail to encourage the students. Universities need to establish a Incubation Centre and a mentor who can hand hold the budding entrepreneurs to grow out. Interface with local entrepreneurs and alumni to be organised to learn from their experiences. Failure stories should be narrated along with success cases to be prepared for pitfalls. Finally, universities should institute Awards, Medals and Honours for the successful student entrepreneurs similar to Awards dedicated for academic achievers. Universities can shape and foster entrepreneurial abilities and subjective norms through Entrepreneurship Awareness Programs, Entrepreneurship Education Programs and Entrepreneurship Development Programs. This will support to the entrepreneurial approach in reducing unemployment, generating employment and solving economic problem.

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