



# **The impact of Entrepreneurship Education on Entrepreneurial Intention: An empirical study of entrepreneurship education's four key characteristics**

A thesis submitted for the degree of Doctor of Philosophy

by

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## **Declaration**

I hereby declare that the thesis is based on my original work, except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Brunel University or other institutions.

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## **Abstract**

Entrepreneurship plays a significant role in the economic development of society. Education is also the most important pillar for the development of a nation, and this is the reason why business schools and universities are paying attention to promoting entrepreneurship education programmes. There are various courses available for entrepreneurship education with a wide variety of contents, delivery methods, teaching approaches and duration. These programmes are being provided at numerous levels and there is a need to assess the effectiveness of these programmes from different aspects and to find out the strategies for designing entrepreneurship education programmes more effective in terms of creating more entrepreneurs.

In order to know the effectiveness, intention plays an important role. If participants develop their intention to start their own venture in business, then it will be a good indicator of their future entrepreneurial behaviour. Hence the current research examines the impact of entrepreneurship education programmes in terms of intention by using the well-known theory of Azjen of planning behaviour.

Currently, entrepreneurship education courses are delivered by various means hence this research makes a useful contribution by focussing on four key characteristics i.e. introduction of role model, introduction of entrepreneurial network, business planning activities and feedback given by the mentors or teachers during the class. Another important aspect is that the sample is kept consistent by only including those HE courses whose duration is ten to twelve weeks (twenty to twenty-five contact hours).

In order to collect data, the survey method was used and overall four hundred questionnaires were included in the final data analysis. To obtain more reliable results on specific entrepreneurship education characteristics and their influence on entrepreneurial intention, this study used SEM path analysis for fitness of the overall model instead of regression for separate relationships.

The results suggest that the feedback and business plan activities can directly impact on entrepreneurial intention. This knowledge can help draw up guidelines for entrepreneurship education courses and their providers. Also, the link between

entrepreneurial networking and change in intention is mediated by participants' subjective norm though entrepreneurial networking does not influence change in intention directly, it can mediate through subjective norm. Similarly, the introduction of role models does not have a direct impact, but it is also mediated by participants' attitude towards behaviour.

This research makes further relevant contributions by increasing knowledge of the relationship of entrepreneurship education and entrepreneurial intention through investigating the mediating roles of subjective norms, perceived behavioural control and attitudes in the relationships between elements of entrepreneurship education and entrepreneurial intention, which have not been done before. This study also suggests that these three components play mediating roles in this relationship. As these three components are relevant for developing the entrepreneurial intention hence it is also important to explore their mediating roles.

Additionally, this research contributes to the entrepreneurship literature by identifying essential characteristics: a) relevance of business plan activities, b) introduction of role models, c) introduction of entrepreneurial network and d) feedback by mentors or teachers. This is the first study in the area which has taken the step to fill this gap where a variety of entrepreneurship education courses are available, but which key characteristics can make the courses more result oriented in terms of developing entrepreneurial intention are still not available. This research has been conducted by using accepted theories such as Kolb's experiential learning theory, Azjen's theory of planned behaviour and recent teaching models with current entrepreneurship education programmes based on these key characteristics.

Overall the results of the research can be used by educational institutions, universities, organisation such as higher education academies or education policy makers, or anyone else who is aiming for developing and creating more entrepreneurs in the future. Entrepreneurs play a significant role in promoting the economy hence this research makes a significant practical contribution.

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### **Abbreviations**

EE – Entrepreneurship education

EN- Entrepreneurial Network

EC-European Commission

TPB – Theory of Planned behaviour

PBC- Perceived Behaviour Control

ATT- Attitude Towards Behaviour

SUN- Subjective Norm

SEM – structural equation modelling

RM- Role Model

BUP- Business Plan

FEE- Feedback

INT- Intention

CIPD- Chartered Institute of Personnel and Development





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## **Chapter 1: Introduction**

### **1.1 Background of the study**

Entrepreneurship has been increasingly recognised for its role in creating jobs and economic growth, and it has been acknowledged as useful for increasing the competitiveness of a region, state, or country (Davey, Hannon & Penaluna, 2016; European Commission, 2003 ; Zahra, 1991). According to Davey et al. (2016), entrepreneurship can also be understood as a career opportunity, with new business start-ups simultaneously increasing job opportunities within society (European Commission, 2003). Entrepreneurship works as a catalyst for national welfare (Martinez et al., 2010); and global interest in entrepreneurship education (EE) is increasing as a consequence (Bell & Bell, 2016).

The education system focuses keenly on entrepreneurship and venture creation to promote social, economic, and organisational development (CIPD, 2015; EC, 2013; The Quality Assurance Agency (QAA) for Higher Education, 2012; Matlay, 2006). This has led to considerable growth over the last two decades in the development of entrepreneurship as an academic subject (Bell & Bell, 2016; Martin et al., 2013; Fayolle, 2013). In recent work by Kakouris and Georgiadis (2016), it was argued that the UK government is taking serious measures to update its policies in relation to entrepreneurship education which they see as having a key role in employability. Indeed, entrepreneurship education is a motor for endogenous economic development, and a crucial feature of developed, knowledge-driven economies. In addition, Kakouris and Georgiadis (2016) stress that a common goal of worldwide educational agencies is to instill entrepreneurial intention among graduates through entrepreneurship education. Hence, there have been continuous efforts to provide entrepreneurship education in recent years.

There were more than 2,000 entrepreneurship courses in more than 1,600 universities around the world by the year 2006 (Hisrich, 2006). However, most of the universities that were providing these courses were based in the United States. Couetil, Shartrand, and Reed (2016) found that in 2016 over 3,000 institutions in the United States were providing these courses

in various formats, such as entrepreneurship majors, minors, certificates and through experiential learning opportunities.

Recently, scholars have suggested that there is an important relationship between entrepreneurship education and the tendency of graduates to become entrepreneurs by launching start-ups (Davey, Hannon, & Penaluna, 2016). It has been argued that “...entrepreneurship education can influence the thinking and acting of the academic or student” (Davey et al., 2016, p 173). Furthermore, according to Davey et al. (2016) and Gibb and Hannon (2006), entrepreneurship education can influence the entrepreneurial mindset in different ways, for example, in some cases students may plan to start their own venture after completing a course of education. Kraaijenbrink et al. (2010) found that student perceptions of entrepreneurship can be influenced, emphasizing the role the university can play in fostering a positive image. In considering the nurturing role of universities in shaping entrepreneurial careers, Verheul et al. (2002) conclude that student entrepreneurial competencies, behaviours and intentions can be developed through education (Davey et al., 2016).

## 1.2 Problem Statement

It might be expected that entrepreneurship education is already well established with a clear framework and specific theories. However, this has not happened so far, and the area needs further research in order to help bring about effective results (Tung, 2011).

Entrepreneurship programs in colleges and universities are still a recent innovation (Co & Mitchell, 2006; Kabongo & Okpara, 2010) and it has been suggested that more research is needed particularly in terms of types, objectives and outcome of these courses (Kuratko & Morris, 2018). Fiet (2001a; 2001b) suggests more clarity is required on the ways we educate our entrepreneurs. Hence this research will be an attempt to clarify debates on whether experiential learning may play a role in forming entrepreneurial intentions and identify characteristics which may positively influence entrepreneurial intention.

Experiential learning is a learner-centred, activity based, approach which has achieved recognition among relevant researchers (e.g. Krueger, 2007; Löbner, 2006; Fiet, 2000). A

teacher-centred, approach is considered somewhat traditional and ineffective and is usually based on a series of lectures with the focus on the teacher and not on the students (Gibb, 2005; Hytti et al., 2004). There are many approaches that have been developed to teach entrepreneurship such as those that focus on action (Johannisson et al., 1998), reflective practice (Jack & Anderson, 1999), contingency planning (Honig, 2004), and design thinking (Nielsen & Storvang, 2015). It is important to consider “what works”, and to understand the impact of different teaching approaches on entrepreneurial intentions, skills, motivations and behaviours (Bell & Bell, 2016).

Bell and Bell (2016) have also investigated the effectiveness of experiential learning in entrepreneurship education. However, there has been insufficient research which focuses on experiential learning and its impact on entrepreneurial intention. Kolb’s (1984) model of *Empirical Wisdom* and Dewey’s (1933) concept of *Reflective Thought and Action* are relevant to consider when seeking to examine entrepreneurship education (these models are explained in Chapter 2). These theories illuminate the basic process of learning in terms of how entrepreneurship education participants experience learning. According to Kolb (1984), experiential learning is a complete, and holistic perception about knowledge that speaks to cognition, experience, and behaviour and asserts that learning is an ongoing and continuous progression having its roots in experience. The current research will explore the key characteristics of entrepreneurship education based on experiential learning to analyse its relevance in enhancing entrepreneurial intention.

Another research gap in the literature is also suggested by Kasemsap (2016) about the entrepreneurial intention and its impact in relation to entrepreneurship education. Entrepreneurship education has been delivered by using variety of ways hence it is imperative to choose certain characteristics and explore their impact on intention (Fayolle, et al., 2005, Kolvered and Moen, 1997; Noel, 2001; Tkachev and Kolvereid, 1999; Varela and Jimenez, 2001). The current research is using intention as a key indicator to explore the impact of entrepreneurship education characteristics. Theory of planned behaviour Ajzen (1985) has been used in the research. The Theory of Planned Behaviour (TPB) (Ajzen, 1985) was developed from the Theory of Reasoned Action (Fishbein & Ajzen, 1975; Fishbein, 1980) in



order to predict a person's intention to engage in a behaviour. TPB was intended to explain all behaviours over which individuals have the ability to exert self-control. According to TPB, intentions have three independent determinants (antecedents of intentions): attitude towards behaviour, perceived behaviour control and subjective norm (Ajzen, 1991; 2002). TPB states that the behaviour of a person is a result of his/her intentions to perform the specified behaviour and the resulting intent is influenced by his/her outlook towards the behaviour, as well as his/her individual standards. The intention is said to be the immediate precursor of the behaviour.

Recently Caiazza & Vope (2016) found that there is a link between entrepreneurship education and entrepreneurial intention. However, their research focused only on intentions, when other precursors also incline intentions. This limitation has been highlighted in Caiazza's and Vope's work and emphasises that future research should consider the antecedents of intention as well. This study has considered these three components i.e. antecedents and tested their direct as well as mediating roles in the relationship between entrepreneurial education and intention to start a business.

Entrepreneurship education course characteristics may increase the intention (and antecedents) of participants to start their own ventures. Researchers have examined the relationship between entrepreneurship education and the tendency of graduates to become entrepreneurs by launching start-ups (Davey et al., 2016; Gibb & Hannon, 2006).

Designing an entrepreneurship programme with clear objective, teaching contents and overall impact on outcome is very challenging, though Nabi et al. (2017) suggested an integrated teaching model framework. The current research has used the model suggested by Nabi et al (2017) along with key theories based on experiential learning such as Lulliard, (2002), Dewey (1998) and Kolb (1938) in addition to Mueller's (2011) work based on key characteristics. This research examines the short entrepreneurship education course duration only ten to twelve weeks consists twenty to twenty-five contact hours which includes key characteristics i.e. business plans, role models, entrepreneurial networks and feedback. These characteristics may positively increase the intention and its antecedents of participants to start their own ventures. The studies of Fayolle & Gailey (2015), Lorz (2011) proposed

that entrepreneurship education should be studied in more depth in terms of the content, objectives, outcome, duration and other characteristics (Katz, 1991; Bennett, 2006; Fiet, 2001a; 2001b; Henry et al., 2005a; 2005b). Earlier research such as Fayolle & Gailey (2015), Krugger (2004) have conducted the studies on short term courses such as four days course. There are various universities which provides term based course in entrepreneurship however there are not much research exists who has studied the impact on after the term. Hence this study is foccung on 12-14 weeks duration.

Linnan and Fayolle (2015) suggested that the contributions in this category might be based on entrepreneurship education needs to apply differentiated teaching techniques and contents and teaching methodologies (i.e. case studies, business plan, presentations, lectures, role models) to achieve its full potential. Furthermore, according to Fayolle and Gailly (2013), little knowledge exists regarding the potential causal link between some educational variables (participant selection and past entrepreneurial exposure, course contents, pedagogical methods, teachers' professional profiles, available resources, etc.) and the impact of EEPs on the antecedents of intention and/or behaviour.

Fayolle and Linnan (2014) suggests that the research issue such as the overall outcome of entrepreneurship education should include measures of variables at both pre- and post-intervention (Fayolle & Gailly, in press; Martin et al., 2013).

How do the contents of entrepreneurship education programs (theoretical versus practice-based knowledge) bear upon students' intentions? Research could also probe into issues relating to the reciprocal relationships between students' entrepreneurial intentions, the quality of their entrepreneurial learning and the development of their entrepreneurial competences in educational settings (Martin, McNally, & Kay, 2013).

There is a need to address this gap in the literature that has relevance to the academic discipline and area of practice to show that entrepreneurship education course characteristics may positively increase the intention of participants to start their own ventures. The problem is significant to the discipline because it can contribute to the broader knowledge about it hence the current research also contributes in the area.

There are certain motives for conducting this research currently. The interesting point about earlier studies is the extent to which entrepreneurship education courses respond to economic development. The results of several studies suggest a positive relationship between the two (Davey, Hannon and Penaluna, 2016; European Commission, 2006; Zahra, 1991). Later, empirical research went into more detail in this area and the more relevant question that emerged was the extent to which entrepreneurship education influences intention. Interestingly, the results were positive (Maresch, et al., 2014, Entrialgo & Iglesias, 2016). It is now a timely juncture at which to explore those characteristics which can influence intentions (Fayolle et al., 2005). Hence, this research will focus on such characteristics and will try to establish the relevance of those criteria which can influence intention in some way.

### 1.3 Aim and Objectives

This study sets out to examine the extent to which the characteristics of entrepreneurship education programmes i.e business plan activities, introduction of role models, introduction of entrepreneurial networks and feedback provided by mentors or teachers influence entrepreneurial intention. In the current research the feedback is provided and also recorded by the teachers on regular basis through summative and formative forms has been considered. Also, the research is exploring the impact of the above-mentioned entrepreneurial education characteristics on entrepreneurial intention's antecedents such as perceived behavioural control, subjective norm, and attitude. The reason for choosing these characteristics is their popularity in research as well as in entrepreneurship education programmes and these four characteristics based on experiential learning (in-depth justification has been given in literature review chapter and conceptual framework chapter). This study seeks to advance theoretical discussion in the area of the relationship between entrepreneurship courses and entrepreneurial intention, and to identify a practical relevance for the findings. Specifically, the aims can be categorised into certain objectives:

1. To determine which entrepreneurship education course characteristics (duration only ten to twelve weeks consists twenty to twenty-five contact hours) may positively increase the intention (and antecedents) of participants to start their own ventures.

2. To determine the impact of entrepreneurial networks on entrepreneurial intention and its antecedents.
3. To determine the impact of the introduction of a role model on entrepreneurial intention and its antecedents.
4. To determine the impact of business planning activities on entrepreneurial intention and its antecedents.
5. To determine the impact of feedback on entrepreneurial intention and its antecedents.

#### 1.4 Research Question (RQ)

These objectives give rise to the Research Question and certain specific sub-questions about the specific course characteristics.

**RQ:** *What are the entrepreneurship education course characteristics (duration only ten to twelve weeks consists contact hours is between twenty to twenty-five) which may positively increase the intention (and antecedents) of participants to start their own ventures?*

##### 1.4.1 Sub-questions

- 1 What is the impact of entrepreneurial networks on entrepreneurial intention and its antecedents?
- 2 What is the impact of the introduction of a role model on entrepreneurial intention and its antecedents?
- 3 What is the impact of business planning activities on entrepreneurial intention and its antecedents?
- 4 What is the impact of feedback on entrepreneurial intention and its antecedents?

#### 1.5 Research Contributions based on Research Gaps.

The results of the research show that it has contributed in theoretical, practical and methodological aspects by many ways.

The results suggest that the feedback provided by mentors or teachers and business plan activities can directly impact on entrepreneurial intention. This is very relevant and useful

outcome. Entrepreneurship education research suggests that there should be a clarity about which characteristics are more relevant to develop an entrepreneurial intention. Hence from the results conclusion can be drawn that feedback and business plan activities should be considered while designing and delivering entrepreneurship education courses. According to the current research results feedback and business plan activities directly impact on the intention to start their ventures hence education policy makers particularly in the area of entrepreneurship should implement these two characteristics and make sure that participants get maximum benefit from them.

Also, the link between entrepreneurial networking and change in intention is mediated by (Davey, Hannon and Penaluna, 2016; European Commission, 2006; Zahra, 1991). participants' subjective norm though entrepreneurial networking does not influence change in intention directly, it can mediate through subjective norm. Similarly, the introduction of role models does not have a direct impact, but it is also mediated by participants' attitude towards behaviour. This knowledge can also provide valuable guidelines for entrepreneurship education courses and their providers.

The guidelines of these characteristics based on Lulliard, (2002) Dewey (1998) Kolb (1938). experiential learning. Nabi's et al (2017) suggested teaching model and Mueller's (2011) work suggested on key characteristics. Hence theoretically it contributes in each theory and teaching model by taking a step ahead. Also, the impact has been tested on intention and its antecedents by using Azjen's (1985) theory of planned behaviour (TPB) by using direct and mediating impact hence the research contributes in TPB as well.

Katz (2003) suggests that there has been a significant development in the field of entrepreneurship from the last decade. Also, it has been suggested that there is a positive relationship between entrepreneurship education and the number of start-ups by some studies such as Honig (2004) and Robinson and Sexton (1994). Entrepreneurship education helps in enhancing participants' attitudes, behaviour and intention to start the business (Peterman & Kennedy, 2003; Hansemark, 1998) and by developing entrepreneurial and business management skills (Clark et al., 1984; Charney & Libecap, 2000; 2003; Ronstadt, 1987). For these reasons, entrepreneurship education is very significant for starting new businesses,

creating new jobs and for overall economic development. However, there is a need to do further development work and research for entrepreneurship education to have clear objectives, contents, teaching methods and overall outcomes (Katz, 1991; Bennett, 2006; Fiet, 2001a; 2001b; Henry et al., 2005a; 2005b). For instance, course content is a major concern for some researchers like Fiet (2001a; 2001b) who recommends theoretical contents, while others such as Hostager and Decker (1999) and Plaschka and Welsch (1990) support the idea of having practical and activity-based teaching methods. Some researchers have favoured problem-based learning (Swart, 2014; Tan & Ng, 2006), but others have suggested case study method (James & Clare, 2004) or project method (Preshing 1991). An experiential approach based on the learner has achieved good recognition in research (e.g. Krueger 2007; Löbler 2006; Fiet 2000). Entrepreneurship is based on the uncertainty of situations, depending on action and ability to deal with change hence its education needs experience-based pedagogy (Dewey, 1998; 1938; Kolb, 1984). Pittaway et al. (2011) suggests that a formal lecture based teaching method or traditional teacher centred approach is the most common because it is more economical and can be accomplished easily. Other methods can be used but are not common, such as simulations, guest lectures, projects and business plan conceptions.

The most significant aspect is to analyse the impact of on participant's intention towards starting a business by exploring the relevance of specific education characteristics which may be helpful to design effective entrepreneurship education programmes. However, without considering some specific education characteristics it would be very difficult to understand their relevance. Hence, the current research is a very important steppingstone in the right direction since it examines a selection of specific characteristics based on experiential learning for a duration to understand their role in influencing entrepreneurial intention. The studies of Fayolle & Gailly (2015), Lorz (2011) proposed that entrepreneurship education should be studied in more depth in terms of the content, objectives, outcome and other characteristics hence the current research also contributes in the area.

To design an entrepreneurship programme which can provide a clear objective, teaching contents and overall impact on outcome is not easy, though Nabi et al. (2017) suggested an

Integrated Teaching Model Framework Encompassing Entrepreneurship Education Impact and Underpinning Pedagogies. It is an overall model based on supply, demand and a hybrid model for impact indicators they have suggested at various levels such as intention, knowledge, and actual start up. However, there is a lack of follow-up research, hence the outcome of these programmes is still not clear. According to Krueger (1993; Krueger et al. 2000) the entrepreneurship field should be studied more, and researchers should conduct more studies to collect more evidence in order to assess the relevance of the intention model.

An effective entrepreneurship education program should be developed based on a model describing how the specific education components influence entrepreneurial attitudes and intention. Such a model should be developed based on a valid theoretical approach to entrepreneurship.

Also, the research contributes to teaching models/theories of entrepreneurship as specific characteristics are included and by analysing their role on impact towards entrepreneurial intention. As the research is focussed on few characteristics only it reveals the significance of those to the overall outcome. As the significance of each characteristic has been analysed by using various statements of questions, their impact has been analysed on each of the intention antecedents. Hence it helps to determine which entrepreneurial characteristics can improve the attitude towards behaviour, subjective norm and overall entrepreneurial intention so it will be very relevant for educators, programme managers or teachers to help design the courses to enhance entrepreneurial intention. Hence this research will contribute practically and will be useful for education-based organisations, universities and overall society.

Furthermore, this study contributes by demonstrating the application of a contingency perspective. Although many studies have examined the effect entrepreneurial education may have on entrepreneurial intention (Carayannis et al., 2003; do Paço et al., 2015; Nabi et al., 2018), they have not investigated the mediators of the entrepreneurial education—intention relationship. This study increases the knowledge of this relationship by investigating the mediating roles of subjective norms, Perceived Behavioural Control and attitudes in the relationship between elements of entrepreneurship education and entrepreneurial intention.

Another research gap in the literature is encapsulated by Kasemsap (2016) who suggests that the focus should be on intention, to get more deeper understanding about the impact of entrepreneurship education. (Fayolle, et al., 2005, Kolvered and Moen, 1997; Noel, 2001; Tkachev and Kolvereid, 1999; Varela and Jimenez, 2001). Moreover, intentions have been recognised as being the best interpreters of planned attitude, particularly if the behaviour is “rare, hard to observe, or involves unpredictable time lags” (Krueger, et al., 2000). This research enhances, challenges, extends, and contributes to TPB by examining the impact of entrepreneurship education course characteristics i.e. business plans, role models, entrepreneurial networks, feedback on the intention (and antecedents) of participants to start their own ventures. TPB is appropriate for this study since it is most appropriate for examining the intention of participants to start their own ventures. TPB informs, and is informed by, the research questions, including intention, and helps to identify research design decisions. Some entrepreneurship research has used TPB, treating the control of the considered behaviour, the attitude towards entrepreneurship and subjective norms as a prelude to entrepreneurial intentions (Kolvereid, 1996; Krueger et al., 2000; Fayolle et al. 2006). A recent study by Caiazza & Vope (2016) found that there is a causal link between entrepreneurship education and entrepreneurial intention. However, their research focused only on intentions, when other precursors also incline intentions. This limitation has been highlighted in Caiazza’s and Vope’s work and emphasises that future research should consider the antecedents of intention as well. This study suggests that these three components play mediating roles in the relationship between entrepreneurial education and intention to start a business. The research results also recommend that entrepreneurial networking and change in intention is mediated by participants’ subjective norm though entrepreneurial networking does not influence change in intention directly, it can mediate through subjective norm. Similarly, the introduction of role models does not have a direct impact, but it is also mediated by participants’ attitude towards behaviour. This knowledge can also provide valuable guidelines for entrepreneurship education courses and their providers.

Another practical contribution is that research suggests the key characteristics in order to improve the entrepreneurial intention and by increasing the intention more entrepreneurs can be developed in future. Entrepreneurs bring economic development for the society.



According to some studies (Birch, 1989; Jack & Anderson, 1998; Zimmerer & Scarborough, 2005) entrepreneurship brings about economic development as it stimulates innovation and competition. Nadram and Samson (2006) suggest that, as there is intense competition at the international level, entrepreneurship works as a catalyst for economic dynamism by bringing innovative ideas, services and products and it also creates new jobs, new markets, new suppliers and new demands. It is, therefore, useful to find ways to create more entrepreneurs through entrepreneurship education which may impact on developing the economy at a higher level.

Finally, in terms of contribution to quantitative research methods, this research uses the Confirmatory Factor Analysis (CFA) to evaluate the fitness of the measurement model in the field of study. CFA is resolved using SEM whose goal is to determine the extent to which a model is underpinned, and what data were assembled during the research (Schumacker & Lomax, 2010). In order to get more reliable results on specific entrepreneurship education characteristics and their influence on entrepreneurial intention and antecedents this research has used SEM path analysis, fitness of the overall model instead of regression for separate relations. In entrepreneurship education area there are still lack of research which used SEM and it has been suggested by many researchers that future research should use SEM for more reliable and valid results.

For the desired outcome-oriented education programme it is important that it is based on an appropriate model or theory with some specific curriculum-based characteristics and clear assessment of outcomes. Hence the current research is a serious effort to combine all the elements in a teaching model. Nabi et al. (2017) has used a teaching model, for experiential based learning (Kolb and Dewey) along with Lullilard (2002) and key characteristics based on Mueller (2011) have also been used. For entrepreneurial intention theory of planned behaviour (Ajzen, 1985; 1991) have been used. The current study has explored a vigorous approach to entrepreneurship education based on various theories and methods and verify their applications to analyse their impact on entrepreneurial intention by using reliable relevant research methods. Hence the research provides valuable contributions.

## 1.6 Thesis Structure

This thesis is developed in six chapters.

Chapter 1 provides a brief background to the topic and sets out the aim, objective and questions whilst considering aspects such as the problem statement and significance of the study.

Chapter 2 considers previous studies from scholarly journals, books, and academic publications to collect and collate information on the topic. The key theories and models based on research are discussed in detail. Other research published on related topics will also help to shape an in-depth analysis of the subject. The meaning of entrepreneurship, definition of entrepreneurial intention and definitions of entrepreneurship education along with their reviews are discussed. Learning theories, approaches and methodologies are also reviewed. At the end, social cognitive theory and theory of planned behaviour are explained with their significance.

Chapter 3 presents the hypotheses with justification and theoretical framework based on a thorough literature review. In total thirteen hypotheses were developed. The first three hypotheses test the impact of three antecedents i.e. attitude towards behaviour, subjective norm and perceived behavioural control towards intention. The next four are seeking to test the role of entrepreneurship education characteristics i.e. entrepreneurial network, role model, business plan activities and feedback directly on entrepreneurship. The rest of the hypotheses test the mediating role of antecedents on entrepreneurial intention. All the hypotheses have been justified with the review and carefully developed. For better explanation, diagrams and tables have been provided.

Chapter 4 presents the research methodology which discusses the research approach, design, data collection methods and methods of analysis. It is here that the philosophy of the research is identified, and the data collection techniques described. Data were collected from a total of 10 colleges/universities (five in London and five in Delhi) with similar types of entrepreneurship courses. One thousand questionnaires were distributed amongst these

colleges. In both cities, only particular colleges were selected which offer courses of between 12 and 14 weeks in entrepreneurship. Data were recorded accurately, and for each participant, pre-course and post course questionnaires were completed. Students had to complete both questionnaires for their input to be considered valid (Pre and Post). In total, 754 questionnaires were returned. Out of the 754 questionnaires only 400 sets were chosen for the final data set because the rest of them were not complete or not matching with pre-post stages requirements. The data were analysed by using SEM (Structure Equation Modelling).

Chapter 5 presents the data analysis including descriptive statistics, data visualizations, and the results of the statistical analysis performed in the study. The outcome of each hypothesis is discussed. For clear presentation, figures and tables have been used. The results of each hypothesis test are discussed with relevant tables and outcomes. In total seven hypotheses were supported.

Chapter 6 discusses the results and comments on the significance of the outcomes of the hypotheses testing.

Finally, Chapter 7 is the final chapter and provides an overall summary of the thesis including overall conclusions based on the analysis and provides a set of recommendations.

## 1.7 Concluding Remarks

This study addresses a pressing problem that is important to individuals and policy makers which is how to make entrepreneurship education as effective as possible in motivating people to become entrepreneurs. Entrepreneurship is essential for economic growth, for technical innovation and for creating a society in which individuals are able to achieve their potential.

This is a carefully organised and systematic study that leads to evidence based and useful conclusions. It makes a theoretical methodological and practical contribution

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter presents a review of the literature relevant to entrepreneurship education and its impact on entrepreneurial intention so that the research questions of this study may be accurately defined. It includes the key theories and research of three key areas a) experiential education, 2) social cognitive theory and c) entrepreneurship research and associated theories. Initial discussion is of various definitions of entrepreneurship then key research on entrepreneurship intention and entrepreneurship education will be examined. Later the key theories of these areas will be explored, and a brief conclusion will be given.

### **2.2 Meaning of Entrepreneurship**

There are various opinions about the nature of entrepreneurship within different disciplines. Kirby (2004) advocates a comprehension of entrepreneurship from a wide range of perspectives, such as sociology, economics, finance, history, anthropology and psychology and these disciplines offer various concepts and unique terms of reference to describe it. Thus, there are many studies of entrepreneurship, but no mutual agreement about the definition of it. Hindle and Rushworth (2000) defines entrepreneurship as an activity which creates and manages new, innovative and unique organisations. Kobia and Sikalieh (2009) suggest that entrepreneurship overlaps several disciplines, for example, sociology, psychology, anthropology and economics; hence, the simple categorisation based on trait, behavioural and opportunity identification may not complete the definition. According to Schumpeter (1934), an entrepreneur is an innovator who may bring any kind of innovation in products, new production and operations methods, new sources, new business models or new markets. Other researchers such as Cunningham and Lischeron (1991) interpret entrepreneurship through a heterogeneity of tasks including fund raising, sourcing, and starting up the venture. For Vesper and Gartner (1997) entrepreneurship is to be a business owner by starting a new, or buying an existing, company. Kuratko (2005) suggests that entrepreneurship is about creating new ventures but also includes ongoing innovation

activities. Even though there is a variety of definitions, including entrepreneurial process, they generally include the recognition of business opportunities. Shane and Venkataraman (2000) suggest that entrepreneurship involves the identification and exploitation of business opportunities. Perhaps it could be said that there is a loose consensus around entrepreneurship encompassing introducing innovation, identifying opportunities and starting ventures.

Three approaches to entrepreneurship have been identified in the literature by Kobia and Sikalieh (2009). First, the trait approach which focuses on the personal traits of the entrepreneur, such as personality, motivation, focus, the locus of control and risk-taking capability. Some researchers support this approach and there are few strong arguments against it. Shane (2007) discusses entrepreneurship in terms of the high-risk taking propensity of stakeholders. He describes a temperament trait, which measures the inclination of people to engage in risky activity. The high risk-taking tendency is directly related to added entrepreneurial activity because the risk component is a basic feature of entrepreneurship (Frank et al., 2010; Bae et al., 2014; Chand & Ghorbani, 2011). However, Jones and Iredale (2010) maintain an opposing view and suggest individuals who do not possess the risk taking trait which is common to most entrepreneurs should be excluded from the category. Bae et al. (2014) support this argument and suggest that the trait approach fails to answer questions posed about who an entrepreneur is. Kobia and Sikalieh (2010) suggest that the trait approach has been unsuccessful and cannot provide a comprehensive definition of entrepreneurship. Researchers have begun to reject this approach because it is a static model and does not help to produce entrepreneurial education. Second, the behavioural approach: where entrepreneurial behaviour is much more important than many other characteristics. Fayolle and Gailly (2015) characterise an entrepreneur as an individual who establishes an innovative business and then manages it using strategic management practices. Such individuals are often driven by profit and growth. Kobia and Sikalieh (2010) explain that being an entrepreneur is not a fixed feature of a person but is a role that a person might adopt to create organisation. Third, there is the opportunity identification approach. Eckhardt and Shane (2003), Shane and Venkataraman (2000) and Venkataraman (1997) suggest that entrepreneurship is a field where various opportunities for future goods, services are explored. Shane (2007) emphasises that entrepreneurs primarily explore the opportunity to

generate profits by using various resources. Therefore, entrepreneurship involves an appropriate combination of an entrepreneurial person with various existing opportunities.

The current thesis adopts the concept of entrepreneurship where it is defined by the application of entrepreneurship education characteristics. Hence, the definition of an entrepreneur might be: an individual who may be impacted by entrepreneurship education and its characteristics (role model, feedback, business plan activities and entrepreneurial network) to develop an intention to start their own venture. Therefore, this thesis posits that understanding the effect of specific education components is important to design an effective entrepreneurship course or program because this will provide students with an entrepreneurial sense in the learning process and improve their understanding about entrepreneurship. The basis of this study is the role of entrepreneurship education in creating an entrepreneurial intention.

### 2.3 Entrepreneurship Education

Since the 1950s entrepreneurship education has been growing impressively (Solomon & Fernald, 1991). In the more recent past entrepreneurship has been considered a significant area within business management education (Fones & English, 2004) although there is still no mutual agreement about the clear and concise definition of entrepreneurship education. Hood and Young (1993) defined entrepreneurship education as a phenomenon to educate participants about starting a business to earn profit and contribute to economic development. According to Bechard and Toulouse (1998), entrepreneurship education programme participants enhance their basic knowledge about new start-ups and obtain training to manage them successfully. However, Gottlieb and Ross (1997) suggests that entrepreneurship education is simply an education for enhancing the skills of innovation and creativity. Entrepreneurship education has also been seen as an education which teaches about business opportunity identification, appropriate resource allocation (i.e. finances, marketing, human resource etc.) and, most importantly, new business creation (Kourilsky, 1995). Davidsson (2004) proposed that entrepreneurship education is about teaching participants the ways

various opportunities can be explored and about how to make good judgements to choose the right ones to pursue.

Interestingly many countries around the world are making serious investments in entrepreneurship education at university level (Katz, 2003; Brush et al., 2003) at high schools/ A level (Sánchez, 2013; EACEA, 2012; Peterman & Kennedy, 2003), and for primary schools (Huber et al., 2014). Hence these initiatives have created much interest in exploring the outcome of these efforts (Dickson et al., 2008; Pittaway & Cope, 2007; Gorman et al., 1997).

Entrepreneurship education has drawn the attention of public policy makers. According to the latest report of the European Commission (European Commission/ EACEA/Eurydice, 2016). The European Union has recommended entrepreneurship as one of the main areas for the lifelong learning sector. However, still early stage entrepreneurial activities in Europe are still fewer than in North America (8.1 vs. 16.2, respectively, in 2017/2018). This calculation has been done on the basis of average regional rate and has decreased in countries such as France and the United Kingdom (Singer, Herrington & Menipaz, 2018). Jones and Iredale (2010) demonstrate that entrepreneurship education programmes and similar preparation help students to exhibit enterprising behaviour as evidenced by the evolution of Entrepreneurship Education from 1,900 institutions around the world from the 1950s.

Over recent decades, much importance has been given to the education of economics and entrepreneurial patterns of businesses for individual and institutional purposes (Jones & Iredale, 2010) and the focus has been on new start-ups and orientations to entrepreneurial aspirations. Much of the literature that has devoted attention to recognising that entrepreneurship contributes to economic societal development has been carried out in recent years and the role of universities has been recognised (Markuerkiaga, et al., 2016).

There are many debates relating to entrepreneurship education, in particular the way that education affects intention and its antecedents such as attitude towards behaviour, subjective norm and perceived behaviour (Kirkley, 2017). Some studies suggest that entrepreneurship is not intrinsic, and that teaching, and training can develop certain facets of it (Neck &

Greene, 2011; Yu Cheng et al., 2009). Frank et al. (2010) support this hypothesis and suggest that intentions are neither magic or mysterious nor genetic or intrinsic. They suggest that entrepreneurship can be taught and developed in the same way as the sciences. Kuratko (2003) suggests new methods and paradigms which teach entrepreneurship, thereby discarding the idea that entrepreneurship is an intrinsic quality.

According to Sanchez (2010), enterprise education is a vital technique that empowers enterprise since education 1) gives sentiment autonomy and fearlessness to people 2) empowers the acknowledgment of optional vocational alternatives, 3) widens perspectives by empowering people to identify opportunities, and 4) provides information that people will use to exploit new business openings. Through enterprise education, an individual receives appropriate learning to set up and maintain a business. When entrepreneurs seek to engage with business enterprise education, the learning assets they encounter will help them (Sánchez, 2010)

### **2.3.1 Entrepreneurship Education Objectives and Teaching Methodologies**

Linan (2004) suggests that various entrepreneurship education programmes are relevant to diverse target groups. They suggest that basic entrepreneurship educational programmes suit inexperienced students who are new to the world of enterprise. These programmes can focus on developing entrepreneurial skills and assisting students to choose business creation as a career option (Linan, 2008). The major focus of such educational programmes is to build entrepreneurial awareness among aspiring entrepreneurs and help them choose this career path for professional employment (Caiazza & Voipe, 2016; Katz, 2008).

There has been a good deal of research on the effects of entrepreneurship education. McMullan et al. (2006) observed a higher start-up rate among MBA graduates who had finished at least three courses in enterprise. In a later review, Liñán et al. (2011) examined the effect of enterprise education on venture creation. Their review included 511 graduates of which 105 were enterprise graduates and 406 non-business enterprise graduates and found that business graduates saw higher start-up rates (27%) than the rest (9%). Others have also noted constructive outcomes from businesses education (Peterman & Kennedy, 2003;



Souitaris et al., 2007 and Fayolle, 2002). Each of these findings adds further confirmation to the idea that enterprise education positively affects the motivations of graduates to set up their own organisations (Linan, 2004). Entrepreneurship education has been widely recognised globally, and many governments acknowledge the roles of entrepreneurship education programmes and their targeted results in maintaining the desired outcomes. Linan (2004, pp. 11-35) classified entrepreneurship education types that are widely used to devise policy:

1. Entrepreneurial awareness education needs to provide awareness for all students and should not be limited to the creation of new ventures but should give students choices for their development of the skills required to help them in choosing a career in entrepreneurship if they wish. This type of opportunity is useful for many students and broadens their education to improve their career prospects.

2. Entrepreneurship education to start a new business should be given to students who have the inclination to start up a new venture immediately after completion of their courses. This type of programme is designed to give practical assistance for business start-ups and is focused on maintaining a strong and informed development of students' entrepreneurship skills.

3. Education for entrepreneurial dynamism for developing entrepreneurial behaviour among students should be planned and is necessary after setting up a business. This aspect makes students stronger and provides them with objectives to focus their businesses.

4. Continuing education for entrepreneurs is also necessary to continue monitoring and providing students with entrepreneurship education in between their business practices in order to improve their skills and enhance their ability to handle tough situations.

Conversely, a handful of previous studies have revealed a weak connection between entrepreneurship education and the precursors of entrepreneurial intention. However, Linan (2004) clearly found that entrepreneurship education programmes impact on the antecedents of entrepreneurship goals (mentality and subjective standards for entrepreneurship and in

addition entrepreneurship intentions themselves). Students with an interest in entrepreneurship education programmes might be expected to demonstrate a higher aptitude for entrepreneurship because of their disposition, subjective standards and perceived behavioural control and aims (Davidsson, 1995). This arrangement of connections (since it influences both the antecedents of goals and aims) is consistent with the notion that if entrepreneurial education can enhance the predecessors of entrepreneurial intention, it has accomplished its aims (Linan, 2004).

When programmes are specifically designed to develop ability and, when compared with other education courses that are provided, it is clear that behavioural control, and the creation of intentions towards attitude development in entrepreneurship are improved (Ahmed et al., 2017). The conclusion of the study by Ahmed et al. (2017), conducted in Pakistan, has hypothetical ramifications for the information provided by entrepreneurial studies. To begin with, this study is one of a very few that has compared the entrepreneurship-related results of specific entrepreneurship education programmes with those of general business education. By adopting this strategy, the study reveals vital, surprising contrasts in expectations with their predecessors and provides recommendations for entrepreneurship education institutions. Second, the study underlines the value of the theory of planned behaviour as a framework to monitor how the impacts of the precursors of entrepreneurial intention behave and vary across different populations. The study suggests that entrepreneurship education can boost economies.

Noticeable responses that might be ascribed to these discoveries include increased enthusiasm for business and increase in the number of establishments offering enterprise education (Davidsson, 1995). The number of organisations offering courses identified as having a business enterprise focus have increased (Katz, 2003). More young people are considering enterprise as a vocational choice than ever before. Minniti et al. (2006) credited this enthusiasm to the affirmation by outside partners of the significance of the formation of new start-ups and the development of wealth creation and worldwide economic development.

Bae et al. (2014) confirm that the development of entrepreneurial skills and knowledge, as with any other skills, increases over time with entrepreneurship education. For example,

entrepreneurship courses involve areas which can provide insight into new business development and business planning pathways. The skills which students learn on these courses are beneficial for various aspects of their employment and career. Apart from learning technical skills, entrepreneurship education is also concerned with attitudes, intentions and firm creation processes (Linan, 2008). Therefore, the opportunities to create business ventures are three times greater for entrepreneur graduates than for non-entrepreneurship graduates (Charney & Libecap, 2000). Moreover, Minniti et al. (2006) identified a link between entrepreneurship education and growth of human capital. For instance, entrepreneurship links information and skills together, and this gives an optimistic view of students' future possibilities (Bae et al., 2014). Similar studies, although based in countries with less entrepreneurial potential, support these arguments (Klandt et al., 2005).

Researchers have differed on the matter of the significance of the personal psychological characteristics of the entrepreneur. Zhang et al. (2014) argue that entrepreneurship cannot be taught and is the result of personality and psychological features which are intrinsic to people. Some researchers hold that some specific traits are present which effectively relate entrepreneurial outlook to personality characteristics such as perseverance for achievement (Seikkula-Leino et al., 2010). Others hold that the entrepreneurship process deals with the inception of business, and thus understanding individual activities, processes and outcomes are of greater importance than simply understanding personal characteristics (Yar Hamidi et al., 2008). Studies point to the conclusion that in the case of planned entrepreneurial behaviour, intent is a primary and reliable behavioural forecaster (Krueger et al., 2000).

Generally, the improvement of entrepreneurial outlooks is becoming increasingly common in education throughout Europe (European Commission/EACEA/Eurydice, 2016). According to the European Commission (2011), the basic part that education plays in the advancement of such outlooks, and specifically the focal part those educators plays in this procedure, are increasingly salient. For some education frameworks, this speaks to a crucial move far from conventional methodologies (European Commission, 2011). This implies that educators should be furnished with the correct attitudes, information and states of mind to have the capacity to provide their students with the new educational programmes,

instructional methods and learning conditions that they will allow them to learn entrepreneurial capabilities (European Commission, 2011). These improvements will require changes in the way educators themselves are instructed.

The educational system might assist individuals to acquire qualities that are perceived as imperative for business enterprise. In addition, enterprise education can help students create a viable vocational alternative, create positive and ideal mentalities towards entrepreneurial circumstances and furthermore involve them in proposing new vocational viewpoints (Birtchnell, 2011). Business education can constitute a basic device in building up the entrepreneurial culture of a district. Beyond the advancement of an entrepreneurial personality and taste for business, enterprise education can likewise highlight the part business visionaries play in the public arena (Fayolle et al., 2008).

The traditional instructors' primary aim is to communicate hypothetical knowledge on enterprise and business planning, to train the students, to discover and test business ideas, and to survey business openings and counsel students (Frank et al., 2010). The students must understand the significance of setting up a strategy for success. They must be familiar with the Business Plan structure and practice composing a marketable strategy on the premise of their own business idea. Knowledge of the most proficient methods to execute a business idea comes from business planning (Venesaar, 2008).

In traditional classrooms, each class and each learning experience is controlled by the teacher who structures what is learned. However, entrepreneurship requires more creativity than structure so what is required is a range of activities that support students' intuitive learning and reflections including problem solving, group work, learning by doing and presentation (Liñán et al., 2011). A major challenge is to assemble a network involving a variety of organisations and working environments as resources from which students can learn (Hörnqvist & Leffler, 2013).

However, it is increasingly accepted that traditional teaching methods are less effective for imparting entrepreneurial skills and that such techniques do not motivate students. These teaching methods prepare students to work for a business manager, yet do not prepare them

for business. The current shortage in presentation techniques confirms Kirby's (2004) remarks that most business teachers they simply teach about business rather than imparting skills to prepare their students to take part in business activities. Conventional techniques may be utilised to give students the basic business knowledge. However, accomplishing realistic goals and having a chance to talk with genuine business visionaries generates both knowledge and abilities and furthermore improves students' self-confidence.

Some studies have been conducted on the effectiveness of different teaching methods for entrepreneurial courses. Bechard and Gregoire (2005) suggest that pedagogical methods may include discussions or experimentation. Fretschner and Weber (2013) recommend that there can be a variety of impacts of entrepreneurship education through a range of pedagogical methods. Martin et al. (2013) also emphasised that there is some urgency for a theory driven framework which can help to assess the relevance of a variety of teaching methods (Bapista & Naia, 2015, Fayolle & Gailly, 2008; Kruger 2015; Lackeus, 2015; Neergaard, Tabggaard, Kruger & Robinson, 2012).

Teaching methods into two categories i.e. traditional methods also known as passive methods and innovative methods. Another name for these is *active methods*. Traditional methods comprise of formal lectures as well as innovative methods associated with a supplementary action (Mwasalwiba, 2010). Bennet (2006) notes that lectures and case studies as well as group discussions are inert methods and are thus less effective at influencing entrepreneurial characteristics. Pittaway et al. (2011) suggests that a formal lecture-based teaching method is the most common because it is more economical and can be accomplished easily. Other methods can be used but are not common, such as simulations, guest lectures, projects and business plan conceptions. Other formats are games and competitions, venturing in real business undertakings, workshops, presentations and field visits. All these methods fall into the category of "active" methods which are considered to be more effective methods of learning (Saliba, 2010). Doing research on teaching methods will also be helpful to understand how the teaching methods can influence the intentions of participants to develop (Komulainen et al., 2014).

Academics need to be aware that there is a vast difference between courses designed for practising entrepreneurs and courses that teach about entrepreneurship from an academic viewpoint (Gereffi et al., 2008) with practitioner courses requiring a more interactive approach to teaching methods. According to Katz (2008), a highly appropriate tutoring method for an entrepreneurial education program is lectures along the formulation of business strategies and case studies. Hytti and O' Gorman (2004) argue that the teaching methodology should depend on the objective of the course. For example, if the objective is to create awareness about entrepreneurship, then the most suitable methods can be public and unrestricted channels such as mass media, discussions or talks. However, work related entrepreneurial skills can be developed by specific industry training only. Lastly, a trial run of entrepreneurship role-playing in a controlled environment prepares individuals in the best possible manner to act as entrepreneurs (Ahmed et al., 2004).

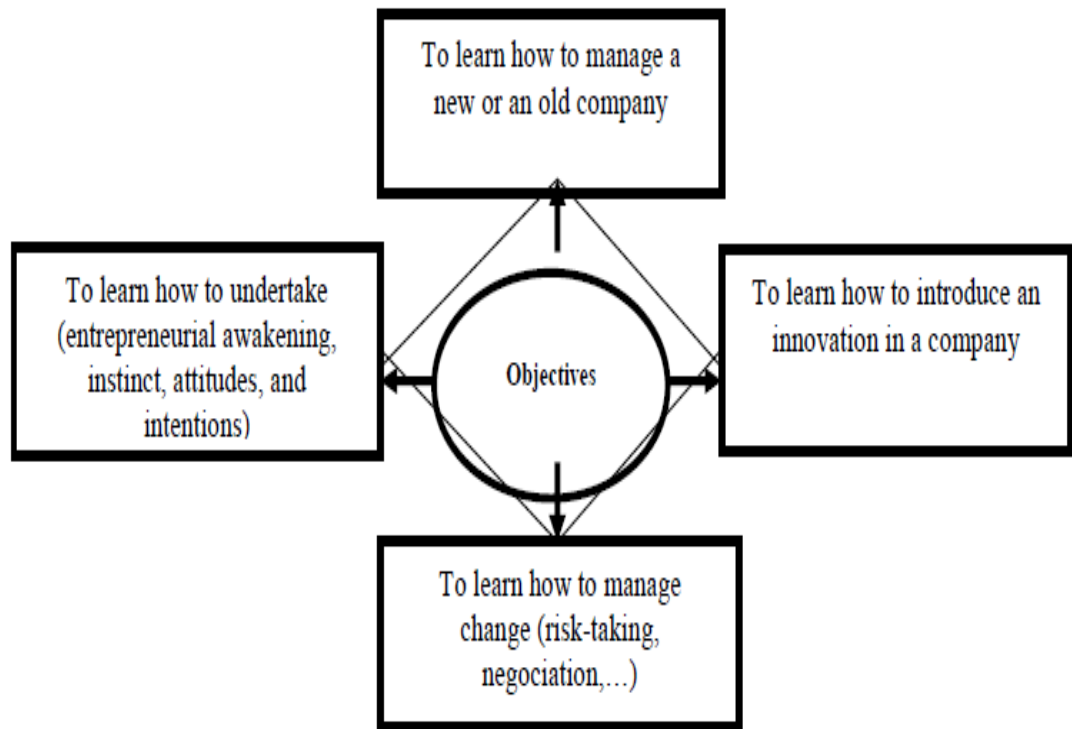
When the aims of the course have been decided upon and particular limitations have been recognised, the correct teaching strategies can be chosen (Fayolle et al., 2008). Be that as it may, the viability of an enterprise education program depends on, for the most part, an instructor's aptitude and knowledge of appropriate teaching methods, especially business enterprise educating strategies (Chand & Ghorbani, 2011). Different teaching methods that have been found to be effective include watching and discussing videos, making videos, discussing case examples, visiting speakers, discussing strategies for success and project work. Also, instructors have found it beneficial to use competitive games, setting-up business simulations, workshops, networking events and study visits. This last class of strategies is named *interactive* and they are said to be more fitting for supporting entrepreneurial learning among students (Mwasalwiba, 2010).

Studies of the aims of entrepreneurship education courses that have been delivered reveal a diversity of aims. Jones and Iredale (2010) claim that university level entrepreneurship education programmes are primarily aimed at awareness building and encouraging students to pursue entrepreneurship as a possible career option. Enterprise and entrepreneurial conduct are thought to be basic capabilities that people develop later on in life (Lämminpää & Kuopusjärvi, 2005). Elmuti et al. (2012) studied a wide range of entrepreneurship education

programs with distinct audiences. They suggest there should be elementary entrepreneurship education programs suitable for students with no previous experience in business concepts, thus creating awareness amongst them. These programs help to polish their acumen in enterprise, and also encourage them with choosing entrepreneurship as a full-time profession. (Linan, 2008).

Bchini (2012) divides the evaluation of entrepreneurship education programmes into three categories a) fixed objectives b) the concerned public and c) deployed pedagogy. Bchini, (2012) divided the objectives of these programs into four major categories (Figure 2.1).

**Figure 2.1: Evaluation of Entrepreneurship Education Programmes**



(Bchini, 2012)

Numerous university-level programs have aimed to increase entrepreneurial awareness amongst students aiming to be entrepreneurs. Elementary entrepreneurship education programs drive awareness amongst students and encourage them to take up entrepreneurship

professionally. Bae et al. (2014) suggests entrepreneurial teaching helps develop skills and knowledge about the field and provides insight into novel business planning and development. Concerning employment and profession, entrepreneurship education and skills like attitudes, and intentions and firm creation processes are always valuable in various aspects of a student's life. (Linan, 2008) These boost the business venture chances of an entrepreneurship education programmes student by almost three times as compared to non-entrepreneurship graduates.

The current study is a step towards understanding the role of entrepreneurship educational objectives, and their role in influencing intention. The objectives which will be focused on in the current research suggest it is fundamental to learn how to teach entrepreneurial awakening, instincts, attitudes, and intentions. In current research only courses of twelve to sixteen weeks have been included. All the courses have very similar objectives.

### **2.3.2 Entrepreneurship Education and its Types**

The forms of education and training for entrepreneurs in universities can be classified into four categories: 1) sensibilization for entrepreneurship – providing awareness education that focuses on increasing the number of people who have a motivation for, or who are sufficiently knowledgeable about, entrepreneurship to consider it important for their future (Henry et al., 2005); 2) entrepreneurship education – providing the development of entrepreneurial competencies and behaviours, including both hard and soft skills; 3) education for entrepreneurship – providing practical assistance and training to those considering starting a new venture, often conducted at a tertiary level or in an informal course structure and 4) education in entrepreneurship – providing continuing business education for those already in business (Henry et al., 2005; Davey, Hannon & Penaluna, 2016).

Fayolle and Gailly (2008) point out that entrepreneurship education covers a wide variety, of audiences, objectives, contents and pedagogical methods. They suggest a few simple questions to understand the complexity of a teaching model for entrepreneurship education:

- a) Why (Objectives, goals)
- b) For whom (target, audiences)



- c) For which results (evaluations, assessments)?
- d) What (Contents, theories)?
- e) How (Methods, pedagogies)?

At the end of the analysis of these questions, they categorise the entrepreneurship education process into three: 1) learning to become an enterprising individual; 2) learning to become an entrepreneur (or an expert in the field of entrepreneurship) and 3) learning to become an academic teacher or researcher in the field of entrepreneurship.

### **2.3.3 Entrepreneurship Education and Teaching Models**

The effectiveness of entrepreneurship education programs depends on meeting the particular needs of the participants. Zahra et al. (2012) suggest a universal approach to teaching entrepreneurship is not useful and argue that it is a subjective matter which dictates the teaching techniques. The content and context are always the moderating variables for teaching.

Entrepreneurship is a combination of various skills. Oviawe (2010) explained the distinction between the teachable and non-teachable skills of business conception. Lee et al. (2007) suggested if the right solution is identified to find a link between students, and to manage teachable skills then entrepreneurship education programs can be more successful. However, before going too far, it is useful to consider the intention of participants towards enterprise or venture creation after attending these courses. It is not clear if participants are influenced in a similar way, or if there are national variations. If there are differences, then those factors should be considered while designing teaching for entrepreneurship (Birtchnell, 2011).

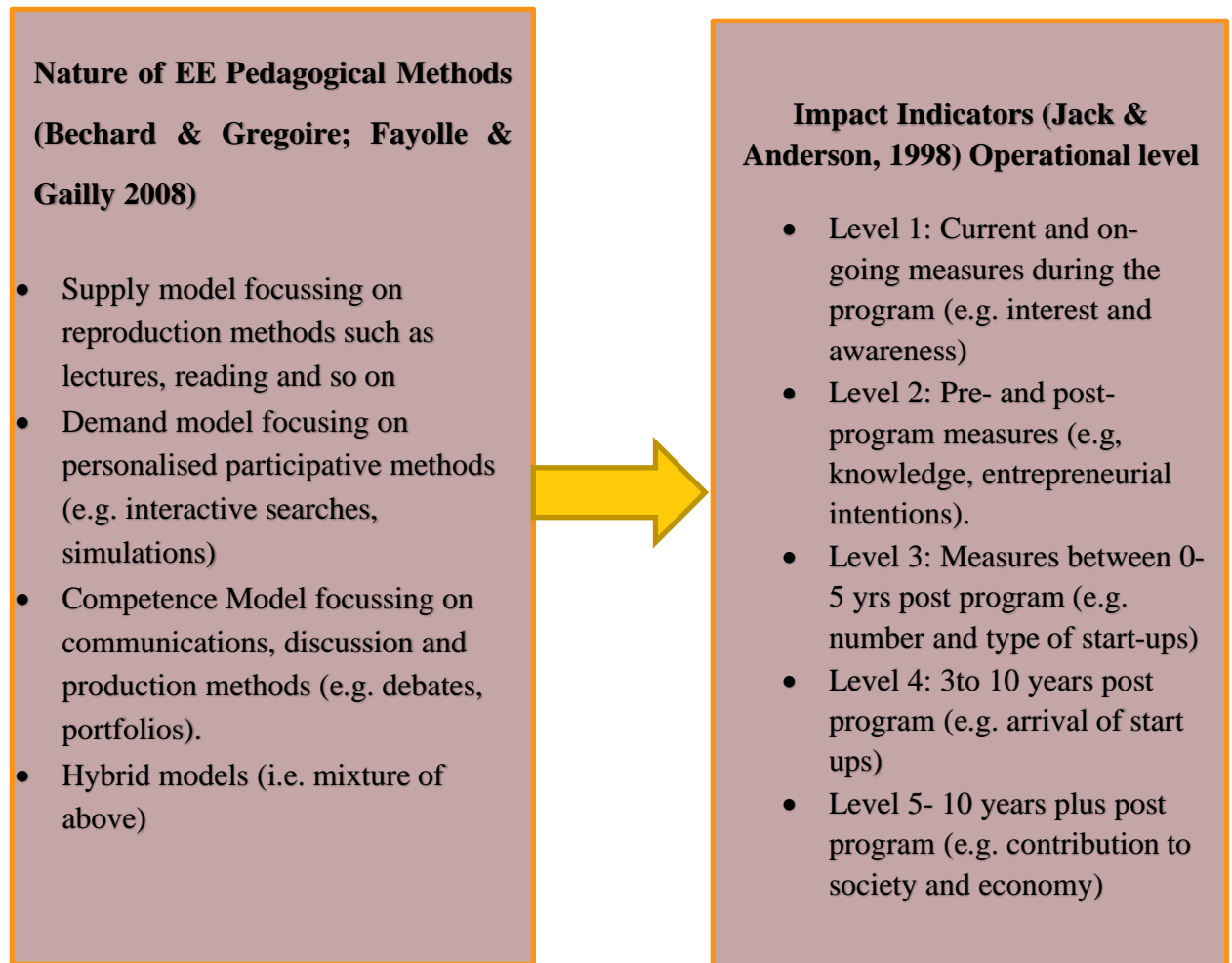
Some scholars have emphasised the importance of the tutor's skills in entrepreneurial education. Zahra et al. (2012) stressed the importance of the tutor's knowledge and tutoring methods in distinct skills of entrepreneurship education for teaching effectiveness. In addition, Lonappan et al. (2011) classified tutoring methods into various known methodologies. These are individual written reports and presentations, case studies, group

discussion and projects, formal lectures and seminars, guest presenters, learning from actions, web-based and electronic learning.

As indicated by Peterman and Kennedy (2003), even with a wide assortment of business courses on offer in business schools, while positive outcomes might be found from an investigation of individual programmes it cannot be assumed that all courses have comparable outcomes because of variety in substance, instructional method, and learning styles.

A study conducted by Nabi et al. (2017) suggests an integrated teaching model framework encompassing entrepreneurship education and its underpinning pedagogy (Figure 2.2). The study is based on an analysis of 159 articles published between 2004 and 2016. In their study, the authors suggest that pedagogies have not been sufficiently tested yet, and most research that has been undertaken has been around subjective outcomes. Pittaway and Cope (2007) also conducted a review of the entrepreneurship education literature from 1970 to 2004 and concluded that there is scope to explore the relationship between students' entrepreneurial outcomes and different pedagogical methods.

**Figure 2.2: Nabi's Integrated Teaching Framework**



(Nabi et al., 2017)

Pedagogical research emphasizes the relevance of impact. Nabi et al. (2017) suggest impact is an important feature of any teaching program, hence it needs to be considered from the programme design stage (Fayolle & Gailly, 2008). Figure 2.2 shows Nabi et al.'s (2017) teaching framework model developed from previous relevant research (Bechard & Gregoire, 2005; Fayolle & Gailly, 2008). In this framework, pedagogical methods have been divided into four categories: a) supply model, b) demand model, c) competence model and d) hybrid model. Interestingly Nabi et al.'s (2017) teaching framework highlights the range of impact measures from beginning to end of an entrepreneurship education programme. It thereby provides a basis for the systematic evaluation of the impact of entrepreneurship education.

### **2.3.2 Entrepreneurship Education and its Impact**

For the current research, intention has been chosen to measure the impact of four key elements of entrepreneurship courses which are delivered across twelve weeks.

#### *2.3.2.1 Supply Model Pedagogy*

The supply model is focussed on a teacher centred approach. In simple terms, it applies where a teacher is taking the active role in teaching, ‘The primary drivers of education remain external to the learner- hence the primary role played by the learner’ (Bechard & Gregoire 2005, p6). Anderson et al. (2001) suggest the primary teaching goals are to remember - i.e. to retrieve pertinent facts from long term memory - and to apply - i.e. to use procedures to solve (simple) problems or complete (simple) tasks. Key methods based on supply model are lecturing, reading, listening or watching videos; hence, there is an emphasis on knowledge and the application of procedures. More importantly, the final outcome is generally assessed by testing the students’ retention of the knowledge imparted to them by their teacher (Bechard & Gregoire, 2005).

#### *2.3.2.2 Demand Model Pedagogy*

The demand side model can be understood as a student-centred model; hence, in this case, the active participants are the students (Kember, 1997). Therefore, the knowledge and content are defined by the students’ needs and expectations. The key pedagogical methods included here are exploration, discussion and experimentation, which may include various adaptive elements/forms (Bechard & Gregoire, 2005). In terms of entrepreneurship education, writing a business plan can be considered an adaptive element, and can fit into the demand side model (Lulliard, 2002).

#### *2.3.2.3 Competence Model Pedagogy*

At the core of the competence model are interactions between the teacher and student. External, as well as internal factors are equally relevant in terms of having an impact on

learning. Education is focused on the whole system of interactions between context, teacher and students – a perspective that Robertson (1999) labels *system centrism*. The competency model is related to the notion that teaching content ought to be primarily determined by the issues that need to be solved.

The competency model assumes that in real-life, tasks and issues are typically ambiguous, divergent, or ill-defined. There are no single ‘correct’ answers. With this in mind, it becomes vital “that the students have the skills to approach issues fairly and find effective solutions. (Biggs, 1999). In order to analyse the issues and work on solutions, students may need a variety of skills such as social competence, research and networking skills. Hence, this model typically emphasizes activities relating to communication and discussion (e.g., seminars, presentations, debates, on-line exchanges, networking etc.) and production (such as essays, animation, modelling, portfolios, writing business plans etc.). In addition, the competency model emphasizes authentic assessments strategies, whereby the professional uses a range of suggestions (e.g., portfolio, direct observation, interview, etc.). (Laurillard, 2002). These highlight the relevance of interactive teaching methods at higher education levels and can be categorised into four types i.e. discursive, adaptive, interactive and reflective. In the current research, all four categories have been considered and entrepreneurial network, feedback and business plan activities fall into these categories.

#### *2.3.2.4 Hybrid Model Pedagogy*

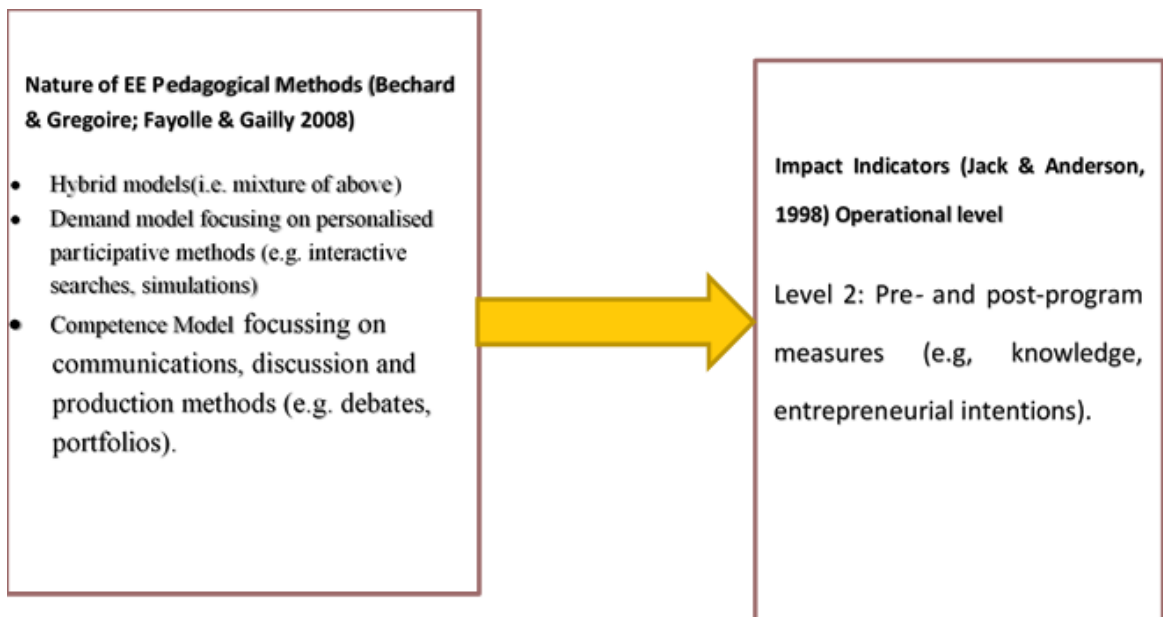
The very fact that the three archetypes of teaching are represented as having well-defined characteristics does not imply that every model forms a rigid set of principles. There is a possibility to combine these models and produce hybrids. (Kember, 1997; Oscar, Palmer & Robertson, 1999). A hybrid model that mixes components from the supply and demand models is possible as is a hybrid that mixes components from the demand and competence models. Figure 2.3 illustrates the “position” of such hybrid models vis-à-vis their original models.

In turn, this hybrid conception may enhance the pedagogic approaches of the teacher, by providing wider opportunities to students and teachers. If hybrid models are adopted, then

this provides the opportunity to use a variety of styles, content and pedagogies (cf. Neumann, 2001; Singer, 1996). If the teacher or student is unsatisfied by any particular model, then they can try another hybrid model (cf. Robertson, 1999). This might be a combination of a supply and demand model or a demand and competence model. This realization is followed by some degree of search and experimentation that leads the professional to adopt a replacement teaching model that better corresponds to freshly developed conceptions and sensible approaches. However, these transitions between models do not seem to be common – and they are not essentially straightforward (cf. Kember, 1997; Murray & MacDonald, 1997). The implementation of these models in the right situation is also extremely important.

The current research combines a hybrid model based on a demand model, and the competence model has been taken into consideration. In order to check its impact level 2 has been chosen.

**Figure 2.3: Impact of Pedagogical Models**



The most relevant experiential learning theories for this study are those of Kolb (1984), Dewey (1963) and Lullilard. Apart from these, Mueller’s (2011) list of entrepreneurship education characteristics has been used and they are categorised by using Lullilard’s experiential learning model. Later the reason for choosing certain entrepreneurship education characteristics and intention as impact indicators are discussed.

### **2.3.3 Entrepreneurship and Experiential Learning Theories**

Entrepreneurship education is considered more effective if it includes a strong experiential component. Mandel and Noyes (2016) found that experiential learning may be the most appropriate approach for top entrepreneurship undergraduate programmes. As in other fields, effective learning requires students to intellectually and physically engage in the learning process and reflect on their experiences (Kolb, 1984). Therefore, many students learn about entrepreneurship either through experiential activities such as business planning and interviews with entrepreneurs who are embedded into the course or programme requirements, or via extracurricular activities (Couetil, Shartrand & Reed, 2016).

Evidence suggests that the use of real life and symbolic role models is a key issue for effective entrepreneurial learning (Laviolette, et al., 2011; Dyer, 1994; Scott & Twomey, 1988). Some studies have examined how individuals successfully create and manage new ventures through networks and learning, and these ideas are increasingly salient in the entrepreneurship literature (Hoang & Antoncic, 2003; Politis, 2005; Rae, 2005; Rae & Carswell, 2001; Ravasi & Turati, 2005; Wang & Chugh, 2014; Soetanto, 2017). However, other studies argue in favour of the importance of networks in entrepreneurship (Hoang & Antoncic, 2003; Jack et al., 2010; Johannisson, 2010; Ostgaard & Birley, 1994), and some focus on the role of networks in entrepreneurial learning (Pittaway & Cope, 2007; Rae, 2005; Romano & Secundo, 2009; Taylor & Thorpe, 2004). Soetanto (2017) confirms that networking with entrepreneurs helps entrepreneurial learning; however, the limitation of this study is that a very small sample was considered. Therefore, this research will be helpful to address that gap. Soetanto (2017) also suggests that the importance of networks in entrepreneurial learning has been overlooked. In this research, this element will be included and the ways it can influence intention are explored.

Experiential learning can be described as a participatory form of learning which involves learners in a range of mental processes to synthesise information in an active and immersive environment (Feinstein et al., 2002). It is a process through which knowledge is created by transforming experiences (Kolb, 1984), and reflection is the means by which the experience is interpreted and transformed. As such, structured approaches to the reflective stage can

enhance this process (Platzer et al., 1997). This approach departs from the traditional lecturer-led passive learning, towards a greater emphasis on action-orientated, experiential learning, problem solving, and project-based styles of teaching (Jones & English, 2004). Many approaches to entrepreneurship education have been influenced by Kolb's (1984) experiential learning cycle, which draws on earlier works that emphasise the central role experience plays in learning and development (Dewey, 1963; Piaget, 1950). The model is a dynamic, holistic experience-based learning process (Kolb & Kolb, 2009).

### *2.3.3.1 David Kolb: Experience as a Source of Learning and Development*

Kolb's model of Empirical Wisdom and Dewey's concept of reflective thought and action are relevant to understand as a precursor to examining entrepreneurship education. These theories illuminate the basic process of learning in terms of how entrepreneurship education participants experience it.

According to Kolb (1984), experiential learning is a complete, and holistic perception about knowledge that speaks to cognition, experience, and behaviour and asserts that learning is an ongoing and incessant progression having its roots in the concept of experience (1984). To elaborate, simply knowing is not learning, but such in-depth experience results in knowledge (Kolb, 1984). ELT (Experiential Learning Theory) focuses on a four-stage cyclic model comprising of concrete experience (CE), reflective observation (RO), abstract conceptualisation (AC) and active experimentation (AE):

1. **Concrete Learning (CE):** Learners should be open and ready to adapt knowledge.
2. **Reflective Observation (RO):** Experience is the key to learning at this stage. Learners also need to think 'why and how' they occurred. It is imperative to reflect, notice and to be perspective and judgemental while examining their experiences.
3. **Abstract Conceptualisation (AC):** Learners need to use logic and ideas and relate them to the observation and considerations assumed during the RO stage. Learners need to understand the concepts rather than just feeling them.



4. **Active Experimentation (AE):** Learners have to test theories to make valid assumptions/predictions. This stage is helpful for learners to take corrective actions in future.

These four phases are relevant for entrepreneurship education as well, and participants must apply all these steps in their routine learning process.

Kolb's experiential learning theory (ELT) model provides insights that are useful when designing experiential learning. Learning styles in the classroom vary according to the circumstances, ethos and race of students present (Akeela, 2010). The present study is not entirely based on learning styles but is based on factors such as the backgrounds, cultures, and the race of students, but it makes a relevant contribution which can provide direction for entrepreneurship education whilst focussing on intentions in two different cultures.

#### 2.3.3.2 *John Dewey and Reflective Thinking*

John Dewey's *Experience and Nature* (1925) and *Art as Experience* (1934) are the basis for his conception of learning. *How we Think* (1910), *Essays in Experimental Logic* (1916) and *Logic, Theory of Inquiry* (1938) present his work on thought and logic. Dewey argued that to adapt to their changing environment, people develop standardised concepts and customary ways of doing things that do not require the individual to think about the specific situation. This approach can work as long as things remain the same, however, usually, the only permanent thing is change, which affects individual habits resulting in feelings of discomfort. Actively thinking about a situation or problem, according to Dewey, requires a process which he terms reflective thought.

There are six phases of Dewey's (1910) reflective thought. First, is formulating the question by thinking about what is not working or could be improved. Daily general habits do not cause any reflection and with these individuals are just following the customary practices that they are comfortable with. However, if situations arise that disturb these normal habits then a state of discomfort gives rise to *reflection* (Mietinen, 2010). Entrepreneurship education participants experience this phase because of their inexperience leading them to

follow habits without a plan for further improvement, and this cannot be useful for entrepreneurs. Second, is defining the problem. After feeling discomfort, it is important to define the problem, which is the process of reflection. Dewey highlights the significance of the problem for thought. This definition of a problem leads to further attention and self-analysis. Without a problem statement, the research process becomes haphazard. The problem is that how the problem is conceptualised dictates the choice of research objects. Primarily, it is the criterion which decides the relevancy and irrelevancy of possible hypotheses and concepts. Third is studying the conditions of the situation and formation of a working hypothesis. Here, analysis and the diagnosis of a given problem should take account of all available means and resources. The most believable or probable solution is called a hypothesis that can be tested and refined (Mietinen, 2010). Fourth is reasoning, in a narrower sense to develop a working hypothesis. This includes the elaboration of ideas and thought experiments. The tentative hypothesis, which has been established in the previous stage can be evaluated and tested here using various knowledge and resources. This process helps develop a working hypothesis. Fifth is testing the hypothesis by observation and experiment. This stage sees the testing of hypotheses by implementing them in practice. Dewey states that conclusions about the validity of the hypothesis can only be drawn after practical testing. The process of reasoning narrows down across different phases, and for proper reasoning, testing is essential. Finally, a workable solution which helps to solve the problem is subject to refinement by applying another iteration of the same process.

Dewey's theory helps learners to understand that there are a number of factors which affect learning and achievement directly. It states that the learner has to go through different phases and follow steps, and various factors affect these phases. If Dewey's theory is followed and applied to entrepreneurial education, it has certain consequences including understanding that reasoning does not only depend on thought processes, but also involves actions. The learner has to switch between the role of actor and observer when undertaking experiential learning. In entrepreneurship education, participants also have to play both roles with complete responsibility. This process should be considered during the designing of a lecture and when planning resources and expecting achievements from learners.

Interestingly, Dewey accepted that culture can be an important element for understanding human thinking and actions. Dewey notes that culture has both a psychological and a collective nature at the same time. Later, Dewey influences the cultural psychology of the 1990s (Shweder, 1990; Cole, 1997) which quantifies the collaboration of individuals and culture as a primary analytic unit.

Scott et al. (2016) described three key roles for enterprise and entrepreneurial education: education about enterprise, education through enterprise and education for enterprise. They describe the second of these as “ways in which the education process itself can be enhanced by using pedagogic styles which work in and make use of ‘enterprising’ situations, including student-centred and real-world project driven approaches” (p. 1). Laurillard (2002) also suggested that an empirically based teaching strategy suggests an interactive dialogue between the teacher and the students with a focus on the topic at hand. For the current research, Laurillard (2002) suggests teaching strategy has been considered and each aspect of student orientation will be taken into account, and later entrepreneurial entrepreneurship characteristics will be categorised according to these aspects.

#### **2.3.4 Laurillard’s Rethinking of University Teaching**

Didactic approaches can be differentiated between using teacher-centred or student-centred methods. The teacher-centered approach is where the defined subject matter is chosen by the teacher. Whereas in a student-centered approach, learning is self-directed and teachers act as supporting agents. According to Laurillard (2002) student orientated agendas are based on experiential studies and four key features are indispensable for appropriate students’ learning. 1) discursive elements 2) adaptive elements 3) interactive elements 4) reflective elements:

**Table 2.1 Laurillard’s Four Key Features of Learning**

|  |  |
|--|--|
| <p><b>Discursive Elements</b></p> <p>Easy accessibility between teachers and students.</p> <p>Teacher and students should have mutually agreeable topic learning goals.</p> <p>The atmosphere of the classroom for discussions having a dialogue between students should be created by teachers.</p> | <p><b>Adaptive Elements</b></p> <p>The task focus for enduring discussion between teachers and students is the teacher’s responsibility.</p> <p>The student’s responsibility amounts to correlate the work feedback their conceptions.</p>   |
| <p><b>Interactive Elements</b></p> <p>Teachers must create an environment encouraging students to for feedback interchange. Students must act to achieve the task goal.</p> <p>The teacher’s feedback must target the actions related to task goals.</p>   | <p><b>Reflective Elements</b></p> <p>Teachers must support the process in which students link the feedback on their actions to the topic goal for every level of description within the topic structure.</p> <p>The task goal, the concept description related to it, the action is taken to accomplish it, and the feedback received should be linked by the students by proper reflection.</p> |

1) Discursive Elements: is where a good discussion between teacher and students occurs, and these discussions need to be with the student on the same level of authority with the instructor. Both parties should agree mutually on the same learning objectives. 2) Adaptive: is where instructors and learners are both responsible for the constructive and adaptive environment, which means both parties should listen to each other carefully and provide a chance to share their ideas. Also, students should have a chance to receive feedback and consider it for further improvement. Learners should also be able to integrate and link feedback with key concepts. 3) Interactive: this stage of the learning sees the teacher and student create more interactions with each other whilst trying to understand each other better

in terms of learning. Instructors provide more support and constructive feedback. 4) Reflective: this stage involves a reflection on the performance of both parties. Primarily, it helps learners and gives them a chance to reflect on their performance and receive feedback. Instructors also provide the chance to learners to reflect on all the concepts which have been covered and apply these to their real-life situations or theories. Laurillard's framework (2002) is used in the current research (Table 2.1).

## 2.4 Entrepreneurship Education Characteristics Chosen for the Study

Another key part of the research is related to entrepreneurship education course characteristics; hence, the work of Muller (2011) has also been considered. Muller (2008) in her study, sought to find the effect of entrepreneurship course characteristics on entrepreneurial intention. This study aimed to achieve both theoretical advancement and practical relevance. According to Muller (2011) the course characteristics which influence intention to become an entrepreneur a) prior intention b) attitude, c) subjective norm and d) perceived behavioural control - are shown in Table 2.2.

The main limitation of Mueller's (2011) study is that it is based on German-speaking countries only, namely Austria, Germany, Luxemburg, and Switzerland. In addition, Mueller (2011) did not take into consideration the question of the right time for shaping entrepreneurial skills, attitudes, and perceptions though research on learning has suggested that the ability to learn specific things changes over time (Bednorz & Schuster, 2002).

**Table 2.2: Category Scheme - the Influence of Entrepreneurship Course Characteristics**

|   |
|---|
| a) General impact of entrepreneurship courses   |
| b) Course characteristics with influence on attitude<br>Role models<br>Practical experiences  |
| c) Course characteristics with influence on perceived subjective norms<br>Provide a platform to build an entrepreneurial network  |
| d) Course characteristics with influence on perceived behavioural control<br>Practical knowledge<br>Business planning<br>Role models<br>Entrepreneurial networks<br>Explorative and interactive Elements<br>Feedback<br>Supportive infrastructure |

(Muller, 2011)

According to Zierer and Seel (2012), while carrying out an analysis of modern textbooks, there are two models which are most popular a) critical-constructive didactics and b) teaching-centred didactics. Critical-constructive didactics helps to create ideas for tutoring plans as described by an extension of Klafki’s “didactic analysis (Meyer & Rakhkochine, 2018). A two-step matched analysis procedure is carried out in which conditional analysis focuses on sustainable and problem-centric approaches to finding out the socio-cultural backgrounds of learners, teachers and institutions as an initial approach. In terms of the second approach, the didactic analysis, seven distinct questions are answered. Here, the initial three are interactive and are based on rational thinking, consistency and the present and future relevance of the study content. These questions are helpful to understand if students bring a level of interest and set of expectations with them and they assess their influence on the

outcome of the topic. Question four is related to thematic structure where, the course content, aims/ goals, and overall structure are the key focus. It also focuses on the correct link between the goals and structure of the course by which the desired goals can be achieved. Question five relates to the clarity of learning outcomes and their assessment. It should be very clear that appropriate assessment techniques have been used to examine students, and that they are achieving these learning outcomes. If learners can achieve the specified learning outcomes, then the learning process is successful. Once the teacher is clear about the goals, learning outcomes and assessment techniques the next challenge is establishing the correct way to present content. Hence, question six is based on accessibility and the presentability of learning content. There are various factors which are considered here, such as age, background, experience and teaching methodology based on the teaching content and the level of ability of the students. The seventh question makes sure that all the questions are an integral part of teaching and learning and have been worked through collectively rather than independently. Hence, the overall process of teaching and learning can be enriched.

## 2.5 Reasons for Choosing Intention as an Impact Indicator

Recent systematic review on entrepreneurship education and its impact conducted by Nabi et al. (2017) analysed 159 impact studies from 1st February, 2004, to 2nd January, 2016. Previous to that Pittaway and cope (2007) conducted the similar study which included a broad section of literature, including 185 academic papers from 1970–2004. Nabi et al. (2017) recognises a variety of impacts and suggests that the most common impact indicators are related to lower level indicators of subjective/personal change: attitude (32 articles), skills and knowledge (34 articles), perceived feasibility (42 articles), and entrepreneurial intention (81 articles). However, only a few studies have been carried out so far on the relationship between entrepreneurship education and other subjective impact indicators such as the teaching framework provided by Bae et al. (2014) who conducted a meta analytic review of the literature on the relationship between entrepreneurship education and entrepreneurship intention. In their study they analysed 73 studies with a total sample size of 37,285 individuals and established a significant but small correlation ( $p=.143$ ) Also, a very limited

number of studies have included psychological variables such as attitude. Overall, there has been limited study of the context-specificity of entrepreneurship education impact.

Caiazza and Vope (2016) found there is a causal link between entrepreneurship education and entrepreneurial intention. However, their research was focused only on intention when other antecedents also include intentions. This limitation has been highlighted in Caiazza's and Vope's work and emphasised that future research should consider the antecedents as well. There are some popular studies such as the concept of planned behaviour (Ghani et al., 2014; Jones & Iredale, 2010) or the two-factor model (Kruger et al., 2000) which suggest that entrepreneurial intents are manipulated by a blend of three important factors: (1) assertiveness towards results, (2) apparent behavioural control, and (3) one's perceived subjective norm. These three factors are vital to take into account while conducting research on intention.

In the current research, intention and its antecedents have been considered.

Couetil (2013) discuss the challenges of entrepreneurship education and conclude that designing the assessment plan based on impact is key. Considering the cost of such programmes, good research in the field must be encouraged among academics.

Raposo and Do Paço (2011) note a variety of entrepreneurship education programme approaches across various countries and institutions. Such variation is seen in learning approaches, objectives as well as in potential students. A mutually combining common framework can be proposed to evaluate and improve these programs (Fayolle & Gailly, 2015). The variety of objectives is exhaustive and difficult to accomplish in one piece of research. However, this study sets out to holistically explore the influence of entrepreneurship education on the intention of participants in a parallel manner in two different countries. The future scope of this research is to generate an effective framework independent of country boundaries (Samwel Mwasalwiba, 2010).



### **2.5.1 Assessment of Entrepreneur Education Courses**

Pittaway et al. (2011) carried out a systematic literature review (SLR) and concluded that the design of enterprise education and ways to implement it are commonly studied research topics across countries, but the assessment of the influence and effectiveness of these programs is a black hole and has not been investigated widely. According to Pittaway, Hannon and Gibb (2008), the National Council for Graduate Entrepreneurship's (NCGE) research bibliography contains just three studies relevant to assessment practice from a total of 700 citations. Askham (1997) observed assessment for general education and Reid and Petocz (2004) examined it for creativity and both conclude that assessment is a vital ingredient for improvement in any educational practice and suggest further exploration in the field of education evaluation. The comparison of entrepreneurship education programmes of two distinct and major countries can be taken as a guideline in laying down a common framework for evaluation and assessment. Here one important element, i.e. entrepreneurial intention, will be taken as the pivoting point to develop the background and framework for the assessment of entrepreneurship education programmes.

The Centre for Study in Higher Education in Australia evaluates the quality of teaching and learning in higher education by assessment of education programs. A thoughtfully designed assessment or evaluation clearly encompasses all the expectations, assigns a pragmatic workload, provides self-evaluation of outcomes for the participating students, and gives clear and practical feedback. Assessment is thus an essential element of a coherent educational experience (CSHE).

Pittaway, Hannon and Gibb (2008) claim that the Quality Assurance Agency (QAA) (n.a.) and the Higher Education Academy (HEA) (n.a.) are based in the UK and specifically assess education programmes. The assessment undertaken can be institutional assessment; teacher assessment or student assessment as well as any combination of these (Banta, 1999; 2007). Schwartz and Webb (2002) suggests the most significant of education is its outcome. Thus, this current research is aimed at entrepreneurial educational outcomes in terms of intention to start their own venture.

The design level and program implementation level effect of entrepreneurship education is related to its pedagogical design based on the evaluation of the courses (Bechard and Gregoire, 2005; Mialaret, 2005). The complexity of assessment of education programs is a result of the difference in the objectives and types and methods used in the assessment. Fayolle and Gailly (2015) suggest measurement of coherence, relevance, efficacy, and efficiency for the assessment of a training programme. Ghani et al. (2014) note that the diversified efficacy measurement of training programmes is one of the most widely studied assessment issues.

The field of assessment studies refers to the work of Kirkpatrick in (1954) for more than three decades. It has a model which has divided the assessment process into four significant and hierarchical levels. The complexity, as well as the relevance and the precision of the model, increases with progressive levels. The first level is 'reactions' centric format which measures the overall perception of participants about the general organisation of the programme, the subjects taught in the course, the faculty, the schedule, etc. This gives an overall measure of the satisfaction of the students undertaking the program. The second level is an assessment of the 'learning' or the skills and the perspective modification which a student undergoes during the programme. The third level is the level to quantify the 'behaviour' thereby measuring the regular application of the skills and knowledge that are imparted to the students. The fourth is the "results" level. It is the final step and holistically measures the changes that a student has undergone from the beginning to the end of the course in the context of the behavioural changes, enactment, and efficiency.

This study tests the impact of an entrepreneurship education programme on the entrepreneurial intention of students in higher education. The analysis of assessment of efficacy in this study is undertaken using the Ajzen's TPB. The motive to select the topic is primarily to raise the awareness of students in the field of entrepreneurship which focuses on the second level of the Kirkpatrick (1975) evaluation model. Thus, awareness, understanding and attitudes assessment of participating students plays an important role in the overall efficacy assessment of the programme (Gereffi et al., 2008; Seikkula-Leino et al., 2010). Furthermore, it has been found that entrepreneurial intention is a stepping stone to

entrepreneurial behaviour and these intentions can be modified by entrepreneurship education programmes resulting in a modified behaviour which is caused by the university environment (Fayolle & Gailly, 2015).

It has been discovered that a number of management electives chosen by students enrolled in academic programs other than management have a positive impact on intensities of entrepreneurial intention (Komulainen et al., 2014). Liñán et al. (2011), in a longitudinal study, investigate specific groups of students of five distinct curricula in three Colombian universities to associate students' intention and behaviour contained by various groups. The result testified that students in the universities that provided for supplementary entrepreneurship backing and training had the highest pointers of entrepreneurial intention and thus an inclination to become entrepreneurs.

Elmuti et al. (2012) investigates the effects of entrepreneurship training on the advancement of entrepreneurial intentions and also the perception of self-efficacy. This study had a sample in which the graduate students were chosen from fields of entrepreneurship education, management sciences, and some other disciplines also having enrolled in an entrepreneurship education programmes. The investigation resulted in partial confirmation of the proposed hypotheses about entrepreneurship graduates having an advanced intention and an improved perception of their self-efficacy as compared to the others (Raposo & Do Paço, 2011). The literature has many distinctive research studies undertaken as attempts to relate entrepreneurship education programmes with perception of self-efficacy or psychological characteristics like achievement deprivation and control trajectories. They conclude that entrepreneurship education programmes had a positive impact, in that they increased the level of these psychological traits as well as the probability to adopt entrepreneurial behaviour (Neck & Greene, 2011).

In comparison to the vast literature on the development of entrepreneurial behaviour, little attention has been devoted to the refinement of educational variables like pedagogical methods, selection criteria, or course contents. Lüthje and Franke (2003) undertook a study with a sample of MIT students and concluded that various distinctive contextual factors like State laws, the activities of banks and perceived support as well as the creative atmosphere

of the university may influence entrepreneurial behaviour. Fraser's (2009) studies based on similar samples confirm these results. Thus, entrepreneurship education programmes appear to impact entrepreneurial intentions and behaviours. The students who have taken part in entrepreneurship education programmes are significantly different from those who have not.

Furthermore, it can be noted that there is inconclusive evidence on the relationship between educational variables (participant assortment and previous exposure, curriculum, academic methods, professional profile of the faculty, accessible resources, etc.) and the effect of the entrepreneurship education programmes on intention and behaviour experiences. Thus, the results of these studies have to be generalised in these settings (Zhao, Hills and Seibert, 2005).

The influence of entrepreneurship education programmes in instilling entrepreneurial attitudes, perceptions, and intention has not been well researched and is a fertile topic for further studies. Most of the recent studies (Ahmed et al., 2017; Katz, 2008; Levenburg & Schwarz, 2008) concentrate on programs that typically are longer courses or electives. Thus, the results suffer from course selection bias because it has been shown that time is a moderating factor for entrepreneurial attitudes, perceptions, and intentions (Bruton et al., 2009; Fraser, 2009; Komulainen et al., 2014).

The current research aims to contribute in the research area by taking one specific type of course in two dissimilar countries and compare the responses. It will be interesting to notice if the result show any dissimilarity or not. As there is a involvement of two different countries so there is a chance that entrepreneurship education courses shows different impact on students amongst chosen countries. However, there might be possibility that there might be not much difference because India is also making sincere efforts to upgrade their teaching courses, objectives and teaching strategies by collaborating with British universities Dasgupta (2016).

## 2.6 Social Cognitive Theory (SCT) and Entrepreneurship Education Research

Social cognitive theory defines a set of methods, and it looks for various behavioural patterns. There are several factors such as the environment, people, and behaviours which can help to evaluate changes in behaviour (Lin & Huang, 2008). The environment can affect behaviour based on a range of social and physical factors. Family, relatives and friends come under the category of the social environment and physical environment variables include temperature, weather and hygiene. Shu et al. (2011) note that behaviour can be understood through an assessment of the environment and situations. The situation is the individual's personal perception of their surroundings including location, time, physical topographies and characteristics (Glanz et al., 2002).

The environment, people, and behaviour are constantly and mutually influential factors. Notably, behaviour is not the simple reflection one gets by manipulating the environment of a person. Similarly, the environment does not simply reflect the person and his behaviour (Glanz et al., 2002). It is a more complex proposition which illuminates the fact that the environment is a source of models of behaviour. The concept of behaviour has various interpretations. Observational wisdom comes from an observation of the activities of individuals and it is the basis of the formation of views of a person (Lin & Huang, 2008). Behavioural competency refers to the knowledge and skills that a person requires to exhibit a particular behaviour.

Social cognitive theory explains the growth of capabilities and guidelines for actions (Bandura, 1989). Notably, a successful entrepreneur requires capabilities for any planned form of entrepreneurship so social cognitive theory is relevant and potentially helpful. Thus, this study examines social cognitive theory and entrepreneurship education relationships in the first section, and social cognitive theories and models in relation to entrepreneurship education research in the later sections (Annesi et al., 2011).

Entrepreneurship involves cognitive and behavioural ability to innovate, establish and propagate a novel business (Lin & Huang, 2008). Hence, for the evaluation of entrepreneurial

behaviour, psychological theories can be useful tools provided one finds fitting theories or models in psychology that are applicable to entrepreneurship studies.

Social learning theory (Bandura, 1977) explains entrepreneurial behaviour through intention models. The central element of the approach is that individuals intend to perform specific behaviours (Krueger & Casrud, 1993; Shapero & Sokol, 1982). Intentions reflect the motivational factors that influence behaviour, indicating the effort that individuals plan to make to put behaviour into practice (Krueger et.al, 2000). The greater the intention to undertake a behaviour, the more likely it is that such a behaviour will take place. Although many models have been used to explain entrepreneurial intentions, such as those of Shapero and Sokol (1982) and Bird (1988), none has had greater influence in the discipline than Ajzen's Theory of Planned Behaviour (TPB) (Krueger et al., 2000; Liñán & Chen, 2009)

Entrepreneurship is arguably a deliberate and planned process. Certain market opportunities have a moderating effect on the way entrepreneurs shorten the time it takes them to make decisions, but it certainly does not promote haste in reaching business decisions (Burney, 2008). Additionally, they have proven to be the best forecasters of planned behaviour, especially if the behaviour in question is "rare, hard to observe, or involves unpredictable time lags." (Krueger et al., 2000, p. 411). Such characteristics apply to entrepreneurial activities. A strong aim and purpose to start a new business essentially yields positive results.

Before the advent of the intention model, researchers used one of two research approaches. The psychological and personality traits that emerged along with general outlooks of successful and non-successful entrepreneurs formed the basis for one of the research approaches. The other one concentrated on demographic factors like gender, age and ethnicity. Both these approaches successfully helped to relate specific traits to corresponding demographic factors. However, owing to the limited explanatory framework, no specific method was universally adopted, and the flawed conceptual problems associated with both of these formats were rejected (Linán & Santos, 2007, p. 444-445).

When compared to models based on individual variables, the intention-based representations turn out to be superior because the aims are focused on those models (Krueger, et al., 2000).

They are nurtured by personal motivational factors and capabilities along with their social environments.

Shapero developed the theory of the Entrepreneurial Event, and in so doing heavily influenced intention theory (Linán & Santos, 2007). Subsequently, a similar, and far more detailed theory, TPB, was developed by Ajzen (1991). Both theories emphasise the importance one gives to the perception of people's capabilities to perform an explicitly required behaviour. Shapero's model calls this Perceived Feasibility whereas Ajzen's calls it Perceived Behavioural Control. In the next section, both theories are closely examined as they relate to self-efficacy as proposed by Bandura (1977).

## 2.7 Shapero's Entrepreneurial Event (SEE) Model

According to SEE, the intention to start a business is derived from insights of appeal and possibility which then form tendencies in individuals to act upon opportunities (Krugger et. al,2000). Shapero's model assumes that human behaviours are influenced by the environment and situations which can be positive or negative.

Shapero and Sokol used the entrepreneurial event as a unit of investigation. Considering the entrepreneurial event as a dependent variable, they used groups or individuals, and also social, financial, governmental and ethnic research contexts (Shapero & Sokol, 1982).

There were two important questions which Shapero and Sokol wanted to explore a) what are the triggering factors to change one's life? and b) what are the factors influencing the choice of a certain path from the pool of countless other options? To find the answer to the first question, they identified some negative forces (divorce, stress at workplace, not feeling valued, etc.) and some positive forces (recognition by a partner or as an employee). These are factors that bring change about in individuals' lives (Shapero & Sokol, 1982). To answer the second question two important drivers must be addressed: perceived desirability and perceived feasibility. The perception of desirability indicates an apparent attractiveness of specific behaviours, in this case becoming an entrepreneur. The perception of feasibility is

an apparent capability to convey respective behaviour. (Linán & Santos, 2007). Both driving factors are made up of ethnic and social factors.

Interestingly, the perception of desirability is influenced by family, relatives, friends, peers and, most importantly, culture which is the basis for individual values (Schwartz, 1999). For example, people residing in society where social system values encourage business formation will be likely to have a high rate of enterprise formation (Shapero & Sokol, 1982).

Family also plays an important role which influences the perception of desirability. Taatila (2010) argues that individuals are more encouraged to become entrepreneurs if they have successful entrepreneurs in their family or know people that they respect who are entrepreneurs (Shapero & Sokol, 1982). If people have a chance to work in small companies then on some occasions, they can become motivated by simply observing entrepreneurs. They learn directly from entrepreneurs and want to start their own businesses in the future. In addition, if they can gain some practical support such as mentoring, partnership or family financial support, they are more likely to start a new venture. (Shapero & Sokol, 1982, p.85).

It is important to note that the concepts of perceived desirability and feasibility are mutually interdependent. If it appears that the formation of a company is not possible, then one may not desire it, and the opposite is also true (Shapero & Sokol, 1982) The dominating factors influencing entrepreneurship are desirability and feasibility, and studies show that they can be influenced by educational practices.

## **2.8 Bandura's Concept of Self-efficacy**

If someone believes that he/she can start a business, then the probability is that the person will start the business. This possible behaviour pattern was captured by Ajzen and Shapero under the psychological concept of perceived behavioural governor and perceived possibility. Bandura (1989) associates both these concepts with part of the social cognitive model of perceived self-efficacy. Perceived behavioural control and perceived feasibility -- are similar since they are based on the idea that, apart from knowledge and skills, individual beliefs also play a very important role in achieving desired goals. Belief is a key ingredient



of entrepreneurship as well because, for a new start-up it is very difficult to predict the behaviour of customers, employees and stakeholders or to predict future profits, sales and obstacles. Hence, a strong belief can certainly help to overcome such difficult situations and entrepreneurship education programmes entrepreneur motivated. Therefore, strong beliefs increase intentions, which are an important aspect of starting a business. A strong belief boosts the likelihood of conceiving a successful and profitable business.

The concept of self-efficacy focuses mainly on individual perceptions of efficacy, and this is an important factor which influences what individuals can achieve (Bandura, 1977). The performance of dissimilar people with a similar set of skills as well as the performance of the exact same person under different situations depends on changes in their outlook about their self. Thus, with a stable sense of efficacy, individuals can achieve extraordinary things and overcome complications. Whereas, 'a fragile sense of efficiency and self-doubt can override skills and lead to failures, even if the person possesses the requisite skills and knowledge, since they might not trust their capabilities' (Bandura, 1997, p. 3). Thus, 'perceived self-efficacy is a positive capability' (Bandura, 1997, p. 36).

However, at the same time, it is also necessary that to achieve the desired goals, a person should continuously improve and entrepreneurship education programmes are useful for updating his/her skills since a strong self-efficacy is only a part of success, and strong beliefs can bring about success with the right set of skills and knowledge (Bandura, 1997).

Domain-specific conditions play an important role in self-efficacy. For example, an individual's confidence in his mathematical skills in a technical setting may lead to reduced confidence in the same set of skills within a non-technical background. (Bandura, 1997).

Bandura explained a number of ways in which efficacy beliefs affect rational thinking as well as inspiration. He argues that if people have doubts about their capabilities and are not willing to do difficult tasks, then it will be difficult for them to motivate themselves. The person can feel stressed and exhausted and will give up quickly if challenging situations arise. In situations where a person is feeling stressed, they might highlight their weaknesses and also indicate task complications. Hence, the result is a vicious cycle because the stressful situation

gradually affects the person's efforts and analytical thinking. Overall, the person will blame herself/himself for having deficiencies in their personal/professional skills or might blame the complexity of the task. They will slowly lose faith on their capabilities, which will directly lead to poor performance on the task (Bandura, 1997).

Contrastingly, a stable sense of efficacy in many ways leads to enhanced socio-cognitive operations in applicable fields (Bandura, 1997). If people can view difficulties as opportunities rather than threats, the chances of success are higher. If self-belief is stronger and people have the capacity to convert threats and challenges into opportunities, then they will take more interest, and get involved with higher commitment levels. They will enjoy the complete process which leads to the accomplishment of goals. If people are able to handle difficult situations, then they will gain self-efficacy. It is therefore extremely important to deal with beliefs about self-efficacy carefully because it contributes towards the success and failure of human performance (Bandura, 1997).

After looking into the important role of self-efficacy, it is relevant that entrepreneurship education considers educating people about different manners to increase individual skills and efficacy beliefs. The following section suggests appropriate measures in this regard.

Bandura (1977) suggests four principal sources of information which have a moderating effect on self-efficacy beliefs. Entrepreneurship education must thus consider the positive usage of these four factors: enactive mastery, vicarious experience, verbal persuasion and emotional cues.

Enactive mastery experiences are the first source for increasing one's efficacy belief. Individual success and failure play a vital role in building self-efficacy. Success is a positive factor, which increases confidence. Contrastingly, failure can erode self-efficacy. The fascinating aspect is knowledge of the factors that aid success achievement. If success comes easily, then someone can expect success routinely and easily and they are not prepared to deal with difficult situations. However, if success comes after continued effort and following overcoming difficulties, then a strong belief in self-efficacy can be built. If someone takes control of situations and turns difficulties into opportunities and failures into successes, then

this process helps them to strengthen their beliefs in self-efficacy, and that person will become stronger (Bandura, 1997).

Enactive mastery, when equated to other modes of impact (modelling of strategies, cognitive simulations of successful performances, tutorial instructions, etc.), turns out to be superior to its competitors. Enactive mastery is a factor for establishing stronger opinions about one's self-efficacy to a greater degree than second-hand experiences, reasonable mock situations, or verbal guidelines (Bandura, 1997).

This research focusses on entrepreneurship education. Thus, it is necessary to explain the relevance of 'self-efficacy' to entrepreneurship education. While teaching courses in entrepreneurship education, it is also important to think about ways to organise curricula so that participants can have strong self-efficacy and sensibility and can thereby cultivate essential abilities to become prosperous entrepreneurs (Zhao et al., 2005).

Bandura reports a case study where academically challenged children were trained to deal with cognitive tasks. They were asked to find solutions, observe the suitability of the solution and accordingly make recommendations. The result was that the tutoring schemes and techniques used did not increase self-efficacy beliefs. Thus, the result was worse academic performance. Even positive feedback signifying success was not of much help. The aspect which turned out to be the most relevant and which helped the children most was the reminder that the application of strategy helps them exercise better control over their responsibilities. Using these steps, their self-efficacy beliefs positively affected their academic performance (Bandura, 1997).

Cognitive processing affects more efficacy beliefs than performance itself. It is possible that modest success can convince individuals about their skills and capabilities. This motivates them to aim for higher-level goals (Bandura, 1997). Bandura stresses that cognitive processing is dependent on different variables like former self-knowledge outlines, task complexity, and the amount of effort required as well as careful self-monitoring, and reconstruction of enacted experiences or accomplishment histories.

The most important task is to focus the use of the knowledge of enactive mastery experiences in an entrepreneurship education setting. The suggested method is the option that in entrepreneurship education programs the students have to cultivate an idea, write a business strategy and finally conceive a company. Thus, the students use their cognitive abilities and eventually may increase their individual effectiveness in these beliefs. Essentially, if mentored under a senior entrepreneur success rates are higher. A series of continuous interactions with a mentor could eventually lead to a sense of understanding these events which could relate actions to successes and failures.

Vicarious experience is the second most important element to create self-efficacy beliefs. It can transform the perceived efficacy by comparing it to the achievements of others, and this helps augment one's individual competencies.

There are many ways in which role models help with learning. Bandura also supports social models for learning. He affirms the presence of some personalities which affect through television or other media, and people consciously or subconsciously align their behaviour with them (Bandura, 1976). Hence, while using video material, the internet, case studies, etc. educators should be very careful because they can influence students in various ways.

Verbal persuasion is the third important element based on verbal encouragement and community culture that influences and convinces people about their capabilities. In entrepreneurship education, this concept is very relevant and can be used in various ways, such as in the form of comments, appreciation and criticism conveyed in one-on-one sessions. Feedback should be given in a positive and constructive way to provide opportunities for further development. To do so, a teacher needs to spend time with their students and understand their needs and expectations very precisely.

Physiological and emotional states as a measure of capability is the fourth major source which is the state of one's physiological and affective behaviour as a measure of their capability (Bandura, 1997).

All the information from the respective four states after cognitive processing, can have an effect on perceived self- efficacy (Bandura, 1997). This cognitive processing of information collected from the four stages includes selection, judgment, and integration which are furthered by various heuristics and can help construct self-efficacy beliefs (Bandura, 1997).

One explanation for this lies in the enactive mastery experience described earlier, which acts as an important source of efficacy information because it yields first-hand and authentic evidence of one's capabilities. However, the degree to which it is effective is subjective. The cognitive process plays an important role in increasing self-efficacy and the extent to which people can get the most out of it. The concepts of established self-knowledge structures, task complexity and background factors as well as the effort required are key here. So too are considerations of careful self-monitoring, and past goal attainments. These all influence the mental process (Bandura, 1997).

The ability to cope with setbacks is a major feature of successful entrepreneurs. Bandura explains that self-efficacy is a major factor inducing the course of action, the effort expenditure and the perseverance that individual will undertake (Bandura, 1997). Thus, with strong knowledge of one's capabilities, institutional constraints can easily be defeated, and opportunities yield maximum advantage (Bandura, 1997). Furthermore, self-efficacy is extremely relevant to successful entrepreneurship because it influences one's outlook in complex situations (Bandura, 1997). Hence, to chart entrepreneurship education courses, some reflection of self-efficacy should be applied to students, thereby helping them to be practically active and perform entrepreneurially in their own enterprises.

## 2.9 Ajzen's Theory of Planned Behaviour

Many models have been used to explain entrepreneurial intentions, such as those introduced by Shapero and Sokol (1982) and Bird (1988). None has had as much influence as Ajzen's theory of planned behaviour (Krueger et al., 2000; Liñán & Chen, 2009). This theory provides a coherent theoretical framework with general applicability, which allows one to understand intentions, taking social, as well as personal factors into account (Krueger et al., 2000). Indeed, TPB has become one of the most commonly used psychological theories to

explain and predict human behaviour, including entrepreneurship (Carr & Sequeira, 2007; Kolvereid, 1996; Krueger & Casrud, 1993; Tkachev & Kolvereid, 1999). For researchers in entrepreneurship, since entrepreneurial behaviour is intentional, intentions are good predictors of behaviour (Bird, 1988; Krueger & Casrud, 1993).

Previous research supports such intention models including the concept of planned behaviour. (Ghani et al., 2014; Jones & Iredale, 2010) or the two-factor model (Kruger et al., 2000). Ajzen (1991) study suggests that entrepreneurial intents are manipulated by a blend of three important factors: (1) assertiveness towards results, (2) apparent behavioural control, and (3) perceived subjective norm.

According to TPB, intentions have three independent determinants: attitude toward behaviour, perceived behaviour control and subjective norm (Ajzen 1991; 2002). The theory states that the behaviour of a person is the result of his/her intentions to perform a behaviour, and furthermore the resulting intent is influenced by his/her outlook towards the behaviour as well as his/her individual standards (Figure 2.4).

Attitude towards the behaviour is necessary as one's individual beliefs about carrying out a behaviour are key. These can be either negative or positive and can arise from the evaluation of one's beliefs about a situation. It can be the individual's assessment regarding various consequences expected if some particular action has been taken to deal with a situation. Thus, as a formal definition, overall attitude can be expressed as the sum of individual perceptions of the consequences and the desirability assessments of all types of behaviour.

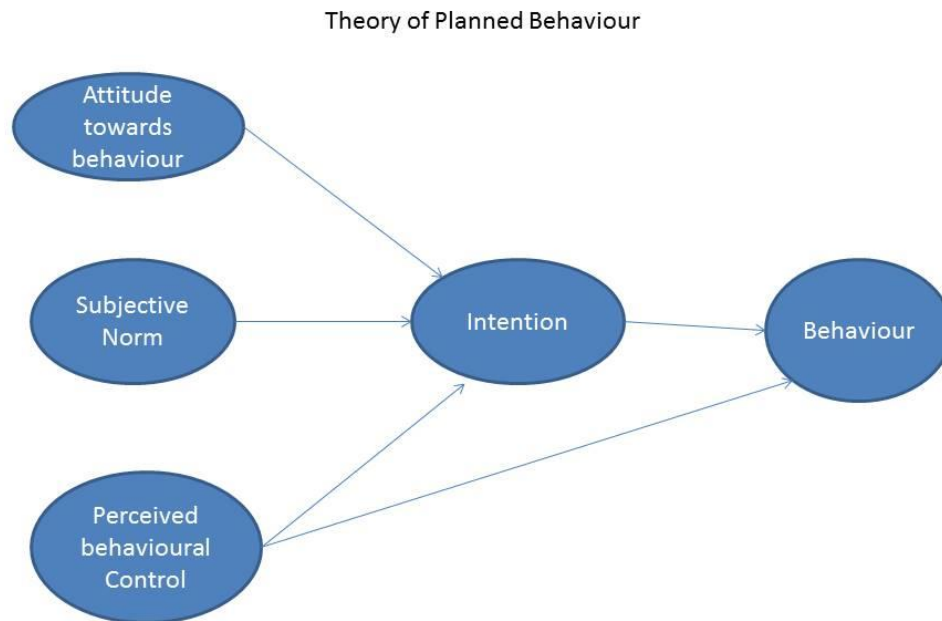
Perceived behavioural control (PBC) refers to an individual's perception of the ease or difficulty of carrying out the task of starting and running a company (Walker et al., 2013). It is a resultant set of available relevant and regulatory beliefs (the belief about the elements which can act as a catalyst and some can restrain the overall behaviour). It is also one of the significant components in the theory of planned behaviour. Some elements of PBC are contained in Atkinson's (1964) theory of achievement motivation. It is described as the perceived probability that someone will accomplish a specific task (Dinc & Budic, 2016).

More specifically, this construction refers to the ease or difficulty in conducting the behaviour (Tkachev and Kolvereid, 1999).

Bandura and his associates (Bandura et al., 1977; Bandura et al., 1980) dominate the relevant research of perceived behavioural control. While Ajzen differentiates perceived behavioural control from the locus of control developed by Rotter (1966). Similarly, de Vries et al. (1988) also supports the research of Ajzen and Madden (1986) which revealed that perceived behavioural control expectations increased the predictions of behavioural intentions. Perceived behavioural control might change over time compared with the locus of control which more relatively stable and does not change over time. Further, the locus of control assert that the success peoples depends on the effort invested (Rotter, 1966).

The research by (Ngoc Khuong & Huu An, 2015) on 401 students age from 18 to 24 years old parallel with current research as positive and negative perception towards entrepreneurship mediate the relationship entrepreneur network (external environment) and entrepreneurial intention. As same as the research by (Ngoc Khuong & Huu An, 2015) also suggest the mediator role of perceive behavioural control in increasing the entrepreneurial intention.

**Figure 2.4: Theory of Planned Behaviour**



Source: Ajzen (1991)

### 2.9.1. Recent Research based on TBP

Ajzen's (1988) TPB serves as a popular theory to explain individual behaviours and Web of Science shows TBP has been cited more than 5000 times since it first appeared. Lorti and Castogiovanni (2015) studied a total of 42 articles that indicate a relationship between entrepreneurship and TBP. A total of 21 researched articles suggested that TBP is a useful forecasting tool for predicting entrepreneurship intentions. Souitaris et al. (2007) give credence to the idea that an entrepreneurship programme influences the approaches, individual standards, Perceived Behavioural Control (PBC), and intentions of entrepreneurship educational program students to form a new project. Arenius and Kovalainen (2006) undertook a similar study based on the example of different Nordic countries in the Global Monitoring data (GEM) dataset and found a similar convincing relationship. In addition, Katz (2008) used, for the first time, TPB to explain and envisage



individualistic intents in entrepreneurship backgrounds. The author found that the approaches, subjective norms, and PBC were backgrounds for business endeavours.

Carr and Sequeira (2007) found that, apart from the three antecedents listed above, prior exposure to family businesses predicted the development of business creation aims in entrepreneurs. Hence, with such a varied diversity of learning outcomes, it can be concluded that TPB is an appropriate theoretical model to demonstrate and envisage entrepreneurial intentions for business ventures.

Lorti and Castogiovanni (2015) undertook research based on the above literature and focussed on entrepreneurship and the TBP to present a review of researches done in the area. A total of 42 entrepreneurship articles on TBP appear in their final database.

Table 2.3 points to a link between entrepreneurship and TBP and indeed this link has been acknowledged and published in top management journals. It is interesting to note the presence of one particular article that is based on research using longitudinal data to explore novel entrepreneurial start-ups in Norway (Kolvereid & Isaken, 2006). This paper reviews the entire model of TBP and concludes with a set of results which do not support the idea that TBP is a factor in explaining and predicting entrepreneurial behaviour and intent. Discrepancies have been found in results that have only partially reviewed the TBP model. Hence, a clear gap in the literature is notable concerning various articles and research which do not offer a detailed discussion of TBP (Lorti & Castogiovanni, 2015).

**Table 2. 3: Final Journal Count of TBP Citation**

| Journal                                 | No. of Articles | % of Articles |
|---|-----------------|---------------|
| Entrepreneurship: theory and practice   | 12              | 28.6%         |
| Journal of Business Venturing           | 8               | 19.0%         |
| International Small Business Journal    | 6               | 14.3%         |
| Entrepreneurship & Regional Development | 3               | 7.1%          |
| Journal of Small Business Management    | 3               | 7.1%          |
| Technovation                            | 3               | 7.1%          |
| Journal of management studies           | 2               | 4.8%          |
| Academy of Management Journal           | 1               | 2.4%          |
| Journal of vocational behaviour         | 1               | 2.4%          |
| Journal of business research            | 1               | 2.4%          |
| Journal of applied psychology           | 1               | 2.4%          |
| Small Business Economics                | 1               | 2.4%.'        |
| Total                                   | 42              | 100%          |

Lorti and Castogiovanni (2015)

Although numerous articles support the association between TBP and its application to entrepreneurship contexts, Kruger et al. (2000) offers contrasting views. They fail to find any reliable connection between subjective norm and intention. Similarly, Linan and Chen (2009)

undertook research with students in universities in Spain and Taiwan to understand the relation of subjective norm and intention by using structural equation modelling but they could not relate subjective norm to intention. These contrasting findings fuel the curiosity to promote exploration in this field. Hence the current study also explores the relationship between subjective norm and intention.

Elmuti et al. (2012) in a theoretical article make another interesting proposal about the relationship between Perceived Behavioural Control and intention and behaviour. They argue that the individual business creation process has a direct link with entrepreneurial self-efficacy/PBC. Notably, the relationship between self-efficacy and intention may be accountable for increasing intention concerning entrepreneurship (Wilson et al., 2007; Zhao et al., 2005). Entrepreneurial self –efficacy can be defined as a belief in one’s capability to perform the various roles and responsibilities in entrepreneurship effectively (McGee et al., 2009). Self-efficacy triggers entrepreneurial intentions (Benzing et al., 2009; Birtchnell, 2011; Caiazza & Voipe, 2016; Elmuti et al., 2012).

Benzing et al. (2009) failed to find statistical support for the relationship between self-efficacy to entrepreneurial intentions. However, Maula et al. (2005) established that entrepreneurial self-efficacy has an impact on future ventures. This research focused on the entrepreneurial context, but specific behaviour was a missing factor for studies in entrepreneurship. Instances of prosperous business planning and collaboration with successful entrepreneurs are key concepts for students of entrepreneurship education (Honig, 2004). These are major factors that entrepreneurship education programme students are motivated by to persevere and which can eventually lead to higher success expectancy and amplified entrepreneurial self-efficacy (Harvey, 2008). Levenburg and Schwarz (2008) found that business self-efficacy moderates entrepreneurship education and entrepreneurial intentions. This study is an important contribution to the research undertaken because current research also tries to relate entrepreneurial behaviour and entrepreneurial intention in starting a business.

Lorti and Castogiovanni (2015) suggest that the development of TBP suggests exploration of links between business planning and entrepreneurship (Castrogiovanni, 1996; Delmar &

Shane, 2003). Samwel Mwasalwiba (2010) suggests the absence of a link between formal, long-term planning in venture creations and their success. However, Castrogiovanni (1996) submitted a counter view and suggested that only in highly contextualised cases are there links between formal planning and venture survival. Lorti and Castogiovanni, (2015) suggest there is a research gap in terms of understanding the link between intentions and planning in relation to current concepts of entrepreneurial strategy-making as a deliberate and well-ordered behaviour. Benzing et al. (2009) tested the TBP model in the context of entrepreneurship and project formation and noted some failures. They also noted a lack of evidence to validate the relationship of PBC to intentions and behaviours (Kolvereid & Isaksen, 2006). Lorti and Castogiovanni (2015) noted some scope for future studies to empirically investigate the complete TPB model. They conclude that there is some holistic validity in using statistical methods like structural equation modelling to reveal complex mediation and partial mediation associations.

In entrepreneurship research, multiple factors should be considered. Uebelacker (2005) stated that entrepreneurship research is multi-faceted and is influenced by a variety of perceptions which aid understanding. The fields influencing salient research range from pedagogy, economic sciences and social sciences through to psychological sciences, as well as many other disciplines relating to three important themes of research, specifically: educational science, social cognition and entrepreneurship education which are used for the construction of theoretical frameworks (Oviawe, 2010).

The key goal of entrepreneurship education is to create a positive attitude towards entrepreneurship activities and develop thinking skills (Fayole et al., 2006), which may provide chances to the students to acknowledge and/or identify entrepreneurial opportunities (Busenitz et al., 2014). In recent years entrepreneurship scholars have paid increasing attention to intention and its antecedents because they have been shown to predict entrepreneurial behaviour (Entrialgo & Iglesias, 2016). According to Entrialgo and Iglesias (2016), TPB is the most popular intention model. By using this model, academic studies have analysed several effects of EE on the antecedents of entrepreneurial intentions. However, the evidence found is not strong. While some studies found a positive relationship between EE

and attitudes and perceived behavioural control (Rauch & Hulsink, 2015; Souitaris et al., 2007), other studies observed a negative relationship (van Auken, 2013) or no any significant relationship at all (Díaz-Casero et al., 2012; do Paço et al., 2015).

According to Ajzen and Fishbein (2004), the three antecedents mentioned are sufficient to explain the intentions, but their relative importance varies from one context to another (i.e. in some contexts, only one or two of the determinants mentioned may be necessary to explain the intentions). In the field of entrepreneurship, attitude toward behaviour is an important factor that affects the perception of desirability and, in turn, influences intention.

Nielsen and Gartner (2017) revealed that the relationship between subjective norm and intentions is not so clear in prior empirical research. Several studies have found no significant direct relationship between subjective norm and entrepreneurial intentions (Autio et al., 2001; Krueger et al., 2000). This may be because subjective norm tends to influence intentions weakly (Armitage & Conner, 2001) in individuals with strong internal control (Ajzen, 2002). This is a trait that applies especially to entrepreneurial behaviour. Subjective Norm may also exert influence indirectly on the antecedents of intentions.

This discussion indicates that there is still a need to do further research to understand how intention and its antecedents are influenced by EE. Hence, the current research attempts to examine the relationships between EE and various antecedents i.e. Subjective norm, perceived behavioural control and attitude which may have some influence on intention.

## 2.10 Conclusion

This chapter surveys the literature that is relevant to this study to give it a basis and to help define the research questions and hypotheses that will be developed in the next chapter.

A list of key articles for this thesis is given in Appendix 3. The List is based on key themes of the research. Initially the articles based on background of entrepreneurship education i.e. Pittaway, Gibb & Thompson (2008) , then entrepreneurship intention and those who linked the topic of entrepreneurship education and entrepreneurship intention. Interesting paper based on current

academic debates on entrepreneurship education and its characteristics also included such as Miao & James O. Fiet (2014) & Walter and Block (2015).

Some interesting paper who helped to identify the gap has included in the list Nabi et al.,(2017) Fayolle & Linnan (2013). Few papers based on research methods and data analysis has been included in the list Mat et al (2016). The complete list has been discussed in Appendix.

## Chapter 3: Conceptual Model

The aim of this study is to discover what characteristics of ten to twelve week entrepreneurial education courses, that are part of a higher education programme, can influence students to start their own ventures. It seeks to advance the theoretical discussion on the relationship between entrepreneurship courses and entrepreneurial intention, and to identify the practical relevance of entrepreneurship education.

The research question and sub questions are as follows (Section 1.4):

**RQ:** *What are the entrepreneurship education course characteristics (duration only ten to twelve weeks consists contact hours between twenty -twenty-five) which may positively increase the intention (and antecedents) of participants to start their own ventures?*

Research sub-questions:

- 1 What is the impact of entrepreneurial networks on entrepreneurial intention and its antecedents?
- 2 What is the impact of the introduction of a role model on entrepreneurial intention and its antecedents?
- 3 What is the impact of business planning activities on entrepreneurial intention and its antecedents?
- 4 What is the impact of feedback on entrepreneurial intention and its antecedents?

### 3.1 Background of the Study

According to the Theory of Planned Behaviour (TPB), intentions have three independent determinants: attitude toward behaviour, perceived behaviour control and subjective norms (Ajzen, 1991; 2002). The theory states that the behaviour of a person is a result of his/her intentions to perform a behaviour and the resulting intent is influenced by his/her outlook towards the behaviour as well as his/her individual standards. The intention is said to be the immediate precursor of the behaviour.

The Theory of Planned Behaviour (TBPPB) has been applied in the context of entrepreneurship because engaging in entrepreneurship is a behaviour that is under volitional control. However, the role of TBP in entrepreneurship education is still not clear. Many studies have been undertaken to explain the intentions to become an entrepreneur using TBP (Krueger et al., 2000; Liñan & Chen, 2009) and entrepreneurial behaviour (Kautonen et al., 2013). Also, research has been done to evaluate the effects of entrepreneurship education (Ferreira et al., 2012; Liñan et al., 2011; Mwasalwiba, 2010).

Sniehotta et al. (2014) highlight some of their concerns on TPB and provide some alternative models that, based on their opinion, to provide viable alternatives to TPB. However, these authors offer no evidence that the models can withstand any of the criticisms levelled at TPB. Ajzen (2014) asserts that Sniehotta et al.'s (2014) perception is a misunderstanding of the theory and fails to appreciate the work needed to properly apply the theory to efforts to change behaviour and that they wrongly interpret negative findings of poorly conducted studies as evidence against the theory. Ajzen (2014) stresses that TPB is alive and well and gainfully employed in the pursuit of a better understanding of human behaviour.

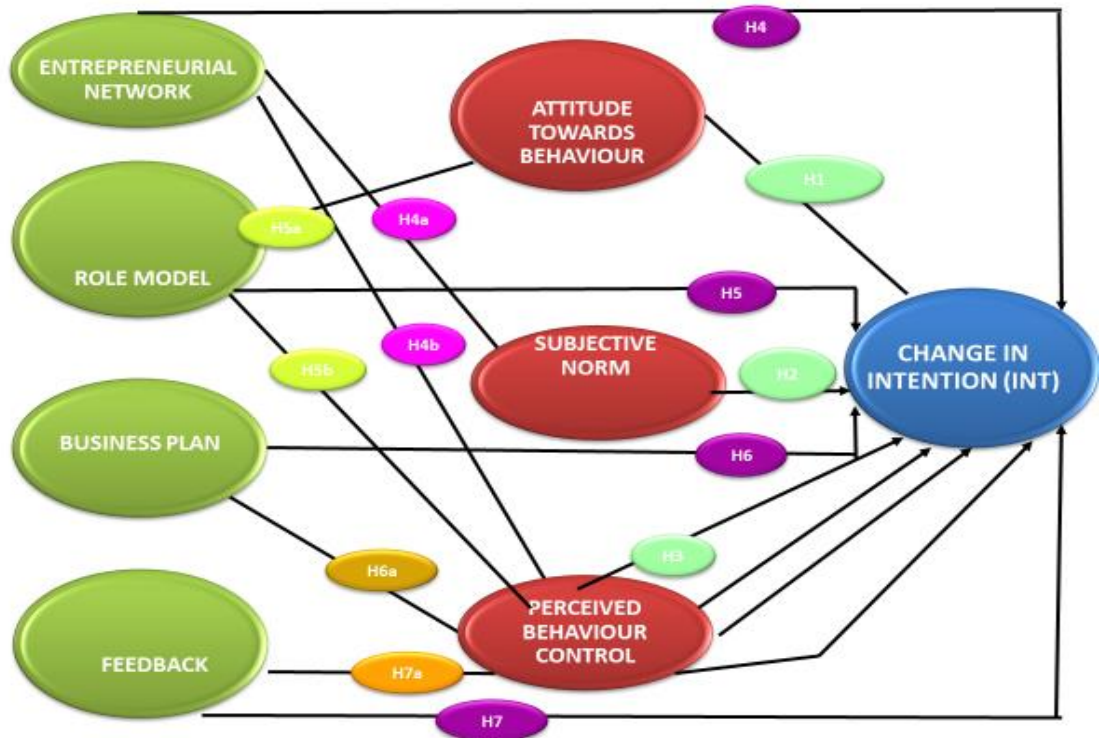
### **3.2 Entrepreneurship Education Characteristics**

This study aims to explore how the specific characteristics of entrepreneurship courses influence the intentions of learners to become entrepreneurs, hence the use of the model. Each characteristic has been explained below in detail.

This research focuses on four key characteristics only: entrepreneurial networks role models, business plans and feedback. These areas are focused on for analysis in greater depth. The rationale for choosing these areas is discussed in detail in Chapter 2. In addition, items from the list suggested by Mueller (2011) have been removed because the research focuses only on the characteristics which are embedded in the teaching methodology. Hence, other items such as practical experience /knowledge have been eliminated since, to gain practical knowledge, students need to have work experience, and various factors can influence their intentions in this regard. This consideration has influenced the overall aim of the study. Similarly, a 'supportive infrastructure' has not been considered in the current study.



**Figure 3.1: Conceptual Framework**



The data for this research has been collected from different educational institutions, and it is likely that these may have seen some variation in terms of providing supportive infrastructures. Hence, had this characteristic been considered then it may have disproportionately influenced the study. In addition, Mueller (2011) provides little clarity as to what counts as a supportive infrastructure. Indeed, supporting infrastructures are not related to experiential learning and, in the current study, the focus is on those characteristics which are based on experiential learning. A further element dropped from the list was 'Explorative and interactive Elements'. The key reason for dropping this item is the lack of clarity about these elements in Mueller's (2011) study. Characteristics such as entrepreneurial networks and feedback are also based on interactions. Hence, if 'explorative and interactive' elements had been chosen, then these may have been confused with other characteristics.

**Table 3.1: Laurillard’s Recommended Teaching Strategy**

|  |                            |
|--|----------------------------|
| Discursive<br>Role Models              | Adaptive<br>Business plans |
| Interactive<br>Entrepreneurial network | Reflective<br>Feedback     |

Adapted from Laurillard (2002)

The characteristics which have been chosen are also identified in the relevant literature. After considering the literature, four characteristics have been selected from the list: business plan activities, introductions to a role model, entrepreneurial networks and feedback. Also, the chosen entrepreneurship education characteristics fit appropriately with Laurillard’s (2002) work based on experiential teaching strategies.

### 3.3 Constructs and Hypothesis Development

#### 3.3.1 Entrepreneurial Intention

Entrepreneurial intention has also been defined in diverse ways. Katz and Gartner (1988) defined entrepreneurial intention as exploring knowledge and other resources to start a venture. Bird (1988; 1992) defined that intention as a mental state that is based on personal intention and experience to start a new venture. Also, Tubbs and Ekeberg (1991) suggest that an intention is served as a stepping stone to execute an entrepreneurial behaviour. Reynolds and Miller (1992) suggest that entrepreneurial intention is the personal commitment towards a new venture. Similarly, Krueger (1993) and Krueger et al. (1995) argue that entrepreneurial intention is a strong predictor of becoming involved in entrepreneurial behavior which may lead to a start-up venture.

Intentions play a key role in explaining human behaviours (Tubbs & Ekegerg, 1991). Many social behaviours, such as creating a new business, are volitionally controlled and these behaviours have been found to be best predicted by intentions (Ajzen, 1991; 2005). According to Raposo and Do Paço (2011) an entrepreneurial intention is the desire to own one's own business or initiate a business (Kruger et al., 2000). Wu and Wu (2008) suggests that intentions are a map of our future behaviour or self-prediction. Bagozzi, Baumgartner and Yi (1999) also supports this statement about the relationship between intentions which, in turn, predicts future behaviour.

In general, the person with a more favourable attitude towards behaviour, has a stronger intention to do that behaviour (Ajzen, 1991). Rudhumbu, Svotwa, Munyanyiwa & Mutsau (2016) suggested the student with a positive attitude towards entrepreneurship education tends to become an entrepreneur once they finish their studies due to their earlier exposure. Remeikiene, Startiene and Dumciuviene (2013) found that the attitudes towards entrepreneurship among Lithuanian students were the main factor of students' entrepreneurial intention. Ferreira, Raposo, Rodrigues, Dinis and Paço (2012) found that personal attitude affected entrepreneurial intention among secondary students in Portugal.

According to Laurillard (2002) feedback processes are also a part of interactive aspects and reflective aspects since feedback gives students the opportunity to reflect and take corrective actions wherever required. However, feedback always comes after the act and therefore students need to act upon it. Feedback provides an opportunity for continuous improvement and can be given at various stages. Evaluation and assessment are a key part of the quality cycle and hence should be taken very seriously since further progress of the students depends on them. The development of entrepreneurial intentions is further encouraged from the beginning of Higher Education courses through to graduation, with the aim of stimulating entrepreneurial behaviour (Smith & Beasley, 2011). The initial development of entrepreneurial intention is particularly essential as it influences the intention to start up business (DeGeorge & Fayolle, 2008).

There are some significant studies which suggest that increase of entrepreneurial intention may be the result of entrepreneurial education (EE) (e.g., Kautonen et al., 2015; Rauch &

Hulsink, 2015; Walter et al., 2013; Sánchez, 2013; Souitaris et al., 2007; Peterman & Kennedy, 2003). However, the studies of von Graevenitz et al. (2010) and Oosterbeek et al. (2010) are inconclusive as to whether entrepreneurship education may result in an increase in entrepreneurial intention or activity. Bogatyreva (2019) and Van Gelderen et al. (2015) hold that there may be some cases where entrepreneurial intention does not turn into actual entrepreneurial activities and create an “intention-action” gap in entrepreneurship. As there is a variation in the outcome of the studies which suggest there may be other factors which may impact on entrepreneurial intention while attending the entrepreneurship education courses (De Clercq et al., 2013; Walter & Dohse, 2012). Bae et al. (2014), Martin et al. (2013) and Unger et al. (2011) suggest that there might be a variety of moderators at play during entrepreneurship education and hence further research is required in the area. Some researchers have found that entrepreneurship may also be the result of interaction with a variety of people during the course, or outside the course (Learned, 1992; Herron and Sapienza, 1992; Naffziger et al., 1994). Pittaway and Cope (2007) assert that despite much research having been done in the area, there is still a need to explore further and try to find the solutions to unanswered questions such as which aspects of these programmes are effective (Laguía, Moriano and Gorgievski, 2019) and try to provide constructive and productive outcomes to entrepreneurship education programmes.

It is popularly believed among researchers that entrepreneurial intentions are key antecedents of entrepreneurial actions (Kruger et al., 2000; Lee, Wong, Foo & Leung, 2011). Intentions dictate the degree to which people are motivated and are an indicator of the level of effort they are willing to put into performing an expected behaviour (Lorti & Castogiovanni, 2015). Ajzen (2005) supports this idea and affirms that intention best predicts actual behaviour. Psychological studies also support this finding (Samwel Mwasalwiba, 2010) and consider intention as a primary element for understanding planned behaviour. Neck and Greene (2011) found that numerous researchers support this idea. Intention significantly impacts on perseverance in terms of entrepreneurial behaviour (Krueger et al., 2000). Therefore, entrepreneurial intention is essential for understanding the process of entrepreneurship (Cheng et al., 2009). Over the last decade, as confirmed by Schlaegel and Koenig (2014), intention has been approached as a relevant consideration in the capability of individuals to

start a new business. Katz (2003) demonstrated these benefits in his investigations and showed there is a relationship between entrepreneurship education and intention. Hence, various institutions are engaged in promoting entrepreneurial intentions and career choice (Laguia, 2019; European Commission, 2013).

The entrepreneurship process is a complex process involving the planning of top to bottom level activities such as the choice of location, the type and the area of business, field and growth strategies and the calculation of financial risk. To overcome these challenges, and to remain motivated, an entrepreneur should have a strong sense of purpose and an intention to engage in the process (Cheng et al., 2009). This primary intention significantly affects perseverance in terms of entrepreneurial behaviour (Krueger et al., 2000). Therefore, entrepreneurial intention is an essential means to understand the inclusive process of entrepreneurship (Cheng et al., 2009). Krueger and Brazel (1994) suggest that intentions are based on perceptions and also are learnable hence entrepreneurship education plays a significant role in the area.

### **3.3.2 Attitude Towards Behaviour**

According to Ajzen (2002, p.5) attitude towards behaviour is defined as “the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behavior in question.” Souitaris et al. (2007) shows that the attitude in relation to entrepreneurship behaviour is related to the difference between the personal perception of becoming self-employed and the intention of working as an employee.

**Hypothesis 1:** Positive attitudes to start their own venture increase the level of entrepreneurial intention.

### **3.3.3 Subjective Norm**

Solesvik, Westhead, Kolvereid and Matlay, (2012, p. 448) explain that subjective norm is known as “the perceived social pressure to perform the action of being monitored.” These are known to be the individual’s values, beliefs and norms of influential individuals that includes family, teachers, other entrepreneurs, friends that are an important factor that

influences the individual. This influence drives and shapes the formation of the entrepreneurship intentions of the individual (Ajzen, 2001).

Subjective Norm is an individual perception about the opinion of other individuals regarding a given behaviour. Others in this context are usually people important to the individual. Tsai et al. (2016) suggests that subjective norm plays a role as mediator in increasing the entrepreneurial intention. Even though the focus of this study is on members of society instead of just students, the results still support the current research by showing social norm as mediator in influencing the entrepreneurial intention. According to them, people in society may encounter more realistic entrepreneurial environments than students and consider more factors, for instance family and time.

Based on their empirical results, previous researchers indicate that the people who have a successful role model in their family, workplace or in a social business setting are more likely to become successful entrepreneurs (Aldrich & Zimmer, 1986; Matthews & Moser, 1995). In other words, the development of entrepreneurs is positively related with family background and childhood experiences, previous job experience and exposure to other businesses (Morris & Lewis, 1995). These factors engender expectation about their entrepreneurial ability to complete certain tasks and influence their intention to be involved in a similar task (Bandura, 1986). As aforementioned above, there are a lot of research proved that the positive roles of subjective norm as a mediator in relationship with entrepreneurial intention. Furthermore, the finding for this research is not surprising as previous research shows that family and people with close ties plays a vital role in formulating subjective norms (Tsai et al., 2016).

**Hypothesis 2:** Subjective norms concerning to start own venture positively influence the level of entrepreneurial intention.

### **3.3.4 Perceived Behavioural Control**

Perceived behavioural control is the extent to which one accepts the perception of the easiness or difficulty of the fulfilment of the behaviour of interest (Liñán & Chen, 2006, p.4).

Ajzen (2012; 2011) illustrate that perceived behavioural control is determined by control beliefs concerning the availability of factors (eg. market opportunities, resources, role models, social support from others and entrepreneurial support) that can facilitate or impede performance of the behaviour.

**Hypothesis 3:** Strong perceptions about one's ability to successfully found one's own company positively influence the level of entrepreneurial intention.

In a study by Souitaris et al. (2007) based on science and engineering students from two European universities in London, UK and Grenoble, France showed a direct and significant relationship between subjective norm and entrepreneurial intention. Wu and Wu (2008) carried out a study of Chinese students in Shanghai which failed to associate subjective norms with entrepreneurial intention. In a recent study by Solesvik et al. (2012) of third, fourth and fifth-year students of economics and business administration studying in three universities in Ukraine revealed that students with a positive attitude towards self-employment are more likely to demonstrate increased intention for developing entrepreneurial activities. Additionally, Solesvik et al. (2012) discovered that students with high perceived behavioural control are more likely to report strong entrepreneurial intention. These researchers demonstrated debatable results and requires further exploration on TPB factors contributing to the formation of entrepreneurial intention of students.

Gifford (2014) argues that despite TPB has been used widely there are concerns about its incompleteness. For instance, the results of a meta-analysis across different behavioural domains (Rivis, Sheeran & Armitage, 2009) support the role of moral norms as a significant predictor of intention. Critics were also identified by Sniehotta et al. (2014) to cite others who fault the TPB 'for its exclusive focus on rational reasoning, excluding unconscious influences on behaviour' (p. 2). Ajzen have repeatedly emphasised (e.g. Ajzen, 2004; 2008, p. 2804; 2011a, Ajzen, 2011b; 2012; Ajzen & Fishbein, 2000; 2005) that TPB does not propose that people are rational or that they always behave in a rational manner.

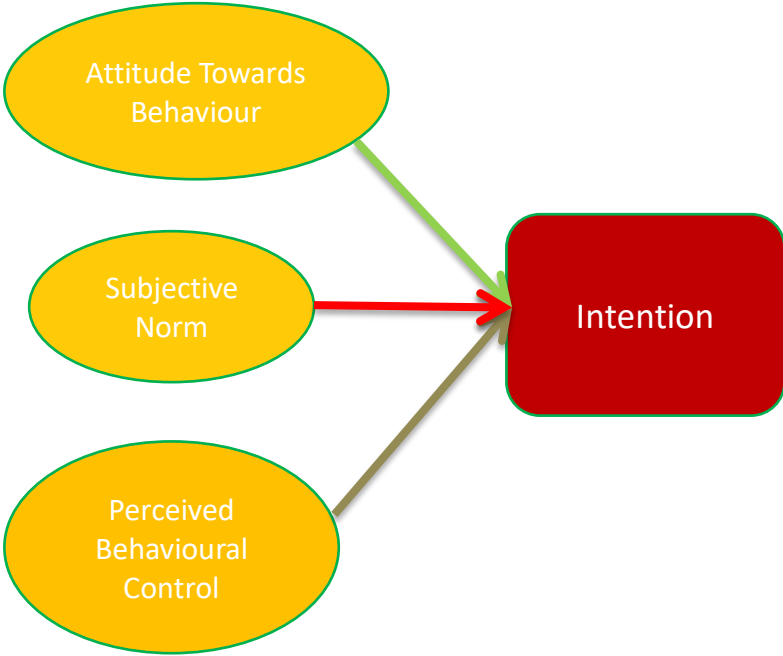
Sniehotta et al. (2014) showed concern about TPB for its ostensible failure to provide an adequate basis for behaviour change interventions. Sniehotta et al. (2014, p.3) argue that TPB

fails to specify how cognitions change, making it difficult to devise effective interventions to modify attitudes, subjective norms and perceptions of behavioural control; and that where empirical tests of behaviour change interventions have been tried, observations have not been in line with the theory. Ajzen, (2011a) clearly indicate that TPB is not a theory of behaviour change. Further, Ajzen (2011a) emphasises that TPB is meant to help explain and predict people's intentions and behaviour. At the present time, TPB is a useful concept that can serve as a useful framework for designing effective behaviour change interventions (Ajzen, 2011a).




Figure 3.2 shows the three conceptually *independent antecedents* of intention as formulated by Ajzen (1991, p.188). Ajzen (1991) examines a person's attitude towards behaviour, subjective norm, and perceived behavioural control are the key factors to determine one's intentions. Ajzen, (1991, p. 181) further explained the concept as "how hard people are willing to try and of how much an effort they are planning to exert, in order to perform the behaviour."



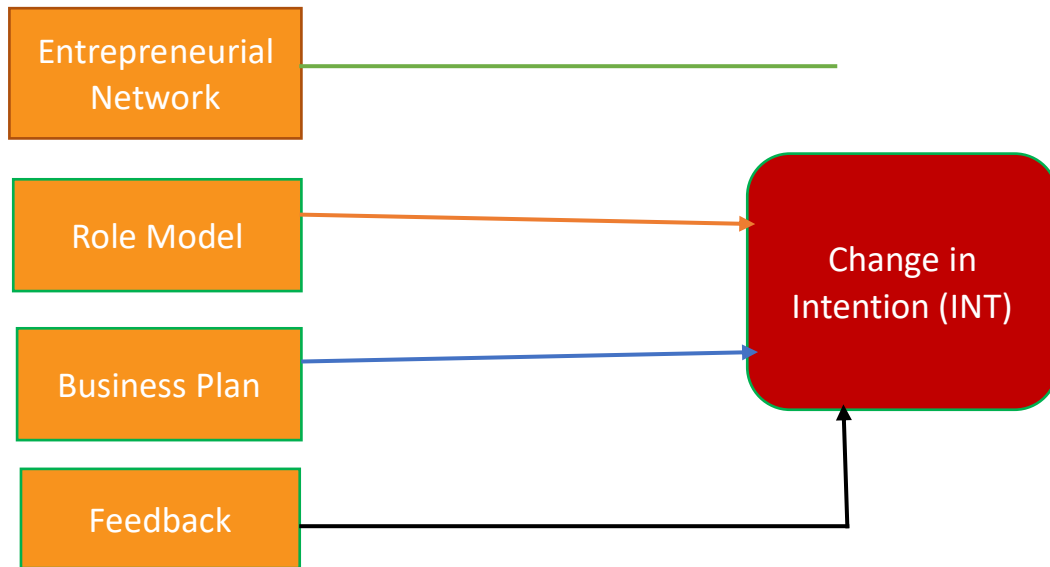
**Figure 3.2: Theory of Planned Behaviour**







Source: Adapted from Ajzen (1991)

|   |    |
|---|----|
|  | H1 |
|  | H2 |
|  | H3 |

**Figure 3.3: Entrepreneurship Course Characteristics**



|   |    |
|---|----|
|   | H4 |
|  | H5 |
|  | H6 |
|  | H7 |

(Muller, 2011)

### 3.3.5 Entrepreneurial Network

Mitchell (1969) defined networks as “a specific type of relations linking a defined set of persons, objects and events” (Paasche et al., 1993, p.175). There are two main theoretical schools of thought in the study of entrepreneurial networks: social network and business network (Brown, Mawson & Rowe, 2018). Business network refer to companies that have

established relationships, directly and indirectly, with other business and non-business organisations (Snehota & Håkansson, 1995). While social networks are by definition "localized" to an individual and these can directly affect the interests, intentions and decision-making processes of new entrepreneurs embedded in their personal networks (Granovetter, 1973). Social network scholars focus on how the social level relates to the network made up people who the individual primarily has contact with such as family members, friends or acquaintances (Sequeira et al., 2007). The social network perspective focuses on personal networks and the qualitative differences between different types of ties (e.g. strong and weak).

Business networks refer to a set of relationships connecting one business enterprise with another business and non-business organisations (Guercini & Ranfagni, 2016; Hakansson, Ford, Gadde, Snehota, & Waluszewski, 2009; Snehota & Håkansson, 1995). Business relationships evolve as a result of the relationships between the parties (Holm, Eriksson & Johanson, 1996). A business network can be considered to be an interconnected web of exchange relationships, in which companies interact with each other for the purpose of doing business (Halinen & Jokela, 2016).

Social networks consist of weak ties and strong ties. The importance of networks is that they can be used as a tool to reduce transaction costs, reduce risks and strengthen access to business ideas, capital and information (Aldrich & Zimmer, 1986). Weak ties exist when the people engaged in non-affective and formal relationships as with business contacts such as with their banker or community organization. This kind of relationship provides people with information regarding available specialist advice and other resources that influence a firm's performance. Strong ties play an essential role in socialization towards entrepreneurship. Further, strong ties related with skills, business related knowledge and experience expose the entrepreneur to the specific information and useful resources necessary for a new business start-up.

The discursive element suggests that the teacher should create an open atmosphere of learning where learners should be allowed to discuss their ideas openly (Laurillard, 2002). Garvin (1991) also suggests that open discussion makes learning more active for learners. Hence, discussions about role-models, and encouraging students to participate in entrepreneurial network events has been included in later sections of the chapter. These two aspects are very popular for entrepreneurship education.

If opportunities for entrepreneurial networking are to be provided during the course, then they may play a key role for influencing intention to start a business (Lavoielet et al., 2011; Dyer, 1994; Scott & Twomey, 1988) also studies of how individuals successfully create and manage new ventures through networks and learning are increasingly popular in entrepreneurship literature (Hoang & Antoncic, 2003; Politis, 2005; Rae, 2005; Rae & Carswell, 2001; Ravasi & Turati, 2005; Wang & Chugh, 2014; Soetanto, 2017). Though some literature argues for the importance of networks in entrepreneurship (Hoang & Antoncic, 2003; Jack et al., 2010; Ostgaard & Birley, 1994), few studies focus on the role of networks in entrepreneurial learning (Pittaway & Cope, 2007; Rae, 2005; Romano & Secundo, 2009; Taylor & Thorpe, 2004). A study by Soetanto (2017) confirms that networking with entrepreneurs helps in entrepreneurial learning; however, the limitation of the study is its very small sample size ; therefore, this research will be helpful to address that gap. Soetanto (2017) also suggests that the importance of networking in entrepreneurial learning has been overlooked. In this research, this element will be included and the ways it can influence the intention explored. Muller (2008) also suggests entrepreneurial networking may influence the subjective norm and intention of students to start their own venture.

Evidence suggests that the use of real life and symbolic role models is a key issue for effective entrepreneurial learning (Lavoielet, et al., 2011; Dyer, 1994; Scott & Twomey, 1988). Some studies have examined how individuals successfully create and manage new ventures through networks and learning, and these ideas are increasingly salient in the entrepreneurship literature (Hoang & Antoncic, 2003; Politis, 2005; Rae, 2005; Rae & Carswell, 2001; Ravasi & Turati, 2005; Wang & Chugh, 2014; Soetanto, 2017). However, other literature argues in favour of the importance of networks in entrepreneurship (Hoang

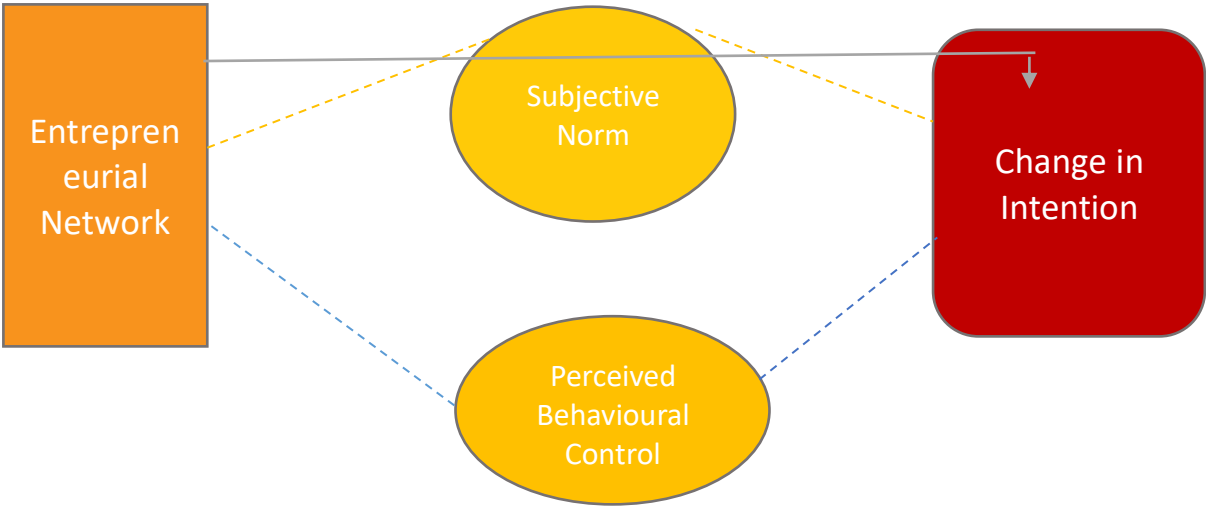
& Antoncic, 2003; Jack et al., 2010; Johannisson, 2010; Ostgaard & Birley, 1994), and some focus on the role of networks in entrepreneurial learning (Pittaway & Cope, 2007; Rae, 2005; Romano & Secundo, 2009; Taylor & Thorpe, 2004). A study by Soetanto (2017) confirms that networking with other entrepreneurs helps entrepreneurial learning; however, the limitation of this study is that a very small sample was considered. Therefore, this research will be helpful to address that gap. Soetanto (2017) also suggests that the importance of networks in entrepreneurial learning has been overlooked. In this research, this element will be included and the ways it can influence intention are explored.




**H4** : Entrepreneurial networking is positively related to change in intention.

**H4a** : The link between entrepreneurial networking and change in intention is mediated by participants' subjective norm.

**H4b** : The link between entrepreneurial networking and change in intention is mediated by participants' perceived behavioural control.

**Figure 3.4: Entrepreneurial Networking and its Influence on Intention Mediated by Subjective Norm and Perceived Behavioural Control**



|   |     |
|---|-----|
|  | H4  |
|  | H4a |
|  | H4b |

### 3.3.6 Role Models

New graduates' behaviour and orientations regarding entrepreneurship are influenced by a number of personal and environmental factors. Researchers have demonstrated the importance of role models in a variety of societies of entrepreneurial activities and situations in the participant's environment (Begley et al. 1997) and the impact cultural values and norms, through role models, may have on entrepreneurial attitudes, intention, or behaviour (Fayolle, Basso & Bouchard, 2011; Hayton, George & Zahra, 2002; Turker & Sonmez Selcuk, 2008).

Entrepreneurial behaviour and the orientation of graduates are influenced by numerous personal and environmental factors. Researchers have linked the importance of the social status of entrepreneurial activities and situations to the student's surroundings (Schmitt & Rodermund, 2004). Thus, cultural standards, morals, and rules may be evident in entrepreneurial attitudes, intentions, or behaviours (Fayolle, Basso & Bouchard, 2011; Hayton, George & Zahra, 2002; Turker & Sonmez Selcuk, 2008).

The part played by close relatives in shaping self-employed professions has been established empirically Benzing et al. (2009). Harvey (2008) observed that the children of entrepreneurs, or people whose parents have had a small business, show the strongest inclination for self-employment and, conversely, the least fondness for employment in a large firm. Furthermore, Smallbone et al. (2010) confirmed that family, and mostly parents, are important in shaping

aspirations to be entrepreneurial. Frank et al. (2010) found an important relationship between the active family role model and the inclination towards an entrepreneurial intention.

Prior entrepreneurial experience also influences entrepreneurial intention. Entrepreneurial experience includes a tangible entrepreneurial experience in the immediate or extended family of the individual. A close friend's experience, or personal experience at work in a small firm can be influential, as can experience in a family business (Manimala, 2008). So, these factors are also known to influence entrepreneurial intention. Studies undertaken by Karakitapoğlu Aygün et al. (2008) on a sample of high school scholars in Australia and by Oviawe (2010) on samples of Russian students validate these findings.

In the French context, Fayolle and Gailly (2015) studied an engineering student's perspective to draw important correlations of entrepreneurial intention and behaviour with other factors like managing student organisations and settling abroad for a short period. The conclusions were consistent with previous studies and confirmed that experience with doing novel things helps to build an entrepreneurial outlook. However, Fayolle and Gailly (2015) encountered a gap in the literature regarding how former entrepreneurial experience affects the influence an entrepreneurship education program has on a student. Thus, the question remains open for discussion

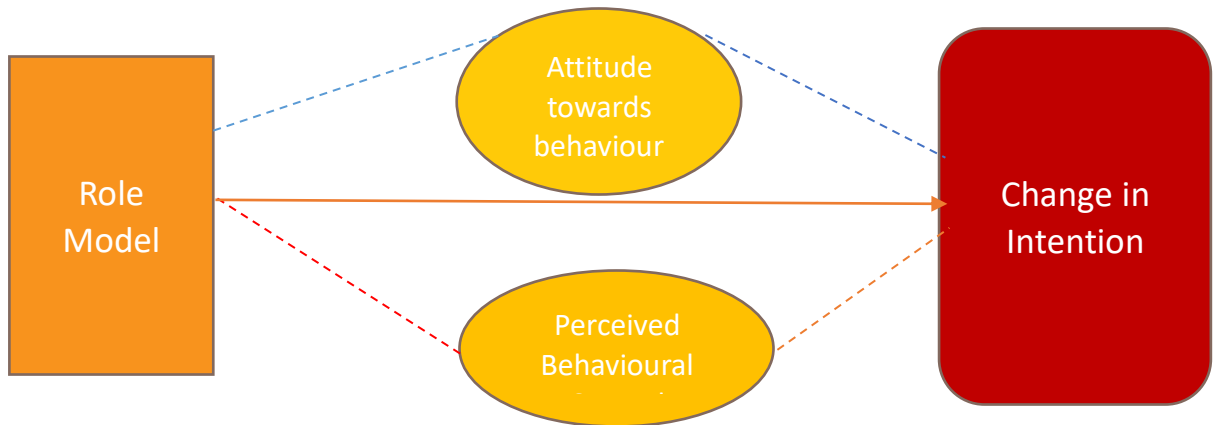
Muller (2008) suggests that role models can have an impact on influencing the participant's attitude, perceptions and also on intention. If participants can see some entrepreneurs in their own network or can access entrepreneurs directly and have conversations with them, then it can influence their intentions. A course which includes role models or introduces entrepreneurs as a part of the course can be more attractive to students and hence can influence their intentions. Therefore, it is relevant to ask about these matters while studying entrepreneurship course characteristics.

**H5** : Introduction of role models in entrepreneurship education is positively related to enhancing the intention of participants to start their own venture.

**H5a** : The link between the introduction of role models and change in intention is mediated by participants' attitude towards this behaviour.

**H5b** : The link between the introduction of role models and change in intention is mediated by participants' perceived behavioural control.

**Figure 3.5: Role model and its influence on intention mediated by attitude and perceived behavioural control**



|       |     |
|-------|-----|
| →     | H5  |
| - - - | H5a |
| - - - | H5b |

### 3.3.7 Business Plan Activities

An adaptive element is when students are able to implement their knowledge into practice. Elmore (1991) argues that knowledge only becomes “usable when it is acquired in situations that entail applications to concrete problem-solving” (p. ix). This element is important in entrepreneurship education because the main aim of entrepreneurship education is to make



students able to implement their business idea in practice. In order to relate this to entrepreneurship education, a business plan has to be developed.

A study by Bell and Bell (2016) confirms the effectiveness of experiential learning such as the business plan. Their research found that the benefits gained from such an approach include both enterprise and entrepreneurial skills, with the greatest impact on student confidence and belief in their own ability to start a business.

Business plan activities in entrepreneurship education is one of entrepreneurial learning (Duval-Couetil et al., 2016). Recent work by Bell and Bell (2016) confirmed that the benefits gained from such an approach include both enterprise and entrepreneurial skills, with the greatest impact measured on student confidence and belief in their ability to start a business.

The benefits of using business plans has been the subject of debate not only in the entrepreneurship education literature (Jones & Penaluna, 2013), but also in the general entrepreneurship literature. Burns (2011) argues that a business plan is vital, as it is an ideal way to present to prospective investors the evidence for the strength of the proposed venture and the professionalism of its advocates. It is also a means to formulate guidelines and a path forward for the successful management of a business (Zimmerer & Scarborough, 1996). The use of a business plan has been credited with encouraging rapid business growth (Kinsella et al., 1993); however, the number of entrepreneurs who create and utilise business plans has not been well defined (Bewayo, 2010). However, Bell and Bell's (2017) use of business planning in entrepreneurship education is debatable. There is some research evidence which supports it, however at the same time other researchers do not agree. Hence, it will be interesting to consider this element and find out if it can influence entrepreneurial intention.

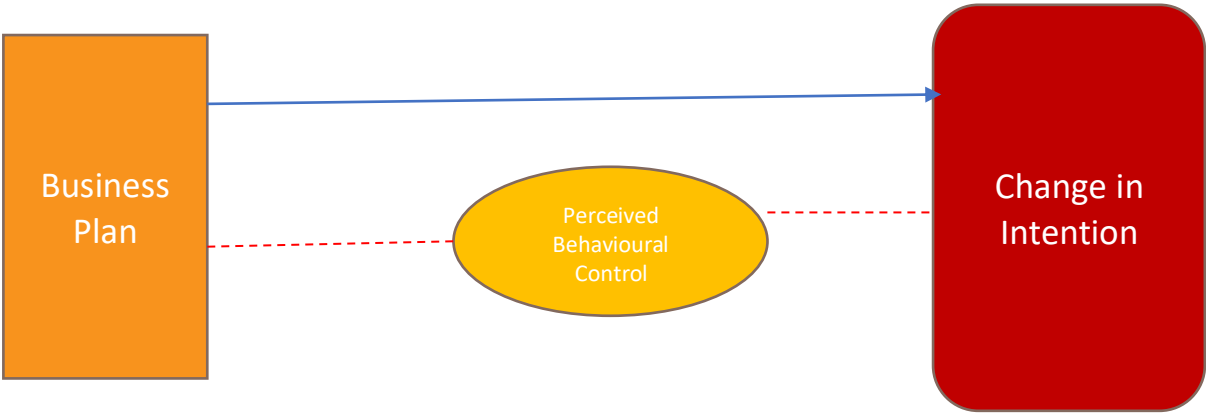
Writing a business plan is also an integral part of gaining practical knowledge where participants have to think about all the elements of their desired business. A business plan is a tangible product which can be seen by participants. It gives them more confidence in their possible venture; hence, it is an important tool which can influence their intentions in different ways. It will be interesting to look into the main contents of business planning and the impact of such planning on influencing intention and its antecedents.

An argument against focusing on business plans has been put forward by Sarasvathy (2001), who argues that entrepreneurs differ from managers because they prefer “effective” rather than “causal” reasoning when beginning a venture. Thus, entrepreneurs’ strengths can be better realised by not forcing them to identify an ultimate end goal (or set of goals), but rather by allowing goals to develop during the enterprise start-up process. Effective reasoning implies that entrepreneurs do not begin with a specific goal, but rather they start with a means, allowing goals to emerge as the entrepreneur engages in risks while exploiting opportunities. Furthermore, negative outcomes from business plan submissions have been observed to discourage otherwise able entrepreneurs from launching their enterprises (Bewayo, 2010). Other paths to business start-up have been put forward advocating exploratory approaches that are more intuitive and logical than composing business plans (Bridge & Hegarty, 2012).

**H6** : The use of business plan activities in entrepreneurship education is positively related to enhancing the intention of participants to start their own venture.

**H6a** : The link between use of business plans and change in intention is mediated by participants’ perceived behavioural control.

**Figure 3.6: Business Plan Activity and its Influence on Intention Mediated by Perceived Behavioural Control**



|     |     |
|-----|-----|
| →   | H6  |
| --- | H6a |

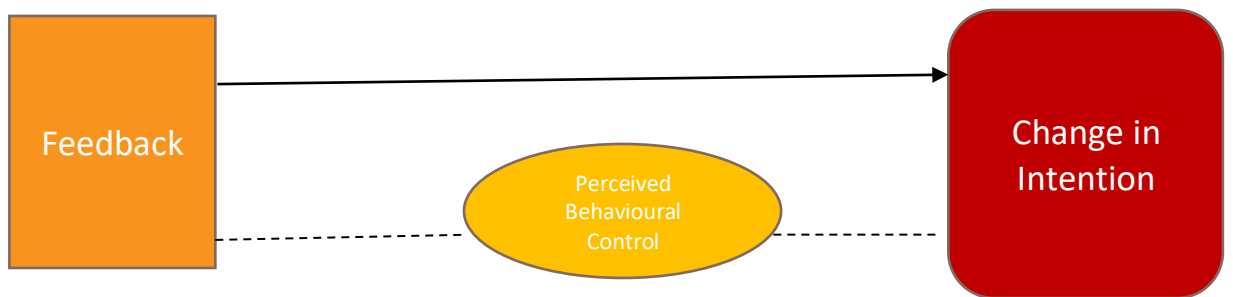
### **3.3.8 Feedback**

Interactive elements are related to what we know about the effectiveness of experiences in order to learn (Laurillard, 2002). This is supported by Garvin (1991), who notes that learning depends on the experiences and interests of students. According to Laurillard (2002), feedback is also a part of interaction and reflection; feedback gives students the opportunity to reflect and take corrective action wherever necessary. Scott (2014 p.49) suggests “There is no widely agreed scholarly definition of ‘feedback’. Indeed, in much of the literature, the definition of the term is left implicit. Interestingly, however, at a time when we have been immersed in the rhetoric of student-centred learning, most scholarly meanings of the term ‘feedback’, whether implicit or explicit, remain teacher-centred”. Generally, feedback comes from the teachers. However, feedback always comes after action and therefore students need first to act. Feedback provides an opportunity for continuous improvement and it can be given at various stages Evaluation and assessment are a key part of the quality cycle and hence should be taken very seriously. Further progress of the teaching and learning depends on assessment and evaluation. Tummons (2007) suggests that “Evaluation of assessment is about judging the extent to which assessment does what it is supposed to do.” Assessment process is about making appropriate judgements and giving proper feedback with some evidence”. Appropriate assessment methods, for example formative and descriptive assessment methods, also help me to provide appropriate information to the learners and maximum opportunities to improve further. Muller (2008) also suggests that if students get their feedback during their course, it may influence their inclination to start their own venture.

**H7** : Providing feedback during entrepreneurship education is positively related to enhancing the intention of participants to start their own venture.

**H7a** : The link between providing feedback and change in intention is mediated by participants’ perceived behavioural control.

**Figure 3.7: Feedback and its Influence on Intention Mediated by Perceived Behavioural Control**



|       |     |
|-------|-----|
| →     | H7  |
| - - - | H7a |

### 3.4 Conclusion

By drawing on the literature of entrepreneurship education characteristics and TBP, ten hypotheses have been developed. These hypotheses are based on measuring the direct impact of entrepreneurship education characteristics on change in intention to become an entrepreneur and other sub-hypotheses have been designed to measure the mediating effect through attitude towards behaviour, subjective norms and perceived behavioural control.

## **Chapter 4: Research Methodology**

### **4.1 Introduction**

This chapter focuses on the research methodology for this research. The multiple methods research design and methodology will be outlined as well as appropriate methods.

The first section focuses on the research methodology. In the extant literature, most research evaluating the impact of Entrepreneurship Education (EE) and learning on entrepreneurial intention (EI) is based on quantitative procedures (Rideout & Gray, 2013). These have been chiefly carried out in developed nations and therefore have limited generalisability to this research context (Gartner, 2010). Either positivist studies (dealing with ‘what’ problems) or interpretivist studies (dealing with ‘why’ and ‘how’ problems) are used to illuminate our research problems (Gartner, 2010).

### **4.2 Research Philosophy**

A research philosophy refers to a system of beliefs and assumptions about the development of knowledge and ultimately determines how the study will be carried out (Burns & Burns, 2008). The research philosophy describes precisely how fresh information is formulated in a specific subject as well as what precisely the characteristics of the understanding are (Saunders et al., 2016). It discusses the association between information and the strategy for gathering information. It also highlights a specific research technique to address the research problem. In social sciences, perception has a number of constituent components - epistemology, axiology and ontology - and these are influenced by human nature as well as actions/behaviour (Bryman & Bell, 2013). Each stage of the research is informed by several types of philosophical assumption (Burrell & Morgan, 1979). These comprise assumptions about human knowledge (epistemological assumptions), about the reality of encounters in research (ontological assumptions) and the personal values of the researcher which are influential and valuable in the research (axiological assumptions). Epistemology concerns

the extent to which knowledge could be or ought to be produced objectively or subjectively (Quinlan & Zikmun, 2015). Ontology refers to the characteristics of knowledge as well as phenomena regarding whether or not they can be found objectively or subjectively (Quinlan & Zikmun, 2015). Assumptions regarding the characteristics of human behaviour concentrate on precisely how ontological variance between societal phenomena as well as items of research in the natural sciences ought to be taken into consideration (McAuley et al., 2007). Axiology refers to judgements of value that direct choice among numerous alternative stages in the procedures of investigation (Heron, 1996).

Any specific research philosophy is at an intersection of epistemological, ontological and axiological considerations and also takes account of human action factors (Creswell, 2014). According to Saunders et al. (2016), there are five research paradigms which are positivism, interpretivism, realism, post-modernism and pragmatism. The most commonly used of these in business research is positivism, which is associated with quantitative methodology. Interpretivism is associated with qualitative methodology while pragmatism may be associated with either methodology. This research does not propose to discuss all the possible research philosophies in depth which would be beyond the scope but only to show why positivism was chosen for this study.

#### **4.2.1 Positivism**

Positivism consists of knowledge that comes from experience and it therefore rejects any *a priori* notions, universal or absolute concepts and holds that there is only one objective reality (Quinlan & Zikmun, 2015). In other words, positivism holds that only “factual” knowledge that can be acquired through observation, including measurement, can be trusted. Thus “...positivism is identical to traditional empiricism: positive (as opposed to theological and metaphysical) knowledge is empirical knowledge, which is the only sound (or scientific) knowledge because observation (or more generally experience) is the only sound source of knowledge” (Halfpenny 1982, p. 115).

Positivism tends to allow for only limited to data collection and interpretation in an objective way. Positivist researchers necessarily use existing theory to develop hypotheses (Saunders

et al., 2016). They need to engage with the world in order to carry out data collection and observation based on hypotheses that are formulated then tested. The philosophy of positivism was proposed by the French sociologist and philosopher Auguste Comte (1798-1857) and developed in the mid-19th century (Sacks, 2017). The key feature of positivism is that knowledge can only be gained through the five senses (Hasan, 2014). It also advocates that the natural and human sciences share common logical and methodological principles and scientific findings can measure these. Positivism draws a basic difference between facts and value in the sense that science deals with facts and value belongs to an entirely different order of discourse, which is beyond the remit of science (Hasan, 2014; Ali & Chowdhury, 2015). According to (Blumberg et al., 2014), there are three characteristics of positivism: (1) that research is value-free, (2) the social world exists externally and is viewed objectively, and (3) the researcher and researched are independent of each other. Table 4.1 summarises the characteristics of positivism identified for the purposes of this study.

According to Vardanyan, (2011), there are five principles of positivism. Firstly, there is no difference in the logic of inquiry between different sciences. Secondly, research should aim to explain and predict. Thirdly, research should be empirically observable via human senses so inductive reasoning should be used to develop statements (hypotheses) to be tested during the research process. Fourth, science is not the same as common sense. Indeed, common sense should not be allowed to bias research findings. Finally, science must be value-free and should be judged only by logic.

Positivists assume that scientists can achieve objective knowledge through the study of the social world in the same way as the natural world (Knox, 2004; Saunders, 2016). So, positivists assume that the natural and social sciences share a basic methodology, which is similar not by virtue of the objects of study but in the sense that they employ the same logic of inquiry and similar procedures of investigation (Guba & Lincoln, 2005). According to McDonald et al. (2015), in their review of research methods between 1985 and 2013, positivism dominates entrepreneurship research. Positivists typically use methods like questionnaires, structured interviews, structured non-participant observation and official

statistics in producing reliable data that could be reproduced by other researchers (Saunders et al., 2016).

**Table 4.1: Characteristics of Positivism**

| Characteristics                         | Description   |
|---|---|
| Aim                                     | Develop universal laws in order to predict and control behavior                               |
| Assumptions About Reality               | There is one reality  |
| Assumptions About Knowledge             | Objectivity must be reproducible  |
| Assumptions About Method                | Theory already out there; seeks to identify method; scientific method; hypothetical deductive |
| Stance Toward Values                    | Neutral— to avoid bias  |
| Stance Toward Persons Studied           | Participants are “things;” “its”  |
| Stance Toward Validity                  | No validity without reliability; seek to reduce error   |
| Research v. Practice                    | Researcher passes knowledge on  |
| Whose Voice is Represented in Accounts? | Passive; those NOT researched   |

The current study examines the influence of entrepreneurial intention on entrepreneurship education through the introduction of role models, entrepreneurial networks, business plans and feedback. The research develops a conceptual model with hypotheses based on earlier



studies. Accordingly, this research adopts a positivist approach which is based on the theory of planned behaviour to develop a conceptual model and the proposed conceptual model is tested to increase understanding about entrepreneurship education.

However, according to (Riyami, 2015) there are a number of limitations associated with the positivist paradigm. First, human affairs, including learning and teaching, are linked to intentions, goals and purposes that give them meaning and meaning is not susceptible to analysis by measurement (Gage, 1989, p. 4). Secondly, the scientific method should be limited to natural phenomena which are stable across time, context and space, which is not necessarily true of social phenomena. Finally, because positivism is intended to measure phenomena that are already understood, it is not good for providing new insights about reality.

#### **4.2.2 Interpretivism**

Interpretivism was developed as a critique of positivism from a subjective perspective and holds that people are individuals and should be treated as unique research participants and not objects. People are approached as social phenomena as they create meaning (Saunders et al., 2016). That is, human behaviour cannot be described, much less explained, based on external and objectifiable characteristics (Santos, 2002). In addition, the researcher is part of what is observed, and the research is driven by interest (Blumberg et al., 2014, p.17). Interpretivists collect qualitative data and the most popular of its methods is interviews because they allow the researcher to probe for information that may not be directly observable. As Wellington and Szczerbinski (2007, p. 81) say of interviewing, “We can probe an interviewee’s thoughts, values, prejudices, perceptions, views, feelings and perspectives.” Unlike the positivist paradigm, the interpretive paradigm does not necessarily value measurement and, though it relies on empirical observation, it is the interpretation of what is observed that is most significant in an interpretivist study (Quinlan & Zikmun, 2015). Table 4.2 compares the key features of positivism and interpretivism

**Table 4.2: Comparison of Positivist and Interpretivist Assumptions**

| Features  | Positivist Assumptions  | Interpretivist Assumptions   |
|---|---|--|
| Purpose of research   | To discover the one objective truth   | Understand and interpret students' and teachers' perspectives of the factors that could impact on the successful use of e-learning and face-to-face instructional approaches in ways that complement each other.   |
| Ontology<br><br>1) Nature of 'being'/ nature of the world<br>2) Reality | <ul style="list-style-type: none"> <li>• Have direct access to real world</li> <li>• Single external reality</li> </ul> | <ul style="list-style-type: none"> <li>• There are multiple realities.</li> <li>• Reality can be explored, and constructed through human interactions, and meaningful actions.</li> <li>• Discover how people make sense of their social worlds in the natural setting by means of daily routines, conversations and writings while interacting with others around them. These writings could be text and visual pictures.</li> <li>• Many social realities exist due to varying human experiences, including people's knowledge, views, interpretations and experiences.</li> </ul> |

| Features   | Positivist Assumptions  | Interpretivist Assumptions  |
|--|---|---|
| <p>Epistemology</p> <p>1) 'Grounds' of knowledge/relationship between reality and research</p> | <ul style="list-style-type: none"> <li>• It is possible to obtain hard, secure objective knowledge</li> <li>• Research focuses on generalization and abstraction</li> <li>• Thought governed by hypotheses and stated theories</li> </ul> | <ul style="list-style-type: none"> <li>• Events are understood through the mental processes of interpretation that is influenced by interactions with social contexts.</li> <li>• Those active in the research process socially construct knowledge by experiencing the real life or natural settings.</li> <li>• The inquirer and the inquired-into are interlocked in an interactive process of talking and listening, reading and writing.</li> <li>• A more personal, interactive mode of data collection.</li> </ul> |
| <p>Axiology</p>  | <ul style="list-style-type: none"> <li>• Value-free research</li> <li>• The researcher is detached, neutral and independent of what is researched</li> <li>• The researcher maintains an objective stance</li> </ul>                      | <p>All research inevitably involves the researcher's point of view</p>  |
| <p>Methodology</p> <p>1) Focus of research</p>   | <ul style="list-style-type: none"> <li>• Concentrates on description and explanation</li> <li>• Using deductive approaches, large samples, highly structured, measurements, typically quantitative methods of</li> </ul>                  | <ul style="list-style-type: none"> <li>• Processes of data collected by text messages, interviews, and reflective sessions</li> </ul>   |

| Features   | Positivist Assumptions  | Interpretivist Assumptions   |
|--|---|--|
| <p>2) Role of the researcher</p> <p>3) Techniques used by researcher</p> | <p>analysis, but a range of data can be analysed</p> <ul style="list-style-type: none"> <li>• Detached, external observer</li> <li>• Clear distinction between reason and feeling</li> <li>• Aim to discover external reality rather than creating the object of study</li> <li>• Strive to use a rational, consistent, verbal, logical approach</li> <li>• Seek to maintain a clear distinction between facts and value judgments</li> <li>• Distinction between science and personal experience</li> <li>• Formalized statistical and mathematical methods predominant</li> </ul> | <ul style="list-style-type: none"> <li>• Research is a product of the values of the researcher.</li> </ul> |

Adapted from Carson et al., 2001, p. 22 and Thomas, 2010, p 298.

The main interest of the interpretive paradigm is revealing the meanings of human actions and social life in general, starting from the penetration in the subjectivity of the human being and their situations, beliefs, motivations and intentions that guide them to act. Interpretivists do not begin with a theory; rather they develop a theory or pattern of meanings as part of the research process (Riyami, 2015). They also implement a methodology that allows the researcher to conduct research in a naturalistic way from a different perspective and from various angles. Therefore, they can use case studies, fundamental theories, ethnography, phenomenology and life histories to develop research. Using this approach can lead researchers to develop personal relationships with groups to achieve insider views (Tuli, 2010). However, sometimes they become frustrated by an inability to limit the scope of the study and to link findings to research questions (Bryman, 1998). They should possess the skill to organize data and create links between these and the principle research questions. The

purpose of this type of research is to understand through accessing the meaning given by the participants to the phenomena under study. Thus, interpretivism uses qualitative methods to analyse the social.

Since this study aims to gain an overview of course characteristics on the effectiveness of entrepreneurial education rather than an insight into the individual's response to them, this was not considered to be a suitable philosophy for this research.

### **4.2.3 Pragmatism**

Pragmatism refers to experimental, empirical, and purposive thought applied to experience and related to the principle that usefulness, workability, and practicability policies, and proposals are the criteria of their merit (Saunders et al., 2016). In the philosophy of education, the notion that the student learns by doing is salient.

Pragmatism was founded by Charles Peirce in the nineteenth century in the US. This philosophical method holds that truth is what is established by the scientific method if the investigation continues long enough. Peirce denies the correspondence principle as a criterion of truth, which is typical of metaphysical realism and scientific realism – and positivism. It also states that something is real when a community of scientists agrees on its existence. For Peirce, scientific knowledge depends on the greater or lesser degree of usefulness of theory for the purposes of science. So, science progresses when better and more reliable theories are available. A body of scientific knowledge has pragmatic consistency but may develop because research methods can evolve and grow and can thereby construct new ways of reasoning (Putnam, 1981; 1987). Pragmatism was popularized by William James (1907) and by John Dewey (1948) who called it *instrumentalism*. Richard Rorty (1979) is a contemporary philosopher who has developed some of the views of these thinkers. A pragmatist is anti-realist about scientific theories, claiming that they are merely tools to organize descriptions of phenomena and to make inferences and will be replaced by better tools in due course.

The pragmatist, functionalist and instrumentalist positions are characterized by considering science as an instrument that aims to produce theories that have withstood the most demanding empirical tests to make them more reliable. Pragmatism distinguishes between real world objects and theoretical idealizations of science and science is knowledge about the world which has a functional nature. The best theories are those that have overcome the most stringent tests and are useful as reliable guides to achieve scientific objectives.

Pragmatism holds that science is not the only valid route to knowledge and it is partly aligned with the relativistic argument against the scientific positions of positivism and realism. Pragmatism can in fact be considered an intermediate position between realism and radical relativisms and this is evident in the salient views of scientific progress and the dynamics of the acceptance and rejection of scientific theories.

Although pragmatism does not propose that science can validate manifestly erroneous knowledge, it does suggest that even the most imaginative programme could be fruitful, thanks to the concerted creativity of a team. In addition, the sociology of science has held that a scientific community has the potential to hold theories or adjust to anomalous empirical evidence to maintain the stability of a belief system (Barnes, 1982), as a prerogative of its members (Bloor, 1971/1991).

From another point of view, pragmatism resonates with realism since they are empirically equivalent, that is, they can share the same basis of empirical evidence. This thesis underscores the denial of the relativistic principle of under-determination, admitting the possibility of contrasting isolated hypotheses. Instrumentalism on the other hand usually involves some idea of truth or verisimilitude but is much more restrictive and usually associated with Popperian realistic positions (Popper, 1972). According to this concept, descriptions of the observable world can be true or false depending on how one describes it. However, for instrumentalists, theoretical constructs are not judged on the criteria of truth or falsity, but rather on their usefulness as tools to help control of the observable world. Thus, descriptions of the observable world can be true or false depending on how useful they are.

A central weakness of pragmatism, which is a key criticism, is the differentiation it makes between theoretical and observational entities. It adopts an inductivist approach that leads proponents to give credibility to only that which is taken to be reliable observation. This position is undermined because all observation statements depend on theories and are therefore fallible. Thus, it has been argued that the radical point of view of pragmatists rests on a fallacious distinction.

Pragmatism is often chosen as the philosophical context for mixed methods research since it is able to encompass both the objective and subjective approaches at the same time. (Morgan, 2014)

#### **4.2.4 Chosen Research Paradigm**

This research is situated in the positivist paradigm since it is an overview of a field which uses well known concepts and tests the relationships between the using quantitative data.

In the positivist view human behaviour is considered passive and can be controlled by external environment and factors. In the current research entrepreneurship education characteristics i.e. business plan activities, introduction of role models, entrepreneurial network and feedback are all external factors. Hence positivism is the most suitable approach for this study.

#### **4.3 Research Design**

Research design refers to the general plan of how researchers go about answering their research question(s) (Saunders et al., 2016). The importance of the research questions cannot be overemphasised and must be provided as clear objectives. Scholars express research design in the form of the entire strategy for carrying out the research which makes up an assemblage of theories, methodologies, approaches as well as relevant techniques of investigation (Creswell, 2009; Creswell, 2014). The research design is a structure for the development of results which is appropriate for evaluating research questions (Bryman & Bell, 2011; Denzin & Lincoln, 2011). In this respect, research design overtly or implicitly entails possibilities concerning a research outlook, which guides the research approach that

is selected. A research strategy affects the choice of procedure in terms of the research investigation and this often produces an effect on the selection of research techniques. Research techniques are merely an accumulation of methods and they are also methods for collecting as well as analysing data (Gill & Johnson, 2002; Saunders et al., 2012).

#### **4.4 Research Approach**

The research approach is the procedure through which social scientific concepts are produced, examined and validated (Gill & Johnson, 2002; Saunders et al., 2009). Accordingly, the research approach is a common positioning of the association between theory and study (Bryman & Bell, 2011). There are two primary methods to research which are qualitative research and quantitative research though both of these can be used in a mixed methods study.

Qualitative approaches refer to the meaning, the definition or analogy or model or metaphor characterizing something (Blumberg et al., 2014, p. 148). Bryman (2009) notes that qualitative research works well using an inductive approach. Based on an inductive approach, the researcher looks for patterns in the data then delineates generalizable conclusions based on the findings and observations of the research in order to develop new theories around the research topic. There are various research strategies for qualitative research including narrative research, grounded theory, ethnography and case study (Antwi and Hamza, 2015).

A qualitative approach was rejected for this research as the aim was to develop new theory for entrepreneurship education characteristics based on numerical data. In this study, the quantitative approach is used.

##### **4.4.1 Quantitative Approach**

Quantitative research focuses on the measurable aspects of a problem and understand how prevalent it is by looking for generalisable results within a larger population, by examining data to test hypotheses (Saunders et al., 2016).



In this study, based upon the literature certain constructs for the surveys were implemented from earlier research. After developing a structured survey questionnaire, the instrument was piloted with fifty study-active professionals to establish whether there is content credibility. Consequently, the survey was amended according to feedback from the pilot respondents. It was essential to make sure that the questions were clear, as well as relevant to deal with the research objectives. A quantitative approach involves analysing existing theory to help the researcher decide what to test and what methods the research strategy should involve like interviews and surveys. As this research applied a quantitative approach, the researcher

**Table 4.3: Differentiation between Qualitative and Quantitative Research Approaches**

| <b>Factors</b>             | <b>Qualitative</b>  | <b>Quantitative</b>  |
|----------------------------|---|--|
| <b>Characteristics</b>     | After understanding the relationship among the variables by emphasizing on different type of data collection methods a new theory is created.   | It analyse the relationship between two major variables and are assessed statistically and numerically.  |
| <b>Role of theory</b>      | It deals with inductive research approach that helps to make new theories based on the findings of the research.  | It is based on deductive research approach that tests the relevant theories and after that, the hypotheses are tested that whether they are accepted or rejected based on the positive and negative outcome. |
| <b>Research philosophy</b> | It follows interpretivism where the topic is studies by the researcher in it circumstance, a rising design is used, and the categories are recognised at the time of ongoing process. | It follows the positivism philosophy that involves testing the authentication of the exiting theories and models related to the research topic and help to understand the research topic clearly.            |
| <b>Research strategy</b>   | Grounded theory, ethnography, case study, narrative research  | Survey and interview   |

(Harrison and Reilly, 2011, p. 7)

conducted a questionnaire survey. The questionnaire exercise was completed between September and December 2017. The survey was conducted in classrooms during the academic term. Classroom completion of questionnaires is a reasonable strategy commonly used by numerous researchers (Andrew, 2007).

Additionally, this method has frequently been utilized in Entrepreneurship Education studies (Packham et al., 2010). From the extant literature, the strategy usually produces an excellent response rate of greater than 60% (imbd).

#### **4.4.2 Research Strategies**

A research strategy is a general orientation that sets out how the research is conducted, and it can be based on either a qualitative or quantitative strategy, or both (Bryman & Bell, 2011). While some argue that qualitative/quantitative research classifications are ambiguous, not useful or even false (Layder & Layder, 1993), others insist that the classification is very informative (Saunders et al., 2009). Any strategy chosen provides specific direction for the methods and techniques to be used in data collection and analyses (Saunders et al., 2009; Creswell, 2014).

Quantitative research requires a deductive approach where the focus is on theory testing (Saunders et al., 2009). This strategy not only incorporates the practices and norms of the natural scientific model but also embodies a view of social reality as an external, objective reality. Conversely, qualitative research is a strategy that emphasises narrative experiences and accounts of social actors rather than quantification of empirical data (Antwi & Hamza, 2015). This predominantly relies on an inductive approach where the focus is on theory generation/building. This strategy rejects the practices and norms of the natural scientific model. Instead, the strategy emphasises the ways in which individuals interpret their social world. This strategy embodies a view of social reality as a constantly shifting emergent property of individuals' creation (Bryman & Bell, 2011). Thus, this study is deductive and proceeds by formulating hypotheses then testing them.

#### 4.5 Research Context

Over the past twenty years considerable progress has been made in entrepreneurship education and learning in the majority of the developed nations around the world (Matlay & Carey, 2006). The number of entrepreneurship programs in the UK has grown tenfold from 1979 to 2001 (Katz, 2008) and investment in private enterprise courses continues to rise (Gwynne, 2008). This increase "can be viewed as an indicator of prevalent governmental perception in the beneficial influence that private enterprise could have on the socio-economic as well as political system of a nation" (Matlay, 2008). Public policy makers have acknowledged the significance of entrepreneurship as an indicator of economic growth and policy can bring entrepreneurship into more focus in schooling to boost entrepreneurial endeavour (Matlay, 2008). The European Commission, for instance, approves this kind of assistance, mentioning that the "primary reason for entrepreneurship schooling is always to cultivate entrepreneurial capabilities as well as mind-sets" (European Commission, 2008, p56). In this way they endorse the idea of incorporating entrepreneurship more thoroughly into academic curricula.

#### 4.6. Research Methods

The most popular research strategy in quantitative approaches for data collection uses surveys (Ellis & Levy, 2009). A survey is a typical data collection technique for social scientific research. In business management, this strategy is the most popular and traditional strategy and is usually related to the deductive approach that is concerned with existing theories and testing formulated hypotheses (Saunders et al., 2016). The survey strategy is useful for collecting relevant data connected to the research topic and useful for analysis based on descriptive and inferential statistics. As such, a survey consists of a series of questions that are directed at a representative portion of a population, and aimed at ascertaining states of opinion, attitudes, or behaviours of individuals on specific issues. There are two main types of survey consisting of descriptive and analytical surveys (Bryman, 2006). Survey strategies are also considered to be suitable methods in quantitative research as they are cost-effective, easy and useful for quickly collecting data from large numbers of

participants (Collis & Hussey, 2013). According to research by McDonald et al. (2015), from a total of 3,749 articles in their sample over 29 years, a total of 3,6169 primary methods were found, and the survey method was the most dominant at 54.2% compared to other strategies such as interviews, case study, document analysis, action research, grounded theory, ethnography and archival research.

This research was based on a design structure comprising of five stages as follows:1) designing the survey 2) adapting the research question 3) carrying out a pre-test pilot survey, 4) collection of data and 5) analysis of data. These strategies were seen as cost effective and suitable to access a large sample of respondents. While conducting the survey, there are three essential steps which are sampling, data collection and instrument Agarwal and Selen (2009). The pre-test and pilot test concepts are explained below.

In this study a survey was conducted on students mostly from business and management disciplines to identify individuals with entrepreneurial inclinations. This research used stratified sampling which attaches respondents to geographical locations according to their availability. Efforts were made to ensure that their identities would be protected, and the data would only be used only for academic research purposes as this encouraged them to share their views and opinions.

#### **4.6.1 Pre-Test**

It is important to carry out a pre-test because it is likely that problems cannot be predicted and doubts that may arise during the application of the questionnaire must be taken account of. This helps the researcher to obtain better results (Hakim, 2007). Without a pre-test, time, money and credibility could be compromised if any serious problems are identified with the questionnaire in the application phase. In this case, the questionnaire would have to be recreated and all information gathered would be lost. Goode and Hatt (1972) argue that no amount of thought, no matter how logical the mind is, and how brilliant the understanding is can replace a careful empirical verification. It is important to know how the data collection instrument behaves in a real situation through the pre-test.

According to Mattar (1994), pre-tests can be performed even in the initial stages, when the instrument is still in development, when the researcher can carry the test out through a personal interview. Each part of the procedure must be designed and implemented exactly as it would be in the context of live data collection. The questionnaire should be presented in a final format and the sample (although smaller) should be obtained according to the same plan that will generate the final sample. The results of the pre-test are then tabulated so that the limitations of the instrument are known.

#### **4.6.2 Pilot Testing**

Pilot testing is related to establishing if the research instrument will work as a live project on a small number of people identified as a pilot population (Ellis & Levy 2009). The purpose of using a pilot test is to make sure that the questions will be understood by all respondents in the same way as much as possible. In other words, pilot testing will reduce the error or weaknesses of the questions before launch in the real field. This helps the researcher to estimate their timing with respondents and accurately inform respondents about how long it will take to complete the questionnaire.

There are a few ways to establish the extent to which respondents understand the questionnaires. This can include retrospective interviews which ask respondents about timing whilst paying attention to difficult questions and asking them for feedback about the survey. It takes account of cultural sensitivity and gathers feedback on the nature of the research instrument. Finally, feedback can be obtained via debriefing and then the final version can be revised. Respondents need to be debriefed to understand patterns of feedback and to use the data to revise the research instruments or measurement strategies.

During the pilot study for this research a hundred responses to the pilot questionnaires were considered. Fifty were based in London and fifty came from Delhi. Initially, a five-point Likert scale was used but it was found to provide inaccurate results, hence it was replaced with a five-point scale.

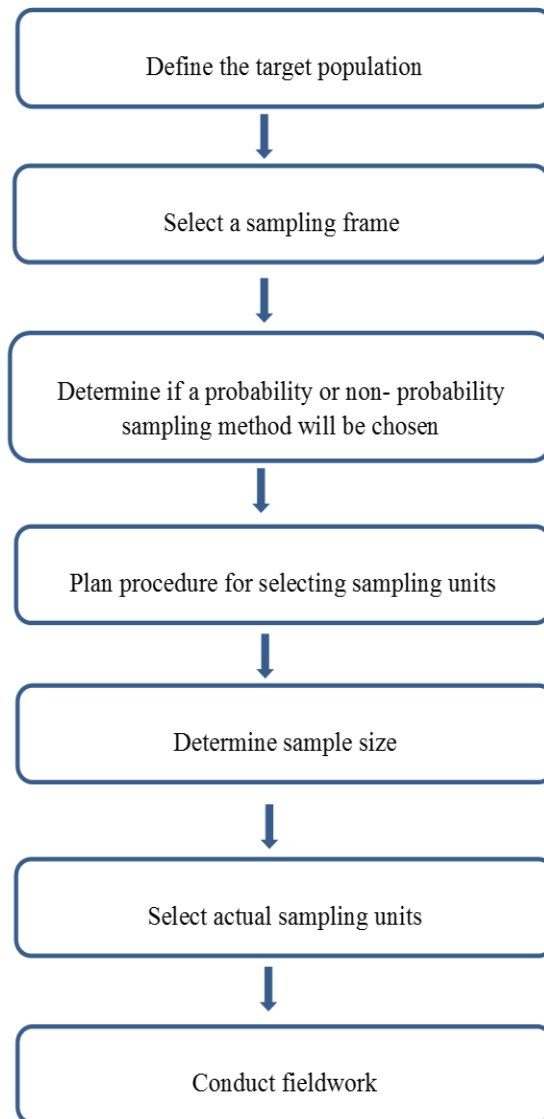
A few elements from the questionnaire were removed, particularly from the post course questionnaire (Part B) which initially comprised of 28 elements and was reduced to 22. These elements were removed because they were repetitive in nature and focused on only one aspect.

#### 4.7 Sampling and Strategies

Sampling is the process of selecting a set of individuals from a population in order to study them so as to be able to represent the whole population (McDonald et al., 2015). The sampling technique can be classified as either probability or non-probability (Saunders, Lewis & Thornhill, 2016). Probabilistic sampling refers to procedures that use some form of random selection of its members with the aim of achieving unbiased objectivity. Accordingly, the samples or surveys must characterize the target population. Moreover, probability sampling is the most popular method and the one that is most used for making robust and reliable conclusions (Brick, 2014). Probabilistic sampling procedures must meet four criteria (Chochran, 1977, p.9):

1. It should be possible to define the set of distinct samples that the procedure can select.
2. Each possible sample has a known probability for selection.
3. Samples are selected by a random process in which each sample has the same probability of being selected.
4. The method for calculating the result leads to a single result for any sample from that population.

**Figure 4.1: Stages in the Selection of a Sample**



(Saunders et al., 2016)

However, non-probability samples related to the selection of unknown target populations may have to be used as the source of information, but this may lead to high bias (Saunders et al., 2016; Buelens et al., 2015). The researcher may have to manage the survey of the population in a limited time frame, with restricted access and under cost constraints. Non-

probability sampling techniques include snowball, quota sampling and convenience sampling (Lodico et al., 2010).

There are five sampling techniques for probability sampling and these are: simple random, stratified random, systematic random, multi-stage and cluster (Saunders et al., 2016). The sampling technique used in this research is convenience sampling which is useful for selecting respondents and applying a stratified random method (Tashakkori & Creswell, 2007; Teddlie and Yu, 2007).

#### **4.7.1 Indian Sample**

Data were collected from a total of 10 colleges/universities (five from London and five from Delhi) and similar types of course were considered. One thousand questionnaires were distributed amongst these colleges. In both cities, only particular colleges will be selected who offer courses of between 12 and 14 weeks in entrepreneurship. Data were recorded accurately, and for each participant, pre-course and post course questionnaires were completed. Students had to complete both questionnaires for their input to be considered valid (Pre and Post).

The population from which our Indian sample was taken is large but well documented. According to government of India report on education 2016, the total student enrolment is classified into 8 levels: Ph.D., M.Phil., postgraduate (PG), undergraduate, PG Diploma, Diploma, Certificate and Integrated. The highest number of students are enrolled at the undergraduate level across India. Similar situation could be observed in States/UTs. Out of the total enrolment of 34,584,781 students, the vast majority of 27,420,450 students are enrolled in undergraduate programmes, that is a sweeping 79.3%. On the other hand, second to undergraduate s, 11.3% students are enrolled in postgraduate programmes which is approximately 39.2 million students. There are 5,753 students enrolled in Integrated Ph.D. programmes in addition to 1,26,451 students enrolled at Ph.D. Level. The student enrolment from the undergraduate level choosing to go higher to postgraduate programmes is thus decreasing steeply. There is a small share of 7.4% students enrolled at Diploma level in India that amounts to around 25.5 million students and the majority of these students are enrolled



in Teacher Training, Nursing and Technical streams. However, a small share of 1.4 million and 2.3 million students are enrolled each at Certificate and PG Diploma levels respectively, constituting approx. 0.4% and 0.7% of the total share at each level. Ph.D., M.Phil. and Integrated levels also have less than 0.5% student enrolment at each level. As the report suggests that largest number of enrolments in India is in undergraduate courses therefore undergraduate courses have been chosen for this study. Interestingly only 1.91% (Government of India report 2016) are enrolled in management courses.

The data for this study was gathered from universities in Delhi. The total number of universities in Delhi is 26 i.e. and total number of colleges in Delhi that provide entrepreneurship education courses at undergraduate level are 17 and their annual enrolment in is 1,527 undergraduates. From these seventeen, five random colleges were selected for the current research. However, to keep the confidentiality commitment, the names of the institutions are not mentioned here.

Entrepreneurship education is still at the initial stage in India (Pache & Chowdhury, 2012) but it is growing slowly. The teaching contents, objectives and teaching strategies are followed by British universities Dasgupta (2016). There are various programmes where teachers have regular visit in British universities such as Greenwich university, Reading university and London business school. Indian teachers spend a week or so in training and learning and try to implement the similar structure in their courses. Kharat (2003). In order to do well and independently achieve success has emerged as the top reason driving the growth of entrepreneurship programs, followed by inspiration from Indian and foreign innovators, liberalization and favourable business environment and unemployment. By the 1990s some institutions recognised the importance of entrepreneurship education courses and its significance in the growth of the economy. A few institutions have been established based on a variety of courses (Komulainen et al., 2014).

#### **4.7.2 UK Sample**

Data were also collected from 5 colleges/universities in London. According to HESA full time and part time education are the key modes of delivery in the UK (Table 4.4)



**Table 4.4: UK Students in Higher Education**

|           | Other Undergrad | First Degree | Postgrad taught | Postgrad research | Total     |
|-----------|-----------------|--------------|-----------------|-------------------|-----------|
| Full Time | 25%             | 89%          | 53%             | 75%               | 76%       |
| Part Time | 75%             | 11%          | 47%             | 25%               | 24%       |
|           | 183,956         | 1563,900     | 419,756         | 113,175           | 2,280,380 |

(HESA, 2016)

In 2015–16, there were 162 higher education institutions, excluding further education colleges, in the England in receipt of public funding via one of the UK funding councils. According to the Higher Education Funding Council for England (HEFCE, 2012) the average higher education participation rate in England was 34.7%. In the BIS Research report for England (Smith, Joslin & Jameson, 2015), 49% of young FE and Sixth Form College students were found to have progressed to HE in 2013-14, but this dropped to 37% for those progressing to HE in 2015-16 (Smith et al., 2016).

The London educational context is complex. There are under 50 further and higher education colleges and under 40 Universities. Almost all universities provide courses in business and management and engineering and technology which include one module, or other form of course, in entrepreneurship education.

For this study only those courses have been chosen whose main objective is to impact on intention to become an entrepreneur and also deliver similar contents and curricula to the Delhi higher education courses. The course structures were analysed and 5 random colleges from London were selected.

## 4.8 Sample Size

The sample size is an important step that should be considered after selecting a sampling technique. The sample size of a survey most typically refers to the number of participants that were chosen from whom data were gathered (Creswell, 2009). A larger sample size to address the research question is better in order to better represent the population (Collis and Hussey, 2013). Moreover, larger data sets will help to improve the quality of the research outcome with implications for generalisability and reliability (Truscott et al. 2010). To analyse the proposed conceptual model, Structure Equation Model (AMOS) was used to analyse data.

The total student population in the UK and India is quite large and around 10 000 are final year students. Due to budgetary, time and logistical constraints, it was impractical to collect data from all final year university students. Therefore, sampling from final year students was undertaken from ten established universities in the UK and India.

With a population of 10,000, the minimum required representative sample size would be 370, with a confidence level of 95% and a margin of error of 5% (Saunders et al., 2009, p.212 and p.585). To reduce the likelihood of a low response rate, 1,000 questionnaires were delivered, and this yielded a sample of 754. This represented a response rate of 75.4%, exceeding the minimum 370 required for a representative sample.

Out of 754 questionnaires only 400 sets had been chosen for final data set because rest of them has not been filled completely or not matching with pre-post stages requirements.

The London educational context is complex. There are under 50 further and higher education colleges and under 40 Universities. Almost all universities provide courses in business and management and engineering and technology which include one module, or other form of course, in entrepreneurship education. (HEFCE, 2015, BIS report, Smith, Joslin & Jameson, 2015), )

To make sure that courses are very similar from both the countries hence I chose only private HE institutes from London. Out of these 50 only those courses were chosen which were

delivering entrepreneurship module and those institutes were only 27. Out of 27 I chose those courses whose objective is to develop intent and they were only 18. Interestingly out of 18, 9 colleges has started their courses only in 2017 so there were no students who are in final year hence only 9 colleges in London were available. Total enrolment of these 9 colleges were only 720 students. In each college there were averagely 80 students. Later 5 colleges were chosen randomly.

### Summary of the Data Collection

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Table: 4.5 Justification of selection the sample.

| Total  | UK   | India                         |
|--|--|-------------------------------|
| EE course from Final Yr student with course Objective EI | 720 students   | 810 students                  |
| Sample Chosen  | 500 Pre<br>500 Post                                  | 500 Pre<br>500 Post           |
| Pre Received   | 448  | 426= Total 874 received       |
| Completed  | 289 : out of 289 only 200 who completed post as well | 259: only 200 completed post. |
| Post   | 402  | 352 =Total 754 completed      |

|                       |   |   |
|-----------------------|---|---|
| Completed             | 258: out of 258 only 200 completed pre and post rest 58 pre weren't complete hence only 200 set were complete | 236: out of 236, (36 didn't complete pre.) hence only 200 set were complete |
| Pre and Post complete | 200   | 200   |

#### 4.9 Questionnaires as Data Collection Method

The collection of data can be considered one of the most important aspects of research, since it is during the collection of data that the researcher obtains the necessary information for the development of a study (Fletcher, 2017). Questionnaires provide a useful alternative to interviews, however, there are certain characteristics that may be appropriate in some situations and inappropriate in others. For example, in the case of interviews, these should be carefully designed for maximum effectiveness. As with interviews, questionnaires are useful when the aim is to understand the general feelings, opinions and experiences of participants (Saunders 2016).

Questionnaires with items that have closed responses are a good means for collecting large amounts of data. If any of the items in the questionnaire are new, there is a process to be followed to check and improve the validity of the questions. It is preferable to use tried and tested items from previous studies, as in the case of this study. If a suitable Likert scale is used for the responses, it is straightforward to record this numerical data. Once a statistically significant amount of data has been collected it can be analysed using one of a number of software packages that are currently available (Saunders et al., 2016).

##### 4.9.1 Instrument Measurement

This research adopted four measures of independent variables and four measures of dependent variables. Four indices for dependent variables (attitude, subjective norm, perceived behavioural control and intention) were specifically selected. The initial set of

questionnaire items were based on the established scales and Ajzen's (1991; 2002) recommendations regarding the theory of planned behaviour. These were used to compile an initial set of items. A pilot study was conducted to test the items n=50 London and n=50 Delhi. The unit of analysis for this research is individual i.e. student. Saunders (2011) unit of analysis can be characterising in to few categories such as individual, group and organisations. Many educational and behavioural experiment use individuals as the statistical unit of analysis when the treatment is applied to analyse the impact on individual behaviour.

Appendix 1 shows the questionnaire along with the items. Pre-set of questionnaires have 6 sections. Section A was based on demographic information such as name, place, age etc. Section B of the pre-questionnaire was to confirm if participants have some pre-exposure to entrepreneurship courses and if they had, those respondents were not considered for further research as the key aim was to explore the impact of current entrepreneurship education on changing their intention to become an entrepreneur.

The Post questionnaire B section is based on the introduction of role models, entrepreneurial network, business planning activities and feedback. The key aim is to analyse the impact of these characteristics in changing the intention to become an entrepreneur. Parts C, D, E and F are based on attitudes towards behaviour, subjective norm, perceived behaviour control and intention respectively.

The Attitude Index Part C is an initial set of items used in pre-test and post-test. Originally it was suggested by Kolvereid (1996) to measure the attitude towards becoming an entrepreneur or to start their own venture. Later used by other researchers such as Mueller (2011).

Subjective Norm Index Part D has items for obtaining a measure for subjective norms that were developed following Ajzen's recommendations for constructing a theory of planned behaviour questionnaire (Ajzen, 2002).

Perceived behavioural control index Part E should measure people's confidence that they can perform the behaviour in question. For direct measures, Ajzen recommends the use of items

which relate to the perceived difficulty of performing the behaviour or the likelihood that the respondent could do it. Such items capture the respondent's sense of self-efficacy regarding performing the behaviour. (Ajzen, 2002).

Intention index Part F: Items measuring entrepreneurial intention were also established according to Ajzen's suggestions for constructing a Theory of Planned Behaviour questionnaire. (Ajzen 2002). Ajzen suggests measuring intention directly by having respondents evaluate the degree to which they will try to perform the behaviour in question.

Post Part B is further divided in to five parts the first one is based on entrepreneurial network, business planning activities entrepreneurial network and feedback. The items are primarily based on Mueller's (2011) work; however, support was taken from the literature review and pilot study. In Muller's research 25 items were included which were based on various entrepreneurship characteristics such as practical knowledge, student orientation and included the selected one in the current study. However, after the pilot study it was noticed there were some items that were repetitive in nature creating confusion amongst the participants. Hence an improved scale was developed which focussed on only the four chosen characteristics and based on 22 items.

The question is based on a Likert scale (Bryman & Bell, 2007) as a function for collecting data. Respondents chose the option that best supported their opinion. This research applied a five-point Likert scale. The Likert scale is a quantitative data collection or measurement tool used in research (Jamieson, 2004). It is a type of additive scale that corresponds to an ordinal level of measurement. It consists of a series of items or judgments as statements to which the subject's reaction is requested. The stimulus (item or judgment) presented to the subject represents the property that the researcher is interested in measuring, and the answers are requested in terms of degrees of agreement or disagreement that the subject has with a particular statement. Five response options are typically used, where each category is assigned a numerical value that will lead the subject to a total score resulting from the scores of all items. This final score indicates the position of the subject's response within the scale.



The steps to follow in developing a Likert scale are as follows: 1) to know the attitude or variable to be measured, 2) to elaborate items related to the attitude or variable to be measured, 3) to administer the scale to a sample of subjects who will act as judges, 4) to assign the scores to the items according to their positive or negative position, 5) to assign the total scores to the subjects according to the type of response in each item, 6) to perform the analysis of validation and reliability, 7) to build the selected items into the final scale, and 8) to apply the final scale to the population in which the instrument was validated.

To design any measurement instrument, it is necessary to decide what data to collect (Antwi & Hamza, 2015). That is, the attitude or variable to be measured must be accurately indicated. It is important to mention that in any investigation it is necessary to be clear about what the problem is, and to ensure the variables are related to each other. The objectives of the research must be clear, and the research questions must be the justification of the study. Each item is a judgment or a sentence to which the respondent must express a degree of agreement or disagreement. Although the number of options for each item is recommended to be 6, they can be in between 1 to 5 i.e.

1 - Strongly agree, 2 –agree, 3 –Neither agree nor disagree,4- Disagree and 5- Strongly Disagree

#### 4.10 Data Analysis

Data analysis is the process of assessing data and interpreting outcomes and is a key step following the identification of the research design and data collection methods. It involves planning and gathering data to make it easier to testing (Bergh & Ketchen, 2009). Serrant-Green (2010), separated data analysis into three parts which are EDA (Exploratory Data Analysis), descriptive statistics and CDA (Confirmatory Data Analysis). EDA relates to uncovering the fundamental characteristics of data and CDA verifies existing hypotheses. For this purpose, the researcher used structural equation model (AMOS). Data was analysed in two stages consisting of preliminary data analysis (descriptive analysis, exploratory factor analysis, correlations, multiple hierarchical regression and T-test) and hypotheses testing.

#### **4.10.1 Reliability and Validity**

Validity refers to the extent to which an instrument measures the characteristics of a concept precisely in a quantitative study (LoBiondo-Wood & Haber, 2014). There are three types of validity which are content validity, construct validity and criterion validity (Heale & Twycross, 2015). Content validity refers to the extent to which the measure adequately measures the concept (Sekaran & Bougie, 2014). In other words, validity is a function of how well the elements and measurements of a concept have been delineated. Face validity is a subset of content validity. Construct validity refers to how well the results used in the proposed measurement fit with the theories about which the test is designed (Sekaran & Bougie, 2014). According to Heale and Twycross (2015), there are three types of evidence related to construct validity and these are homogeneity, convergence theory evidence. Criterion validity relates to any other instrument that measures the same variable (Heale & Twycross, 2015). This validity measures phenomena in three ways (Heale & Twycross, 2015, p. 66):

- 1) Convergent validity shows that an instrument is highly correlated with instruments measuring similar variables.
- 2) Divergent validity shows that an instrument is poorly correlated to instruments that measure different variables. In this case, for example, there should be a low correlation between an instrument that measures motivation and one that measures self-efficacy.
- 3) Predictive validity means that the instrument should have high correlations with future criterions. For example, a score of high self-efficacy related to performing a task should predict the likelihood a participant completing the task.

Reliability refers to the ability of an instrument to measure the attributes of a construct or variable consistently (LoBiondo-Wood & Haber, 2014). Reliability relates to a consistency of measure (Heale & Twycross, 2015). Reliability also applies to individual measures. For example, when a person takes a vocabulary test twice, their scores on the two occasions should be very similar, everything else being equal. If this is the case, the test can then be

described as reliable. To be reliable, an inventory measuring self-esteem should give the same result if given twice to the same person within a short period of time. IQ tests should not give different results over time since intelligence is assumed to be a stable characteristic. The attributes of reliability are related to homogeneity or internal consistency as well as stability and equivalence (Heale & Twycross, 2015). Internal consistency relates to the homogeneity of the items in the measurement of constructs using split-half reliability, item to total correlation, Cronbach's Alpha and Kuder-Ricards on coefficient (Heale & Twycross, 2015; Sekaran & Bougie, 2014). Stability is established using test-retest and parallel or alternate form reliability testing. Equivalence validity relates to the consistency of responses across numerous users of an instrument.

This research used the Cronbach's  $\alpha$  to measure internal reliability. The rule of thumb of Cronbach will use a 0 to 1 scale where  $\leq 0.90$  means excellent reliability, 0.70-0.90 stands for high reliability, 0.50-0.70 shows moderate reliability and  $\leq 0.50$  stands for low reliability (Johnson et al., 2007).

#### **4.10.2 Structural Equation Modelling:**

SEM is widely used multivariate statistical method in the area of research in social science. (Hair et al., 2010). SEM enables a researcher to build a conceptual model of the relationships between variables using path models (Saga & Kunimoto, 2016). It is a popular term that represents a family of concepts and methods such as construct analysis, confirmatory factor analysis, path analysis and partial least square etc. The major strength of SEM is its ability to use latent variables (constructs) in dependence models (Azar, 2010). It allows the user to analyse relationships between several latent and observed variables (Saga & Kunimoto, 2016).

SEM is mainly used to test the theoretical relationships among sets of constructs. The basic objective of research is to draw concrete conclusions, which must be reliable and valid (Hair et al., 2010) This objective remains the same and even more critical when the research is about studying latent variables. SEM helps a researcher in providing justification to his/her research with proper care given to the constructs.

Constructs or latent variables are underlying or masked attributes that cannot be measured directly. However, these attributes can be quantified with the help of measurable items or variables. These constructs are based on theoretical justification or reasoning or, in other words, these constructs are the building blocks of theories. ‘In SEM, a construct can be defined as a latent or unobserved variable that cannot be measured directly or without errors but can be measured or represented with multiple variables/items’ (Chauhan, 2016, p.16). On the other hand, an observed variable is an item from a target analysis that has been measured and can be used to estimate a measurement of a latent variable (Saga & Kunimoto, 2016). The observed and latent variables have some relationship such as causal or co-occurrence so that SEM can be useful to identify or quantify these relationships.

In the present study there are three key constructs which are attitude, subjective norm and perceived behavioural control and there are four entrepreneurship education characteristics which are introduction of role model, entrepreneurial network, business planning activities and feedback. These constructs are measured by selected variables.

The steps of data analysis using structural equation modelling (Chauhan, 2016) are:

1. Define the individual constructs along with the measurable items
2. Analyse the individual constructs
3. Analyse the construct validity (convergent as well as discrimination)
4. Design the structural model if the scale is found valid
5. Analyse the structural model, draw conclusions and make recommendations

#### **4.11 Ethical Considerations**

Ethical considerations are one of the most important aspects of research. Dissertations are considered a failure if this part is missing. According to Bryman and Bell (2013) there are ten key factors that provide a good framework for the ethical development of research, though they can be summarized into six factors, and these are shown below:

1. Value: research should seek to improve health or knowledge.
2. Scientific validity: research must be methodologically sound so that researchers are not wasting their time.
3. The selection of human beings or subjects should be fair. The participant's investigations must be selected in a fair and equitable manner and without personal prejudices or preferences.
4. Favourable proportion of risk / benefit: the risks to participants of research should be minimal and the potential benefits should be potential benefits to individuals, and knowledge gains for society must outweigh the risks.
5. Informed Consent: Individuals should be informed about the investigation and give voluntary consent before becoming research participants.
6. Respect for participating human beings: Participants in their privacy, have the option to opt out of research and their well-being must be monitored.

For this research, permission was granted from the respondents participating, and ethical approval has been gained from Brunel University College of Business, Arts and Social Sciences (CBASS).

#### 4.12 Conclusion

This chapter has set out details of the research design and methodology in order to carry out the proposed research efficiently and systematically. The chapter sets out the details of the research philosophies, so this research is based on a quantitative approach which is related to a deductive approach to test hypotheses. Quantitative research is associated with surveys (Tang et al., 2014). Surveys have been adopted for this research as they are cost-effective and convenient. The sampling techniques, data collection, sample size and analytical methods were also been discussed with appropriate justification. Lastly, the researcher explained the data analysis techniques and ethical considerations. In the next chapter the researcher will present the results and findings of this research.



## **Chapter 5: Pilot Study and Results**

### **5.1 Introduction**

This chapter will discuss the pilot study and the final results. The pilot study was conducted in two phases. Initially, fifty respondents were chosen from both countries to test the validity of the instrument based on only three entrepreneurship characteristics i.e. introduction of role model, entrepreneurial network and feedback. However, after further studies it was realised that business planning activities are also an integral part of entrepreneurship education and hence it was decided to add it to the research. Hence, a second phase of pilot study was conducted.

### **5.2 Pilot Study**

A pilot study is a very important element in a well-deigned study. The results from a pilot study provide information such as about the reliability and validity of the instrument, appropriateness of the items in the instrument to the sample, detecting the problems that may arise, and the smoothness of the actual study (Van Teijlingen & Hundley, 2001). In this pilot study, 100 respondents consisting of college students were randomly selected from London and Delhi. Those samples were selected so that had similar characteristics to the actual population of the study.

The pilot study was conducted in two phases. Initially data were tested by using SPSS but after these results some amendments were made to the questionnaire such as fewer questions and a seven-point Likert scale was changed to a five-point scale before a second phase of the pilot study was conducted. After the second phase, the pilot study results were satisfactory and only after that the final phase of study was conducted.

### 5.2.1 First Phase

The correlation between these variables was tested and was found to be  $p < 0.05$ . The instruments which showed a positive and significant correlation between the variables were accepted while those that did not have a significant correlation were rejected.

Table 5.1 shows  $r = 0.122$ ,  $p < 0.05$ ,  $N = 50$  for UK students i.e. a positive and significant relationship between the attitude of the student to start their own venture with respect to the level of the entrepreneurial intention of UK students.

**Table 5.1: Correlation between Attitude and Entrepreneurial Intention**

|          |                        | Correlations |  |  |
|----------|------------------------|--------------|--|--|
|          |                        | Attitude     | Entrepreneurial Intention<br>(UK Students) | Entrepreneurial Intention<br>(Indian Students) |
| Attitude | Pearson<br>Correlation | 1            | .122*                                      | -.117  |

\* $p < 0.05$ ,  $N = 50$

The students that would have a positive attitude towards starting their own venture, would also already have an intention to open their own venture. These students want to be their own bosses and use the market opportunities to establish their own venture within first 5 years of the completion of the course.

As compared to UK students, it can be observed from Table 5.1 that  $r = -0.117$ ,  $p = n.s.$ ,  $N = 50$  which implies that there is no significant relationship between the attitude of the students and their intention to start their own entrepreneurial venture. Thus, while in the case of UK students there was a positive relationship between the positive attitude of the student towards entrepreneurship, in the case of the Indian students there is no relationship.



In Table 5.2, it can be observed that  $r = -0.029$ ,  $p = n.s.$ ,  $N = 50$  for UK Students. This implies that the subjective norm concerning starting their own venture does not have any significant impact on UK students. This indicates that most UK students are free from the social pressure to perform and indulge in entrepreneurial activity only when they feel it is right and not because it is socially expected of them.

**Table 5.2: Correlation between Subjective Norm and Entrepreneurial Intention**

|                           |                     | Correlations              |                                  |                                      |
|---------------------------|---------------------|---------------------------|----------------------------------|--------------------------------------|
|                           |                     | Entrepreneurial Intention | Subjective Norm<br>(UK Students) | Subjective Norm<br>(Indian Students) |
| Entrepreneurial Intention | Pearson Correlation | 1                         | -.029                            | -.318*                               |

\* $p < 0.05$ ,  $N = 50$

On the other hand, Table 5.3 shows  $r = -0.318$ ,  $p < 0.05$ ,  $N = 50$  which is a significant negative influence of subjective norm concerning to start own venture on level of entrepreneurial intention for Indian students. It can be clearly seen that the relationship between the two parameters is not positive. This implies that in the given case, the increase in subjective norm to start own venture has mildly negative influence on level of entrepreneurial intention. The social pressure to perform and become an entrepreneur doesn't always positively motivate the student. It also has a negative impact and may be detrimental to the intensity with which a student might want to open a new venture of their own.

In Table 5.3, it can be seen that  $r = 0.237$ ,  $p < 0.05$ ,  $N = 50$  for UK Students i.e. there was a strong positive relationship between the perceptions of the students towards their ability to be successful, and the level of entrepreneurial intention. This further suggests that students

who had confidence in their success were able to start their own ventures shortly after completion of their course.

**Table 5.3: Correlation between Perception and Entrepreneurial Intention**

|             |                     | Correlations |  |  |
|-------------|---------------------|--------------|--|--|
|             |                     | Perceptions  | Entrepreneurial Intention<br>(UK Students) | Entrepreneurial Intention<br>(Indian Students) |
| Perceptions | Pearson Correlation | 1            | .237*                                      | -.025  |

\*p<0.05, N=50

Table 5.3 shows the influence of the perceptions of one’s ability to be successful on the level of entrepreneurial intention in the case of Indian students. Here it can be observed that  $r = -0.025$ ,  $p = n.s.$ ,  $N = 50$  which implies that a student’s perception about his ability to succeed does not significantly influence his intention to start up his own venture. In the case of Indian students, the perception about their ability to succeed consistent with their intention to actually start an entrepreneurial venture.

The next section is based on the impact of course characteristics on attitudes, perceived subjective norms and subjective norm.

The entrepreneurship courses in the UK that provide the opportunity to meet people that may later act as potential co-founders to the venture, or those people that might help through initial difficulties in establishing the business, have a significant positive influence on the perceived subjective norm of the students. Table 5.4 shows  $r = 0.341$ ,  $p < 0.05$ ,  $N = 50$  with a positive significant correlation between the two variables. It shows that an increase in networking would also increase the social pressure that a student faces to establish himself as an entrepreneur.

**Table 5.4: Correlation between Entrepreneurship Network and Subjective Norm**

**Correlations (UK Students)**

---

|                         |                     | Entrepreneurial Network | Subjective Norm<br>(UK Students) | Subjective Norm<br>(Indian Students) |
|-------------------------|---------------------|-------------------------|----------------------------------|--------------------------------------|
| Entrepreneurial Network | Pearson Correlation | 1                       | .341**                           | .204*                                |

\*p<0.05, N=50

Similar to the behaviour of UK students, the Indian students reflect  $r=0.204$ ,  $p<0.05$ ,  $N=50$ . Hence, they also show a positive and significant relationship between the courses that help students build an entrepreneurial network and the subjective norm or social pressure that the student faces to establish himself as an entrepreneur.

Table 5.5 shows  $r=0.250$ ,  $p<0.05$ ,  $N=50$  which implies that the entrepreneurship courses that provide the opportunity to the students to meet the right people and build a strong network also positively and significantly influences the perception of the students to start their own venture.

**Table 5.5: Correlation between Entrepreneurial Network and Perception**

**Correlations (UK Students)**

|            |                     | Perception | Entrepreneurial Network<br>(UK Students) | Entrepreneurial Network<br>(Indian Students) |
|------------|---------------------|------------|--|--|
| Perception | Pearson Correlation | 1          | .250*                                    | -.048  |

\*p<0.05, N=50

The networking opportunity helps them in meeting potential co-founders and the key resources that might help them to establish their business in the initial phase.

In the case of the Indian students,  $r = -0.480$ ,  $p = n.s.$ ,  $N = 50$  which shows that the entrepreneurial network that is built through the entrepreneurship courses has no significant impact on the students' perceived behaviour to succeed. This also indicates that students are not able to value the opportunity that is provided to them by the institution to build a network. These students are more reliant on their own abilities to build their own network and are comfortable with the concept that they would be able to start their own venture within 5 years based on their own ability.

All students have certain role models which they aspire to become and, for such students, success is a measure of how close they have been able to achieve to their role models. Entrepreneurship courses, which provide the opportunity to the students to meet their role models, help in building a strong attitude towards starting their own venture. The interaction with the role models helps and inspires the students and hence encourages them to build a strong positive attitude towards starting their own network. This is shown in Table 5.6 where a strong significant relationship between the variables shows  $r = 0.574$ ,  $p < 0.001$ ,  $N = 50$ .

**Table 5.6: Correlation between Attitude and Role Model**

**Correlations**

|          |                     | Attitude | Role Model<br>(UK Students) | Role Model<br>(Indian Students) |
|----------|---------------------|----------|-----------------------------|---------------------------------|
| Attitude | Pearson Correlation | 1        | .574*                       | .196                            |

\*p<0.001, N=50

Contrary to the behaviour of UK students, as seen in Table 5.6,  $r= 0.196$ ,  $p=n.s.$ ,  $N=50$  there seems to be no significant relationship between the students' attitude towards starting his or her own business soon after the course and the opportunity to meet role models during the entrepreneurship course.

Table 5.7 clearly shows  $r= 0.227$ ,  $p<0.05$ ,  $N=50$  i.e. the students that were enrolled in the entrepreneurship courses that provided the opportunity to meet and interact with their role models had a significant and positive perception towards starting their own venture. These students benefitted from the opportunity that they got in terms of being able to connect with their role models and hence had a clear and strong perception that they would be able to establish their own venture within first 5 years of the completion of their courses.

**Table 5.7: Correlation between Perception and Role Model**

**Correlations (UK Students)**

|            |                     | Role Model | Perception<br>(UK Students) | Perception<br>(Indian Students) |
|------------|---------------------|------------|-----------------------------|---------------------------------|
| Role Model | Pearson Correlation | 1          | .227*                       | .037                            |

\*p<0.05, N=50

Table 5.7 shows ( $r= 0.037$ ,  $p=n.s.$ ,  $N=50$ ) which means that exposure which the Indian students received by interacting with their role models during the entrepreneurship course did not have any significant impact on their perceived behaviour to succeed. It can be observed in the context of the Indian students, the presence of the opportunity to meet the role models did not significantly impact their attitude and hence perception towards starting their own venture soon after the course.

Table 5.8 shows  $r= 0.030$ ,  $p=n.s.$ ,  $N=50$  i.e. there is no significant relationship between feedback provided to the students during the course and the perception of the students towards starting their own venture.

Table 5.8 highlights the fact that the feedback which the students received for their class activities remained focussed on the behaviour and performance in class and was able to affect the perception of the student towards starting their own venture within the next five years. It also shows that the perception of the student towards his own success is not pre-determined and feedback from the faculty of the course during the classes is able to impact it.

**Table 5.8: Correlations between Perception and Feedback**

|          |                     | Feedback | Perception<br>(UK Students) | Perception (Indian<br>Students) |
|----------|---------------------|----------|-----------------------------|---------------------------------|
| Feedback | Pearson Correlation | 1        | .220                        | .285                            |

\* $p<0.05$ ,  $N=50$

Just like the UK students, Table 5.8 highlights  $r= 0.285$ ,  $p=n.s.$ ,  $N=50$  which means that the Indian students also see significant impact on their perception towards starting a new venture, based on the feedback they received during the course. The presence of feedback from the

faculty seems to neither motivate nor demotivate the students in building their perception towards starting their own new venture.

**Discussion**

As per the Theory of Planned Behaviour, the Entrepreneurial Intentions after the completion of the course should have been impacted by the three independent determinants (antecedents of intentions): attitude toward behaviour, perceived behaviour control and subjective norm (Ajzen 1991, 2002). The data collected showed us results which were slightly deviated from the theory and also differed amongst each other showing the impact of ethnicity on the course. The hypotheses which pertain to the Theory of Planned Behaviour have been tested at  $p < 0.05$  significance and the impact of the determinants of intention on entrepreneurial intention have been summarised below in the given table.

**Table 5.9: Relationship of determinants of Planned Behaviour to Entrepreneurial Intention**

|                            | UK Students | Indian Students |
|----------------------------|-------------|-----------------|
| Attitude                   | 0.122*      | -0.117          |
| Subjective Norm            | -0.029      | -0.318*         |
| Perception about behaviour | 0.237*      | -0.025          |

\*  $p < 0.05$ , N=50

Table 5.9 indicates that in the case of Indian students, their entrepreneurial intention does not bear any significant relationship with attitude or perception towards opening up their own new venture. They only have a negative relationship with the social pressure or social norm, which means the more the pressure is put on them the lesser is their intention towards opening

up their own new venture. On the other hand, one can observe that for the UK Students, their intention to open their own venture is primarily governed by their attitude and perception to succeed in their entrepreneurial venture. Intentions of the UK students are not impacted by the social pressure to perform.

After this, the pilot study also tried to connect the antecedents of these determinants and their impact on the three determinants of intention. The study attempted to answer as to why the entrepreneurial intention between the two set of samples is different.

While trying to understand the antecedents of the entrepreneurial behaviour and intention the relationship between important factors was observed for Indian as well as UK students. Table 5.9 highlights the various areas which had been tested and shows the difference of behaviour that was observed between the two groups of UK and Indian students.

**Table 5.10: Impact of Antecedents on Determinants of Planned Behaviour**

|                         |                             | UK Students | Indian Students |
|-------------------------|-----------------------------|-------------|-----------------|
| Entrepreneurial Network | Perceived Behaviour Control | 0.341*      | 0.204*          |
|                         | Subjective Norm             | 0.259*      | -0.048          |
| Role Model              | Attitude towards behaviour  | 0.574*      | 0.196           |
|                         | Perceived Behaviour Control | 0.227*      | 0.037           |
| Feedback                | Perceived Behaviour         | 0.220       | 0.285           |

\*  $p < 0.05$ ,  $N = 50$



Table 5.10 shows that while UK students are significantly impacted by the antecedents: entrepreneurial network and role model, Indian students, on the other hand, are not impacted by the presence of the opportunity to interact with their role models during the course. It is also visible that the presence of the feedback of performance from the faculty of the course have any significant impact on the perception of the students about their ability to achieve success within first few years of the completion of the course.

The key objective of the research is to contribute to providing effective entrepreneurship education to the students through identifying the relevance of three key elements of entrepreneurship education i.e. role models, entrepreneurial network and feedback. In order to explore the relevance of these elements in a boarder way the research has been conducted in two different countries i.e Delhi and London. The difference in culture and ethnicity changes the relationship of these variables and also its impact on the determinants of planned behaviour. It has been observed that the students from London (UK) showed positive attitude and perception towards their ability to succeed in their own venture after the course and this helped in increasing their entrepreneurial intention. On the other hand, in the case of Indian students, their entrepreneurial intention was mostly impacted negatively by the increase in subjective norm and social pressure. The entrepreneurial intention of the Indian students was not impacted by the positive attitude and perception towards their ability to succeed in their own venture. The Indian students were observed to be more self-reliant and did not depend much on the presence of an entrepreneurial network or interactions with role models during the course. The London (UK) students, on the other hand, were inspired by these interactions and showed a positive attitude and behaviour towards entrepreneurship due to them. One of the common reactions of the students was towards the feedback provided by the faculty. Both the groups seemed impacted by the feedback from the faculty and changed their perceived behaviour towards entrepreneurship.

There were some limitations of the pilot study such as time and unavailability of other key contents of entrepreneurship education such as business plan activities.

There were originally twenty-nine items on post questionnaire part B. After the phase 1 of the pilot study only 22 items were considered, and seven items dropped because they were

not significant. Initially there were five items to be dropped based on general feedback of entrepreneurship education courses and two items were based on duration. A further two items on course duration were also dropped as the courses were of similar duration.

In order to obtain more reliable results, it was decided to perform the second phase of pilot study and analyse the results before conducting the final survey.

### 5.3 Reliability and Validity of Instrument

The data collected in this study was analysed using internal consistency, Cronbach Alpha ( $\alpha$ ) to determine the reliability of the instrument. Cronbach Alpha is the most popular way to measure the reliability of an instrument. Cronbach Alpha with coefficients between .70 and .90 is considered as high reliability while values between .50 and .70 is considered as moderate reliability (Hinton, Brownlow, McMurray & Cozens, 2004). Cronbach Alpha coefficient for all the construct have given in Table 1. It should be noted that most of the Cronbach Alpha coefficients were above .60. This indicates that all the instruments in this study had an acceptable reliability value. Table 1 reports the validity and reliability of the instruments used in this study.

**Table 5.11: Pearson and Cronbach Alpha Coefficients for the Instrument**

| <b>Instrument</b> | <b>Construct</b>           | <b>Min correlation between item scores</b> | <b>Cronbach alpha (<math>\alpha</math>)</b> |
|-------------------|----------------------------|--|---|
|                   | Entrepreneurial Education  | .403                                       | .822  |
| PART B            | Entrepreneurial Network    | .672                                       | .851  |
|                   | Role Model                 | .914                                       | .944  |
|                   | Business Plan              | .795                                       | .748  |
|                   | Feedback                   | .612                                       | .834  |
| PART C            | Attitude Towards Behaviour | .595                                       | .852  |
| PART D            | Subjective Norm            | .360                                       | .872  |

|        |                               |      |      |
|--------|-------------------------------|------|------|
| PART E | Perceived Behavioural Control | .275 | .797 |
| PART F | Intention                     | .327 | .788 |

In order to measure the validity of an instrument, Pearson correlation analysis was conducted to determine correlation between mean score for each item with the total score by the construct. According to Nunnaally & Bernstein (1994), the correlation value exceeds .25 has a high item validity of an instrument for a pilot study. Therefore, the instrument of this study is valid because the correlation mean value for each construct exceeds .25 and show the whole item can measure the construct better.

#### 5.4 Exploratory Factor Analysis (EFA)

Factor analysis is a procedure commonly used by researchers to identify, reduce, and arrange a large number of questionnaire items into groups corresponding to the different constructs under a dependent variable in the study (Chua, 2011). Large datasets that consist of several variables can be reduced by observing ‘groups’ of variables (factors) – that is, factor analysis assembles common variables into descriptive categories. Factor analysis is useful for studies that involve a few or hundreds of variables, items from questionnaires which can be reduced to a smaller set, to get at an underlying concept, and to facilitate interpretations (Yong & Pearce, 2013).

##### 5.4.1 Entrepreneurship Education Programmes Components

**Table 5.12: KMO and Bartlett's Test for Entrepreneurship Education Programmes Components**

|  |                    |          |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | 0.923    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 2199.033 |
|  | df                 | 378      |
|  | Sig.               | .000     |

The KMO test exhibit multicollinearity. If the same correlation value exists between two or more items, those items measure the same aspects. The KMO test helps the researcher identify whether the items are appropriate or not for factor analysis. The factor analysis is appropriate if the KMO value is greater than .50. In this case, KMO values indicate that data has no serious multicollinearity problem, so those items are appropriate for factor analysis as shown in Table 5.12.

Bartlett's Test of Sphericity is used to determine whether a correlation between items is adequate for factor analysis. The results of this test are significant,  $p < .05$  indicates that the correlation between the items is sufficient to run the analysis factor.

**Table 5.13: Component Transformation Matrix for Entrepreneurship Education Programmes Components**

| <b>Component</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|------------------|----------|----------|----------|----------|----------|
| 1                | .868     | .211     | .364     | .262     | .029     |
| 2                | -.354    | .891     | .159     | .235     | .011     |
| 3                | -.341    | -.352    | .812     | .267     | .171     |
| 4                | -.063    | -.192    | -.368    | .892     | -.167    |
| 5                | .028     | .013     | -.219    | .096     | .970     |

Extraction Method: Principal Component Analysis. :

Rotation Method: Varimax with Kaiser Normalization.

The component transformation matrix (Table 5.13) shows that the correlation between these five factors are low and are below .40. This shows that these five factors are independent of each other. These factors can stand as five separate constructs.

The analysis from Table 5.13 shows that there are 28 items from various concept that can fit into five factors. In conclusion, by examining the characteristics of each item under each factor with reference to the adapted instrument from the previous study, all the items are categorized according to constructs as listed in Table 5.11 (Part B).

#### **5.4.2 Entrepreneurship Intentions Components**

**Table 5.14: KMO and Bartlett's Test for Entrepreneurship Intentions Components**

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|  |  |       |
|--|--|-------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |  | 0.854 |
|--|--|-------|

---

|                               |                    |          |
|-------------------------------|--------------------|----------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2231.405 |
|                               | df                 | 528      |
|                               | Sig.               | .000     |

---

The KMO tests exhibit multicollinearity. If the same correlation value exists between two or more items, those items measure the same aspects. The KMO test helps the researcher identify whether the items are appropriate or not suitable for factor analysis. The factor analysis is appropriate if the KMO value is greater than .50. In this case, KMO values indicate that the data has no serious multicollinearity problem, so those items are appropriate for factor analysis as shown in Table 5.14.

Bartlett's Test of Sphericity is used to determine whether a correlation between items is adequate for factor analysis. The results of this test are significant,  $p < .05$  indicates that the correlation between the items is sufficient to run the analysis factor (Table 5.14).

**Table 5.15: Component Transformation Matrix for Entrepreneurship Intentions Components**

---

| <b>Component</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> |
|------------------|----------|----------|----------|----------|
| 1                | .868     | .062     | .319     | .376     |
| 2                | -.056    | .921     | .282     | -.261    |
| 3                | -.208    | -.346    | .889     | -.217    |
| 4                | -.448    | .165     | .170     | .862     |

---

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The component transformation matrix (Table 5.15) shows that the correlation between these four factors are low which are below .40. This shows that these four factors are independent of each other. These factors can stand as four separate constructs (see Table 5).

Analysis from Table 6 showed that there are 31 items from various concept that can fit into four factors. In conclusion, by examining the characteristics of each item under each factor with reference to the adapted instrument from the previous study, all the items are categorized according to constructs as listed in Table 5.11 (Part C, D, E and F).

**Table 5.16: Rotated Component Matrix for Entrepreneurship Intentions Components**

| Item | Component |      |   |   |
|------|-----------|------|---|---|
|      | 1         | 2    | 3 | 4 |
| c5   | .801      |      |   |   |
| c8   | .789      |      |   |   |
| c9   | .745      |      |   |   |
| c6   | .744      |      |   |   |
| c11  | .740      |      |   |   |
| c3   | .728      |      |   |   |
| c17  | .712      |      |   |   |
| c12  | .707      |      |   |   |
| c7   | .707      |      |   |   |
| c13  | .698      |      |   |   |
| c10  | .689      |      |   |   |
| c1   | .689      |      |   |   |
| c4   | .628      |      |   |   |
| c14  | .598      |      |   |   |
| c2   | .595      |      |   |   |
| c16  | .571      |      |   |   |
| c15  | .501      |      |   |   |
| f5   |           | .910 |   |   |



| <b>Item</b> |      | <b>Component</b> |
|-------------|------|------------------|
| f2          | .908 |                  |
| f1          | .906 |                  |
| f3          | .887 |                  |
| f4          | .882 |                  |
| e1          |      | .805             |
| e4          |      | .804             |
| e3          |      | .788             |
| e2          |      | .787             |
| e5          |      | .662             |
| e6          |      | .653             |
| d1          |      | .811             |
| d5          |      | .774             |
| d2          |      | .754             |
| d3          |      | .727             |
| d4          |      | .719             |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

## 5.5 Results from the Final Surveys

### 5.5.1 Instrument Validation

Instrument validation is a succession of processes in testing a system in order to verify or validate the performance specifications produced by the manufacturer of the instrument (Hair et al, 2016). In the process of verification of the measurement of each construct this research applied convergent and discriminant validity. Convergent and discriminant validity is a subtype of construct validity. Convergent validity refers to the extent to which two construct measurements, that theoretically should be linked, are related. Convergence Validity is used to measure the volume of variance "that a latent variable captured from their indication of the amount caused by measurement error" (Boohene, 2009: p. 128). The convergent validity is appraised by factor loading, composite reliability and average variance extracted (AVE) (Hair Jr, Hult, Ringle & Sarstedt, 2016; Azar & Drogendijk, 2014). As a rule of thumb, all standardized regression weights for factor loading all the constructs should have above 0.50, and entirely of the critical ratios (t-value) must be greater than 1.96. The good and recommended value for AVE in the literature as being acceptable is 0.5 (Bagozzi, Yi, & Phillips, 1991). Nevertheless, Magner et al. (1996) argue that the minimum value of 0.4 for AVE is also indicative of adequate validity. While Naudé et al. (2014) suggested the value of AVE above 0.41 is within an acceptable range. However, the recommended values are more than 0.7 (Carlson & Herdman, 2012). The instrument in this research surpass the minimum requirement for the factor loading, t values, AVE and composite reliability, respectively. The measurement model used by all latent construct have a high level of convergent validity.

Convergent validity refers to two measures in measuring the same construct and shows they are always related. However discriminant validity shows if the two measures are not supposed to be related (Carlson & Herdman, 2012). Discriminant validity (the ability of some indicators to have a low correlation with the indicators of different concepts) refers to the evaluation by comparing the square roots of the average extracted values (AVEs) to the correlation between two constructs (Hair Jr et al., 2016). Significant discriminant validity

was achieved when the average variance extracted was greater than the squared correlation estimates between the constructs. This research has the significant level of discriminant validity where AVE is greater than the squared correlation estimates for all the constructs.

Reliability coefficients illustrate the consistency, or correlation, of a set of scores and poor reliability intrinsically weakens effect sizes. Reliability describes the consistency, or correlation, of a set of scores (Wright, 2013, p. 3). A lack of correlation between scores or poor reliability, is generally the result of error measurement. Reliability was traditionally approximated by the Cronbach's Alpha ( $\alpha$ ) coefficient (Cronbach, 1951). As a rule of thumb, the figure for excellent reliability is  $\leq 0.90$ , high reliability is 0.70-0.90, moderate reliability is 0.50-0.70, and  $\leq 0.50$  is low reliability (Hinton et al., 2004). This study will adopt internal reliability, which uses the Cronbach's alpha as a scale for reliability, with a minimum of 0.7 ( $\geq 0.7$ ) as the lower boundary for acceptability (Tavakol & Dennick, 2011). Comprehensively, the instrument of this research showed a high level of validity and internal validity

### **5.5.2 Preliminary Data Analysis**

The process of data review was performed to ensure the precision and accuracy of the result obtained. The study began with 400 respondents who were university students from the UK and India. The researcher carried out the data cleaning process before beginning the actual data analysis to ensure the data is accurate with no missing data or outliers that might affect the normality of the data. In order to achieve normally distributed data that represents the population of the study, cases with incomplete and isolated data were removed. Removing isolated data increases multivariate normality (Kline, 2005).

### **5.5.3 Descriptive Analysis**

Data needs to be reviewed again with a descriptive review to ensure that there are no extreme values present. Revisions are usually made on the categorical data such as gender, age and nationality (Table 5.17) by using frequency to determine what problems exist such as unreasonable values or continuous data (interval). Finding the mean value is very important for understanding the reasonableness of the data under analysis.

**Table 5.17: Student's' Profile (n = 400)**

| <b>Profile</b> | <b>Grouping</b>    | <b>No. (n)</b> | <b>Percentage</b> |
|----------------|--------------------|----------------|-------------------|
| Age            | 20 years and below | 8              | 2.0               |
|                | 21 – 30 years      | 275            | 68.75             |
|                | 31 – 40 years      | 59             | 14.75             |
|                | 41 – 50 years      | 43             | 10.75             |
|                | 51 years and Above | 15             | 3.75              |
| Gender         | Male               | 202            | 50.6              |
|                | Female             | 198            | 49.4              |
| Nationality    | UK                 | 200            | 50.0              |
|                | India              | 200            | 50.0              |

Table 5.17 presents the profiles of the 400 respondents who participated in the survey. Notably, 2.0% of the respondents were aged below 20 years old, 68.75% were aged 21-30 years old, 14.75% were aged 31-40 years old, 10.75% were aged 41-50 years old and 375% were more than 51 years old. 50.6% of the respondents were male and 49.4% were female. There were equal numbers of respondent from the UK and India.

#### **5.5.4 Normality Test**

The normality of variables is assessed by either statistical or graphical methods. Two components of normality are skewness and kurtosis. The ideal normal graph has zero

skewness. Both skewness and kurtosis transform to the Z-score (standard score for any population) by dividing the statistical value of skewness and kurtosis by standard error (SE). Z-score values should be within the range of +/- 1.96,  $p < .05$  at the 95% confidence level or a significant level of .05. However, these values are rounded to +/- 2 (Hair, Black, Babin & Anderson, 2010).

**Table 5.18: Skewness and kurtosis values for all variables (N = 400)**

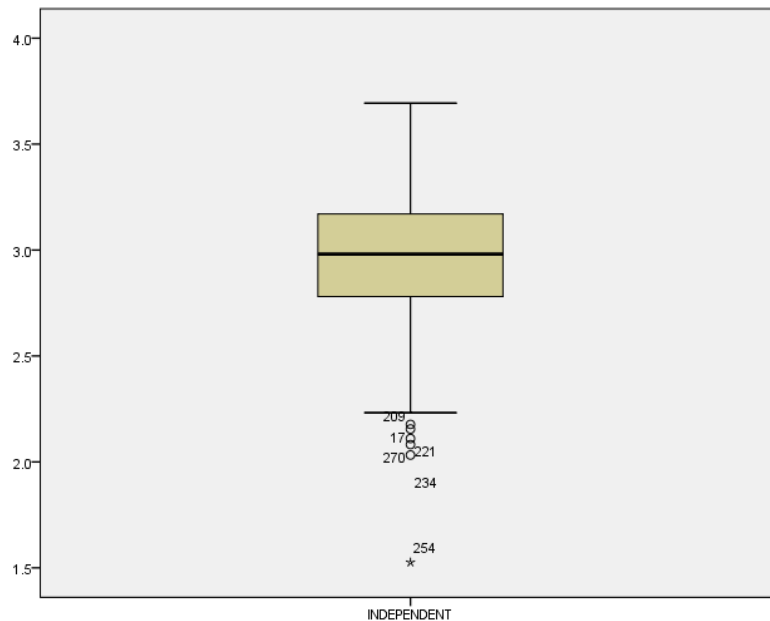
| Construct                     | N   | Mean   | Standard Deviation | Variance | Skewness | Kurtosis |
|-------------------------------|-----|--------|--------------------|----------|----------|----------|
| Entrepreneurial Education     | 400 | 1.5390 | .25464             | .065     | .455     | 1.074    |
| Entrepreneurial Network       | 400 | 3.9296 | .57624             | .332     | -.696    | .454     |
| Role Model                    | 400 | 3.9375 | .59314             | .352     | -.581    | -.221    |
| Business Plan                 | 400 | 3.9867 | .52555             | .276     | -.581    | .880     |
| Feedback                      | 400 | 1.3942 | .32172             | .104     | .418     | -.638    |
| ATTITUDES TOWARDS BEHAVIOUR   | 400 | 2.9567 | .47595             | .227     | .047     | 1.081    |
| SUBJECTIVE NORM               | 400 | 3.1955 | .75213             | .566     | -.013    | -.371    |
| PERCEIVED BEHAVIOURAL CONTROL | 400 | 3.0467 | .61272             | .375     | -.067    | .001     |
| INTENTION                     | 400 | 3.0590 | .72473             | .525     | .167     | -.046    |
| Valid N                       | 400 |        |                    |          |          |          |

Based on Table 5.18 the skewness and kurtosis values for all the variables involved are in the range +2 to -2. Therefore, the data complies with the normality test.

### 5.5.5 Outliers

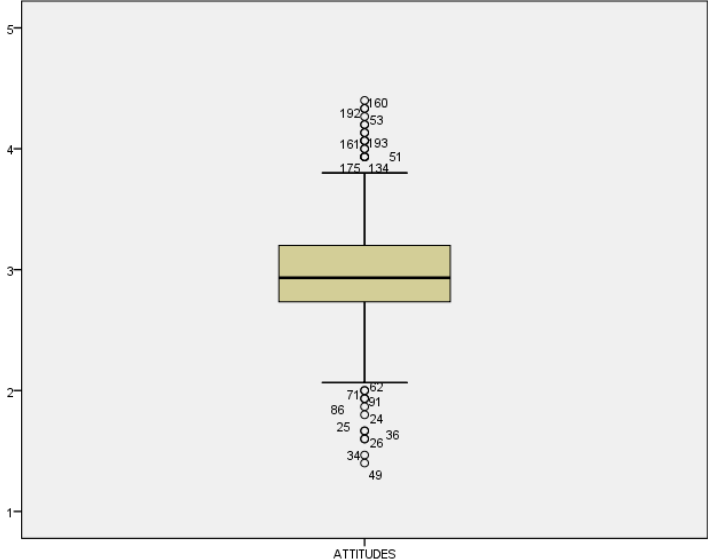
An outlier is a case with such an extreme value on one variable (a univariate outlier) or such a strange combination of scores on two or more variables (multivariate outlier) that it distorts the statistics. Univariate outliers are cases with very large standardized scores, z scores, on one or more variables, that are disconnected from the other z scores. Cases with standardized scores in excess of 3.29 (p < .001, two-tailed test) are potential outliers (Tabachnick & Fidell, 2013). In SPSS, outliers can be determined based on the outputs from boxplot. Figure 5.1 to 5.3 shows the construct or variables in this study that detect the present of outliers. ID numbers representing the respondents need to be removed because it will be affect the next findings or further analysis (Pallant, 2005). For surface approach and teaching efficacy variables, there is no outliers have been detected. As shown in Figure 5.1 to 5.3, it was found that 27 cases must be removed.

**Figure 5.1: Outliers present in the independent variable (N = 400)**

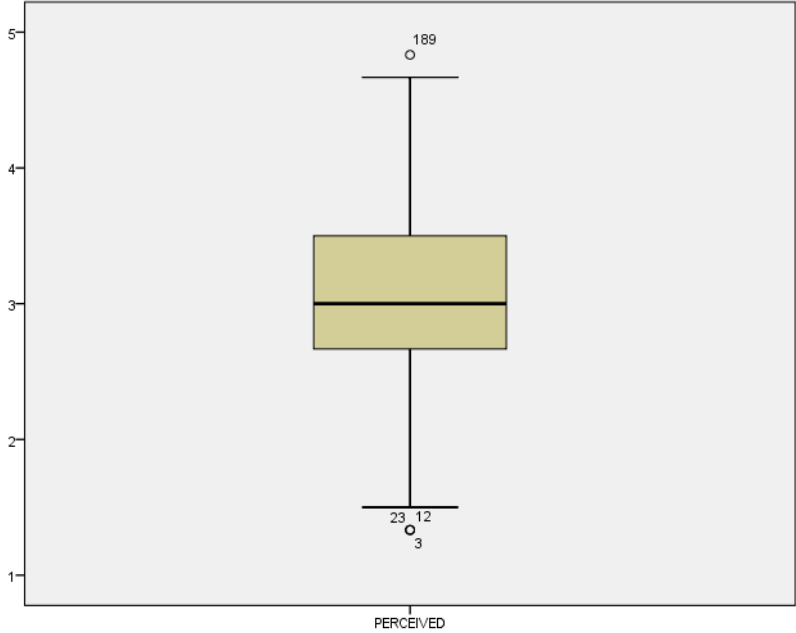


NB. The independent variable includes entrepreneurial education, entrepreneurial network, role model, business plan and feedback constructs

**Figure 5.2: Outliers present in the Attitude Towards Behaviour variable (N = 400)**

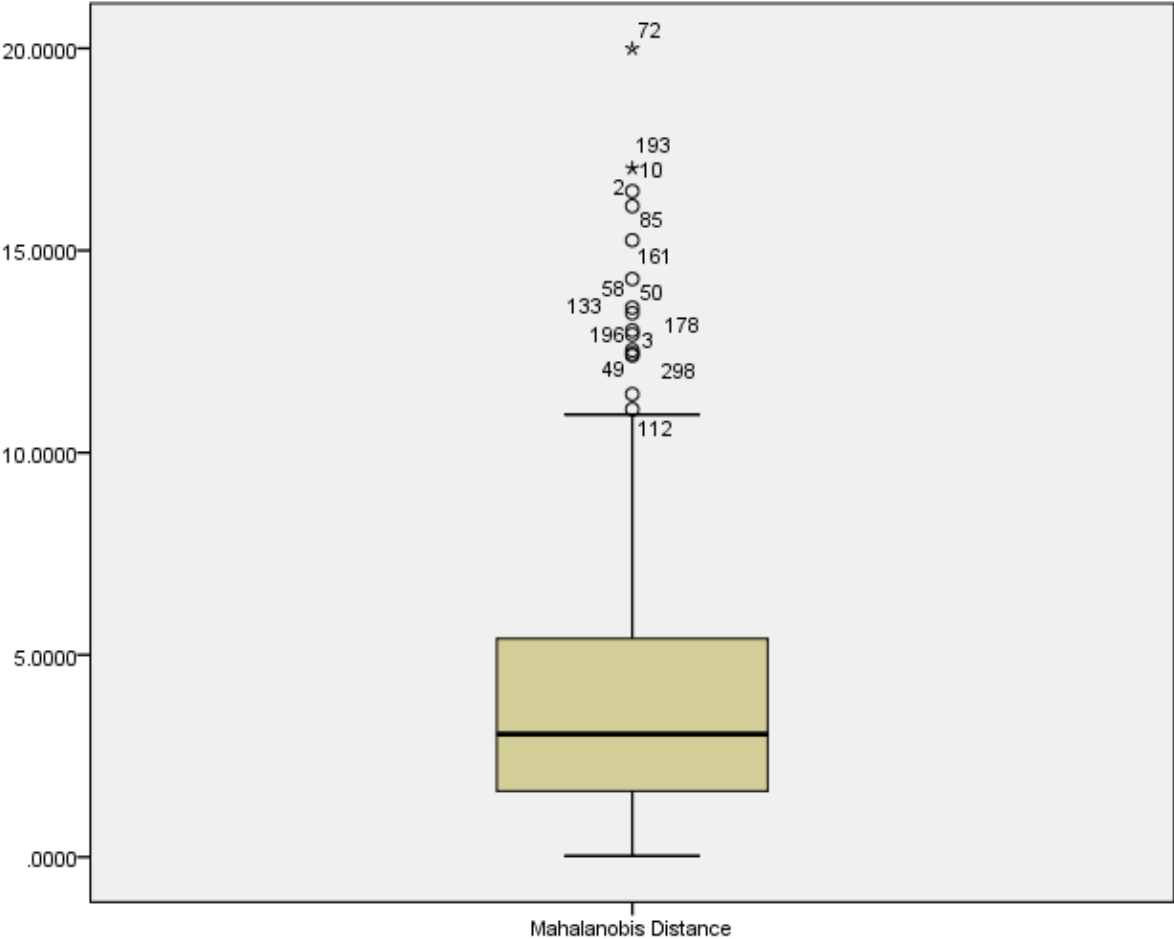


**Figure 5.3: Outliers present in the Perceived Behavioral Control variable (N = 400)**



For multivariate outliers, Mahalanobis distance was used to detect the isolated data among the data of all variables present. Mahalanobis distance is the distance of a case from the centroid of other cases and the centroid is a point where min of all the variables intersect with each other (Tabachnick & Fidell, 2013). From the data review process, it was found that 39 cases had to be removed and the remaining 361 cases (27 cases from univariate outliers and 15 cases from multivariate outliers) are valid to proceed for further analysis. The sample size is suitable for the Structural Equation Modelling (SEM) method because SEM requires a large sample size. According to Kline (2005), a sample size of more than 200 cases is considered to be a large sample. Figure 5.4 shows the outliers present on all of the variables after analysis is carried out by determination of Mahalanobis distance.

**Figure 5.4: Diagram showing the outliers present for all the variables (N = 400)**





## 5.6 Structural Equation Modelling (SEM)

Structural equation modeling (SEM) was used to analyze the relationship between entrepreneurship courses and attitudes towards behavior, subjective norm, perceived behavioral control with entrepreneurship intention. In this study, a two-step approach to the modeling has been used, first, the researcher tests the measurement model, if the developed model is fit and acceptable, then further tests will be carried out to the structural or full model (Kline, 2011).

### 5.6.1 Measurement Model (Confirmatory Factor Analysis)

A measurements model was made using Confirmatory Factor Analysis (CFA) as a statistical method to determine the relationship between the constructs or latent variables and their indicators (Byrne, 2010). In this study, CFA serves to determine the fitness indexes for the measurement model. In SEM, there are several fitness indexes that reflect how the model fits to the data. However, there is no agreement among researchers which fitness indexes to use (Awang, 2012). Hair et al. (2010) recommend the use of at least one fitness index from each category of model fit. There are three model fit categories namely absolute fit, incremental fit and parsimonious fit.

### 5.6.2 Assessing Validity and Reliability for the Measurement Model

Once the CFA procedure for every measurement model is completed, I need to compute certain measures which indicate the validity and reliability of the construct. The assessment for unidimensionality, validity and reliability for the measurement model are required prior to modelling the structural model. (Azar, 2014).

The unidimensionality requirement was achieved through the item-deletion process for low factor loading items. The new model is run and the item deletion process is repeated until the fitness indexes achieve the required level.

The validity requirement was achieved through the following processes:

- i) Convergent validity  $AVE \geq 0.50$  (Table 5.3).

Average Variance Extracted,  $AVE = \sum K^2 / n$  where  $K$  = factor loading of every item and  $n$  = number of items in a model.

ii) Construct validity - All fitness indexes for the model meet the required level.

iii) Discriminant validity - There is no redundant item for all the construct involved, also the correlation between all constructs is lower than 0.85 (Table 5.5).

Checking the reliability was achieved through the following processes:

i) Internal reliability : Cronbach alpha  $\geq 0.70$  (Table 5.3)

ii) Composite reliability (C.R) : C.R  $\geq 0.6$  (see Table 5.3)

$$CR = (\sum K)^2 / [(\sum K)^2 + (\sum 1 - K^2)]$$

where  $K$  = factor loading of every item and  $n$  = number of items in a model

**Table 5.20: Correlation between entrepreneurial network, role model, business plan and feedback**

| .Constructs                                | Estimate |
|--|----------|
| Entrepreneurial Network <--> Role Mode     | .144     |
| Entrepreneurial Network <--> Business Plan | .352     |
| Entrepreneurial Network <--> Feedback      | .225     |
| Role Mode <--> Business Plan               | .295     |
| Role Mode <--> Feedback                    | .164     |
| Business Plan <--> Feedback                | .408     |

**Table 5.21: Correlations between constructs for measurement model**

|  | CR | AVE | MSV | MaxR(H) | ROM | ATT | INT | SUN | PBC | FEE | BUP | ENT |
|--|----|-----|-----|---------|-----|-----|-----|-----|-----|-----|-----|-----|
|  |    |     |     |         |     |     |     |     |     |     |     |     |

|            |       |       |       |       |              |              |              |              |              |              |              |              |
|------------|-------|-------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>ROM</b> | 0.864 | 0.521 | 0.106 | 0.906 | <b>0.722</b> |              |              |              |              |              |              |              |
| <b>ATT</b> | 0.875 | 0.541 | 0.071 | 0.946 | 0.148        | <b>0.735</b> |              |              |              |              |              |              |
| <b>INT</b> | 0.890 | 0.617 | 0.065 | 0.962 | 0.085        | 0.255        | <b>0.786</b> |              |              |              |              |              |
| <b>SUN</b> | 0.859 | 0.551 | 0.035 | 0.970 | -0.013       | 0.186        | -0.027       | <b>0.742</b> |              |              |              |              |
| <b>PBC</b> | 0.760 | 0.514 | 0.071 | 0.972 | -0.062       | 0.267        | 0.144        | 0.160        | <b>0.717</b> |              |              |              |
| <b>FEE</b> | 0.883 | 0.602 | 0.166 | 0.977 | 0.184        | 0.063        | 0.237        | 0.005        | 0.000        | <b>0.776</b> |              |              |
| <b>BUP</b> | 0.787 | 0.554 | 0.166 | 0.979 | 0.325        | 0.187        | 0.213        | 0.180        | -0.051       | 0.407        | <b>0.744</b> |              |
| <b>ENT</b> | 0.863 | 0.517 | 0.130 | 0.982 | 0.174        | 0.229        | 0.141        | 0.117        | 0.084        | 0.225        | 0.360        | <b>0.719</b> |

\*Square root AVE

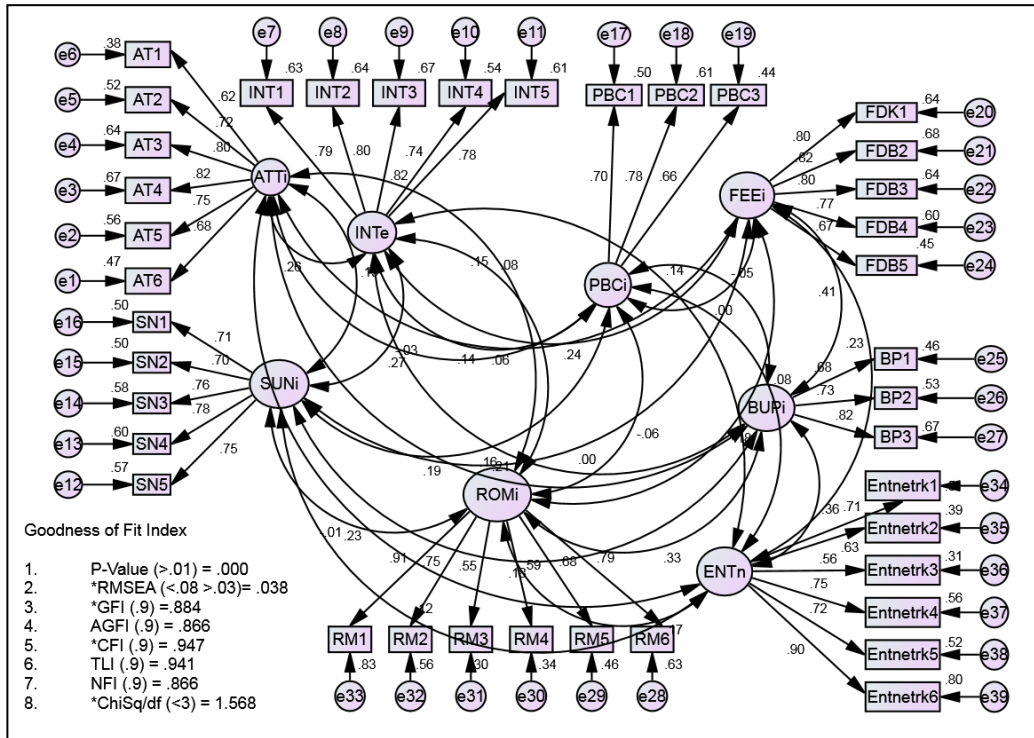
\*\*correlation between construct (<0.85)

The diagonal values in bold are the square root of AVE for that construct while other values are correlation between respective constructs. The discriminant validity is achieved when a diagonal value in bold is higher than the values in its row and column (Awang, 2012).

## 5.7 Structural Model

An analysis of the results showed the measurement model had achieved a good fit for the indexes after the modification process. Therefore, the analysis was continued by testing a full model (structural model). This part gives a report on the analysis of the model developed. Structural models that have been developed will examine the relationship between exogenous and endogenous variables as illustrated in Figures 5.5 and 5.6.

**Figure 5.5: Standard Regression Weights for relationship between entrepreneurial courses and attitudes towards behaviour, subjective norm, perceived behavioural control with entrepreneurial intention before modification**



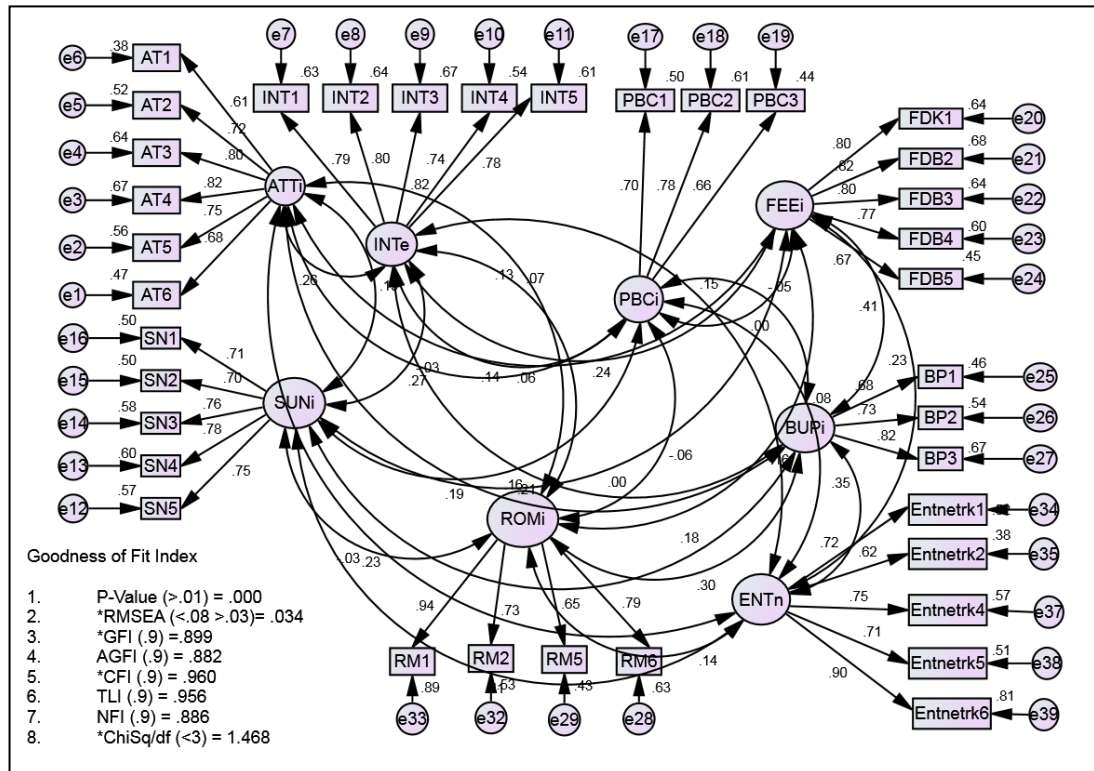
**Table 5.22: Fitness Index recommended by Hair et al. (1995, 2010) and result obtained from measurement model for all the constructs**

| Name of Category    | Name of Index | Level of acceptance | Measurement model (modification) |       |
|---------------------|---------------|---------------------|----------------------------------|-------|
|                     |               |                     | BEFORE                           | AFTER |
| 1. Absolute Fit     | *RMSEA        | < 0.08              | .038                             | .034  |
|                     | *GFI          | > 0.90              | .884                             | .900  |
| 2. Incremental Fit  | AGFI          | > 0.90              | .866                             | .882  |
|                     | *CFI          | > 0.90              | .947                             | .960  |
|                     | TLI           | > 0.90              | .941                             | .956  |
|                     | NFI           | > 0.90              | .866                             | .886  |
| 3. Parsimonious Fit | *Chisq/df     | < 3.0               | 1.568                            | 1.468 |

Table 5.22 shows the fitness index before and after modification which is the result obtained from Figures 5.5 and 5.6. The measurement model after modification meets the rule of thumb fairness index recommended by Hair et al. (1995, 2010)

.

**Figure 5.6: Standard Regression Weights for relationship between entrepreneurial courses and attitudes towards behaviour, subjective norm, perceived behavioural control with entrepreneurial intention after modification**



**Table 5.23: Confirmatory Factor Analysis (CFA) summary for all constructs**

| Construct               | Item       | F.L | $\alpha$<br>(> 0.7) | CR<br>( $\geq 0.6$ ) | AVE<br>( $\geq 0.5$ ) |
|-------------------------|------------|-----|---------------------|----------------------|-----------------------|
| Entrepreneurial Network | Entnetrk 1 | .72 | .86                 | 0.86                 | 0.56                  |
|                         | Entnetrk 2 | .62 |                     |                      |                       |
|                         | Entnetrk 3 |     |                     |                      |                       |
|                         | Entnetrk 4 | .75 |                     |                      |                       |

| Construct     | Item       | F.L | $\alpha$<br>( $> 0.7$ ) | CR<br>( $\geq 0.6$ ) | AVE<br>( $\geq 0.5$ ) |
|---------------|------------|-----|-------------------------|----------------------|-----------------------|
|               | Entnetrk 5 | .71 |                         |                      |                       |
|               | Entnetrk 6 | .90 |                         |                      |                       |
| Role Model    | RM 1       | .94 | .86                     | 0.86                 | 0.62                  |
|               | RM 2       | .73 |                         |                      |                       |
|               | RM 3       |     |                         |                      |                       |
|               | RM 4       |     |                         |                      |                       |
|               | RM 5       | .65 |                         |                      |                       |
|               | RM 6       | .79 |                         |                      |                       |
| Business Plan | BP 1       | .88 | .78                     | 0.85                 | 0.66                  |
|               | BP 2       | .73 |                         |                      |                       |
|               | BP 3       | .82 |                         |                      |                       |
| Feedback      | FDB 1      | .80 | .88                     | 0.88                 | 0.60                  |
|               | FDB 2      | .82 |                         |                      |                       |
|               | FDB 3      | .80 |                         |                      |                       |
|               | FDB 4      | .77 |                         |                      |                       |
|               | FDB 5      | .67 |                         |                      |                       |

| Construct                       | Item  | F.L | $\alpha$<br>( $> 0.7$ ) | CR<br>( $\geq 0.6$ ) | AVE<br>( $\geq 0.5$ ) |
|---------------------------------|-------|-----|-------------------------|----------------------|-----------------------|
| ATTITUDE TOWARDS<br>BEHAVIOR    | AT 1  | .61 | .87                     | 0.87                 | 0.54                  |
|                                 | AT 2  | .72 |                         |                      |                       |
|                                 | AT 3  | .80 |                         |                      |                       |
|                                 | AT 4  | .82 |                         |                      |                       |
|                                 | AT 5  | .75 |                         |                      |                       |
|                                 | AT 6  | .68 |                         |                      |                       |
| SUBJECTIVE NORM                 | SN 1  | .71 | .86                     | 0.86                 | 0.55                  |
|                                 | SN 2  | .70 |                         |                      |                       |
|                                 | SN 3  | .76 |                         |                      |                       |
|                                 | SN 4  | .78 |                         |                      |                       |
|                                 | SN 5  | .75 |                         |                      |                       |
| PERCEIVED BEHAVIORAL<br>CONTROL | PBC 1 | .70 | .76                     | 0.76                 | 0.51                  |
|                                 | PBC 2 | .78 |                         |                      |                       |
|                                 | PBC 3 | .66 |                         |                      |                       |
|                                 | INT 1 | .79 |                         |                      |                       |
|                                 | INT 2 | .80 |                         |                      |                       |



| Construct | Item  | F.L | $\alpha$<br>( $> 0.7$ ) | CR<br>( $\geq 0.6$ ) | AVE<br>( $\geq 0.5$ ) |
|-----------|-------|-----|-------------------------|----------------------|-----------------------|
| INTENTION | INT 3 | .82 | .89                     | 0.89                 | 0.62                  |
|           | INT 4 | .74 |                         |                      |                       |
|           | INT 5 | .78 |                         |                      |                       |

Note : 1) Yellow box represents item deleted due to the low factor loading.

2) F.L = Factor Loading,  $\alpha$  = Cronbach Alpha.

The change in intention of the respondents is being calculated by taking the difference between post intention and pre-intention of the individual indicators of the construct's intentions.

Formula Applied: Post intention constructs-Pre-Intention constructs = change in intention.

Figure 5.7: Structural Model (Path Model)

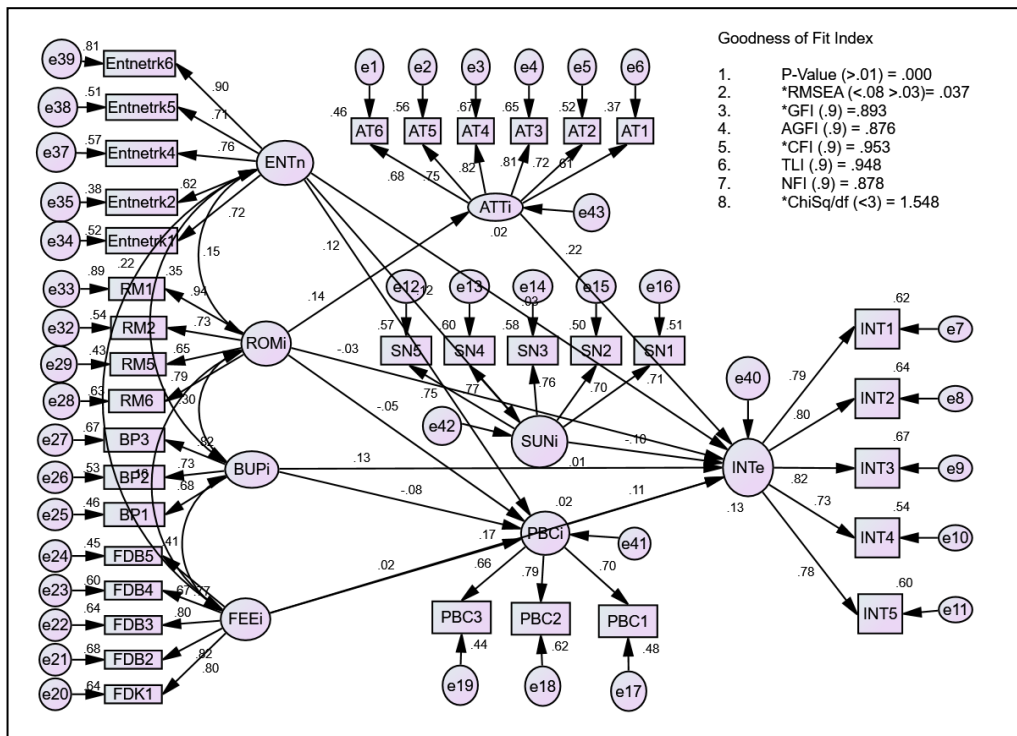


Figure 5.7 shows the Standard Regression Weights for relationship between entrepreneurial Network Role Model, Business Plan, Feedback, Attitude Towards Behaviour, Subjective Norm, Perceive Behavioural Control and Entrepreneurial Intention.

Table 5.24 shows the results obtained from the hypotheses testing for the model shown in Figure 5.7. As a result, the causal effect between exogenous variables (entrepreneurial network, role model, business plan and feedback) and endogenous variables (attitudes towards behaviour, subjective norm, perceived behavioural control) with Entrepreneurial Intention are mention below.

**Table 5.24: Hypothesis testing for the causal effect of the exogenous variable on the endogenous variable for the relationship between Entrepreneurial Network (EN), Role Model (ROM), Business Plan (BUP), Feedback (FEE), Attitude Towards Behaviour (ATTN), Subjective Norm (SUN), Perceive Behavioural Control (PBC), and Intention (INT).**

|                | Estimate | S.E. | C.R.   | P    | Label |
|----------------|----------|------|--------|------|-------|
| SUNi <--- ENTn | .133     | .066 | 2.007  | .045 | SIG   |
| PBCi <--- ENTn | .159     | .089 | 1.791  | .003 | SIG   |
| ATTi <--- ROMi | .131     | .054 | 2.427  | .015 | SIG   |
| PBCi <--- ROMi | -.055    | .070 | -.798  | .425 |       |
| PBCi <--- BUPi | -.102    | .096 | -1.067 | .286 |       |
| PBCi <--- FEEi | .018     | .080 | .224   | .822 |       |
| INTe <--- ATTi | .292     | .079 | 3.682  | ***  | SIG   |
| INTe <--- SUNi | -.136    | .077 | -1.764 | .026 | SIG   |
| INTe <--- PBCi | .130     | .072 | 1.817  | .028 | SIG   |
| INTe <--- FEEi | .239     | .085 | 2.817  | .005 | SIG   |
| INTe <--- BUPi | .183     | .104 | 1.753  | .048 | SIG   |
| INTe <--- ROMi | -.034    | .074 | -.465  | .642 |       |
| INTe <--- ENTn | .043     | .094 | .461   | .645 |       |

Note ; 1. \*\*\* p = 0.001, S.E = Standard Error & C.R = Critical Ratio

2. ATTITUDE = attitude towards behaviour, SUB NORM = subjective norm, PCB = perceived control behaviour, ENT\_NETWORK = entrepreneurial network, ROLE = role model and BUSS PLAN = business plan.

The standard regression weight represents the amount of change in the dependent variable due to a change of one standard deviation of the predictor variable. For example, estimated value for Intention to Attitude Towards Behaviour 0.292. It means, when Intention goes up by 1 standard deviation, Attitude Towards Behaviour goes up by 0.292 standard deviations. It should be noted that the value range of standard regression weights for all variables in this model is between -.136 and 0.368.

### 5.7.1 Mediating Effect

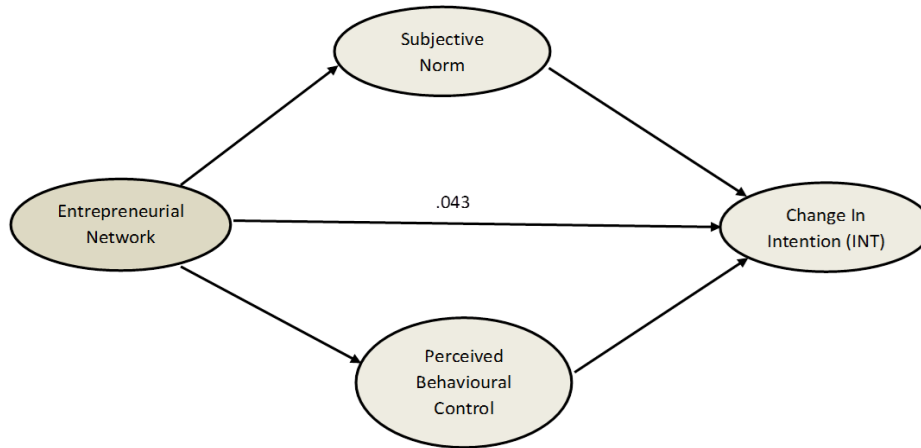
H4: Entrepreneurial networking is positively related to change in intention.

H4a/b: There is a positive influence in intention towards starting their own venture through introduction of entrepreneurial network mediated by subjective norm(4a) and perceived behavioural control (4b).

**Table 5.25: Hypothesis testing for the causal effect for entrepreneurial network on intention**

|  | Estimate | S.E. | C.R.   | P    | Result | Effect   |
|--|----------|------|--------|------|--------|----------|
| SUN <sub>i</sub> <--- ENT <sub>n</sub> | .133     | .066 | 2.007  | .045 | SIG    | indirect |
| PBC <sub>i</sub> <--- ENT <sub>n</sub> | .159     | .089 | 1.791  | .053 | SIG    | indirect |
| INT <sub>e</sub> <--- SUN <sub>i</sub> | -.136    | .077 | -1.764 | .048 | SIG    | indirect |
| INT <sub>e</sub> <--- PBC <sub>i</sub> | .130     | .072 | 1.817  | .049 | SIG    | indirect |
| INT <sub>e</sub> <--- ENT <sub>n</sub> | .043     | .094 | .461   | .645 |        | direct   |

**Figure 5.8: Procedure for testing mediation in Entrepreneurial Network – intention relationship**



### 5.7.2 Subjective Norm as a mediator

Figure 5.8 shows the direct effect of entrepreneurial network on intention. The result obtained in table 5.25 shows that the direct effect of spatial ability on entrepreneur network is not significant ( $\beta = -.043, p > .001$ ). In other words, the indirect effect is  $-.018$  ( $.133 \times -.136$ ) smaller ( $<$ ) than the direct effect is  $0.043$ . Therefore, no mediation occurs in this model. The mediating effect does not exist because there is no direct effect between entrepreneurial network and intention or indirect effect  $<$  direct effect.

### 5.7.3 Perceived Behavioural Control as a mediator

This type of mediation that occurs is Full Mediation since the direct effect of entrepreneurial network on intention is no longer significant after the mediator (Perceived Behavioural Control) enters the model. Both indirect path (EN to PBC and PBC to INT) are significant. In this case, the direct effect of entrepreneurial network on intention is not significant when putting it into the model but the indirect effect is significant through the mediator. The direct effect of Perceived Behavioural Control on intention is also significant. Since Indirect Effect ( $.159 \times .130 = 0.021$ )  $>$  Direct effect ( $.043$ ), the mediation occurs.

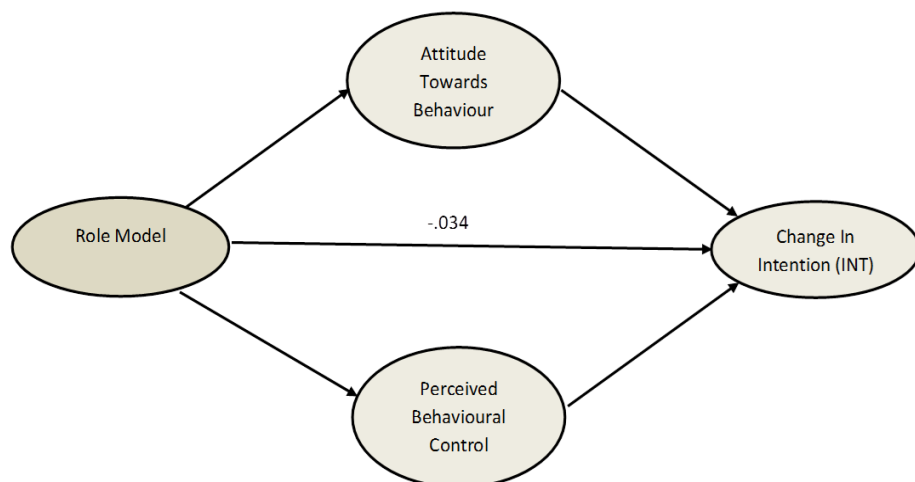
H5: Introduction of role models in entrepreneurship education is positively related to enhance the intention of participants to start their own venture

H5a/b: There is a positive influence in intention towards starting own venture through introduction of role model mediated by attitude towards behaviour (H5a) and perceived behavioural control (H5b).

**Table 5.26: Hypothesis testing for the causal effect for role model on intention**

|                          | Estimate     | S.E.        | C.R.         | P           | Result | Effect        |
|--------------------------|--------------|-------------|--------------|-------------|--------|---------------|
| ATTi <--- ROMi           | .131         | .054        | 2.427        | .015        | SIG    | indirect      |
| PBCi <--- ROMi           | -.055        | .070        | -.798        | .425        |        | indirect      |
| INTe <--- ATTi           | .292         | .079        | 3.682        | ***         | SIG    | indirect      |
| INTe <--- PBCi           | .130         | .072        | 1.817        | .049        | SIG    | indirect      |
| <b>INTe &lt;--- ROMi</b> | <b>-.034</b> | <b>.074</b> | <b>-.465</b> | <b>.642</b> |        | <b>DIRECT</b> |

**Figure 5.9: Procedure for testing mediation in Role Model – Intention relationship**



#### 5.7.4 Attitude Towards Behaviour as a mediator

This is the type of mediation that occurs is Full Mediation since the direct effect of entrepreneurial network on intention is no longer significant after the mediator (Attitude Towards Behaviour) enters the model. Both indirect path (RM to ATT and ATT to INT) are significant. In this case, the direct effect of role model on intention is not significant when entering to the model but the indirect effect is significant through the mediator. The direct effect of Attitude Towards Behaviour on intention is also significant. Since Indirect Effect ( $.131 \times .292 = .038$ ) > Direct effect ( $-.034$ ), the mediation occurs.

#### 5.7.5 Perceived Behavioural Control as a mediator

Figure 5.9 shows the direct effect of role model on intention. Based on the result obtained in Table 5.26, it shows that the direct effect of spatial ability on role model is not significant ( $\beta = -.034$ ,  $p > .001$ ). In other word the indirect effect is  $-.007$  ( $-.055 \times .130$ ) smaller (<) than the direct effect is  $-.034$ . Therefore, no mediation occurs in this model. The mediating effect does not exist because there is no direct effect between role model and intention or indirect effect < direct effect.

H6: Use of business plan activities in entrepreneurship education is positively related to enhance the intention of participants to start their own venture

H6a: There is a positive influence in intention towards start own venture through business plan activities mediated by perceived behavioural control

**Table 5.27: Hypothesis testing for the causal effect for business plan on intention**

|                | Estimate | S.E. | C.R.   | P    | Result | Effect   |
|----------------|----------|------|--------|------|--------|----------|
| PBCi <--- BUpi | -.102    | .096 | -1.067 | .286 |        | Indirect |
| INTe <--- PBCi | .130     | .072 | 1.817  | .049 | SIG    | Indirect |
| INTe <--- BUpi | .183     | .104 | 1.753  | .080 | SIG    | DIRECT   |

**Figure 5.10: Procedure for testing mediation in Business Plan – Intention relationship**

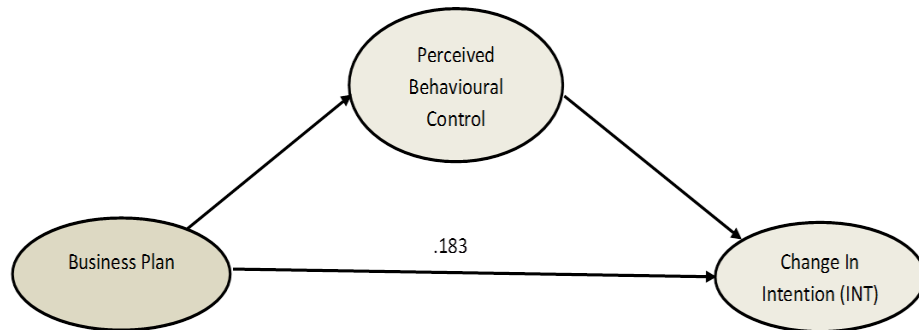


Table 5.10 shows the direct effect of business plan on intention. Based on the result obtained in Table 5.27, it shows that the direct effect of spatial ability on business plan is not significant ( $\beta=.183$ ,  $p>.001$ ). In other word the indirect effect is  $-.013$  ( $-.102 \times .130$ ) smaller ( $<$ ) than the direct effect is  $.183$ . Therefore, no mediation occurs in this model. The mediating effect does not exist because there is no direct effect between business plan and intention or indirect effect  $<$  direct effect.

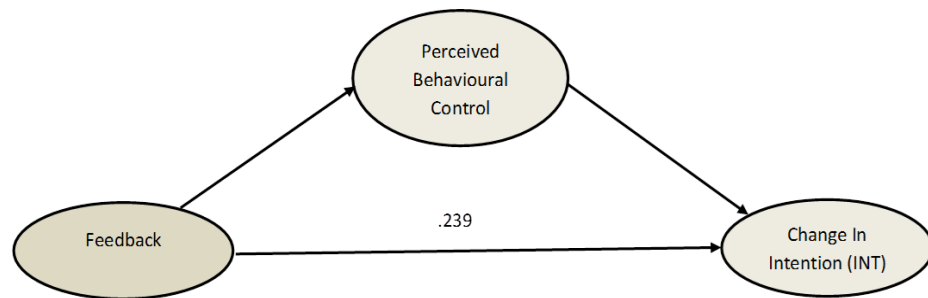
H7: Providing feedback during entrepreneurship education is positively related to enhance the intention of participants to start their own venture.

H7a: There is a positive influence in intention towards start own venture through feedback mediated by perceived behavioural control

**Table 5.28: Hypothesis testing for the causal effect for feedback on intention**

|                          | Estimate | S.E. | C.R.  | P    | Result | Effect   |
|--------------------------|----------|------|-------|------|--------|----------|
| <b>PBCi &lt;--- FEEi</b> | .018     | .080 | .224  | .822 |        | Indirect |
| <b>INTe &lt;--- PBCi</b> | .130     | .072 | 1.817 | .049 | SIG    | Indirect |
| <b>INTe &lt;--- FEEi</b> | .239     | .085 | 2.817 | .005 | SIG    | DIRECT   |

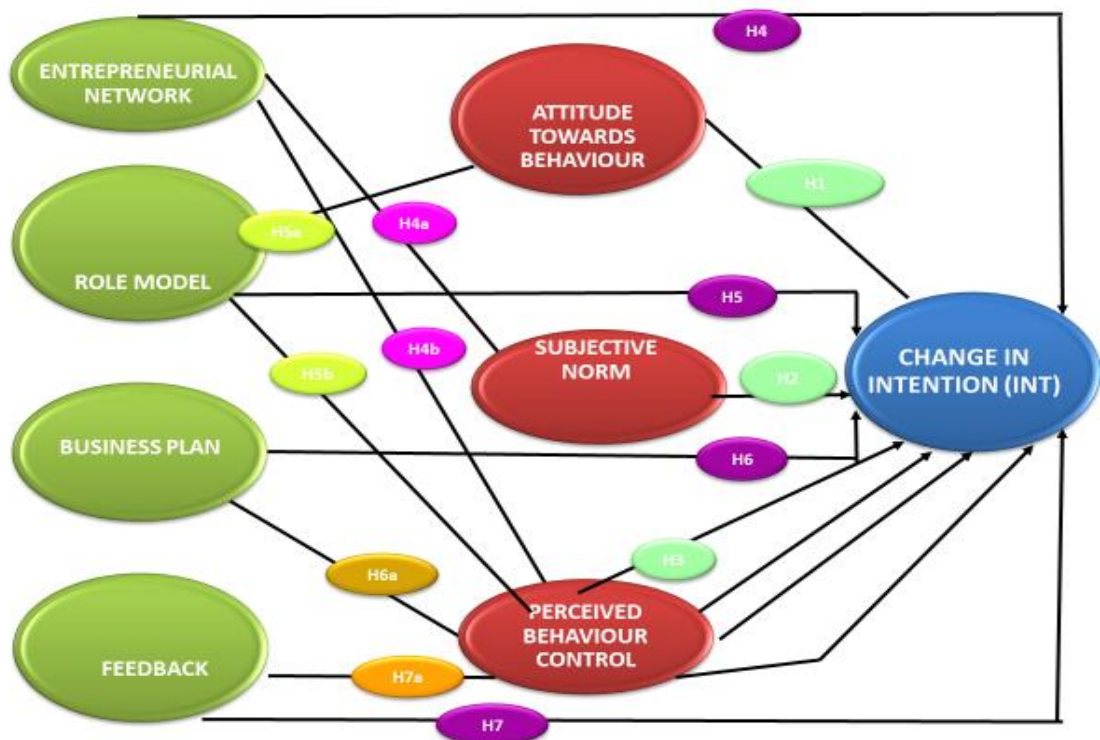
**Figure 5.11: Procedure for testing mediation in Feedback – Intention relationship**



### 5.7.6 Perceived Behavioural Control as a mediator

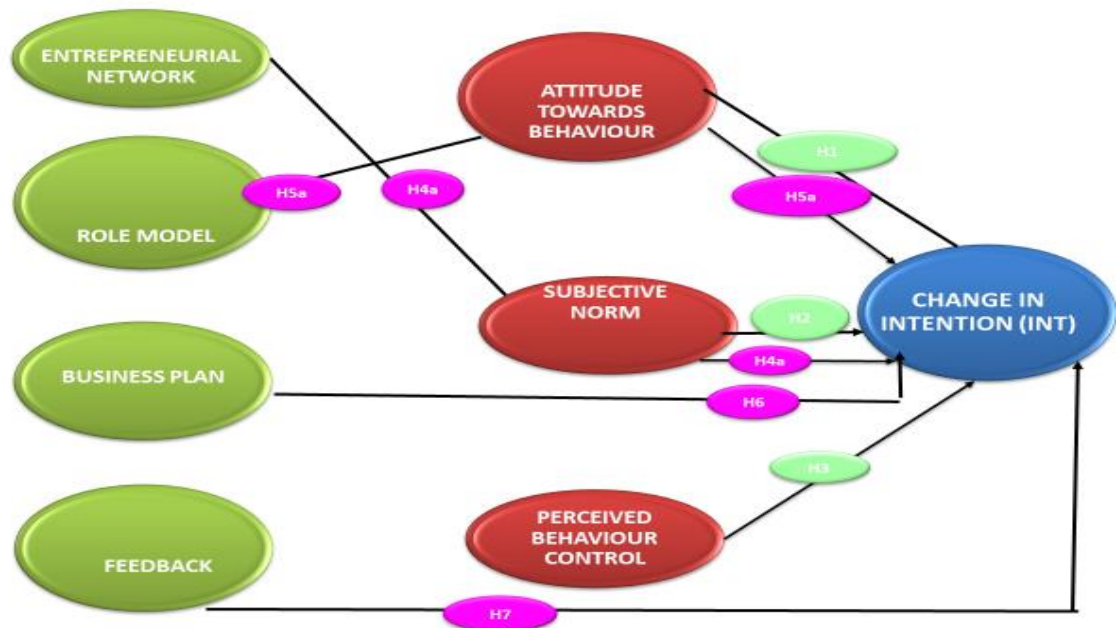
Figure 5.11 shows the direct effect of feedback on intention. The result obtained in Table 5.28, shows that the direct effect of spatial ability on feedback is not significant ( $\beta=.239$ ,  $p>.001$ ). In other words, the indirect effect is .002 (.018 x .130) smaller (<) than the direct effect is .239. Therefore, no mediation occurs in this model. The mediating effect does not exist because there is no direct effect between feedback and intention or indirect effect < direct effect.

**Figure 5.11: Original Conceptual Model**





**Figure 5.12: Improved Conceptual Model**



**Table 5.28: Results of Hypothesis Testing for the Model**

| Hypothesis Statement   | Estimate | P-Value | Result of Hypothesis Test |
|--|----------|---------|---------------------------|
| <b>H1:</b> Positive attitudes to start their own venture increase the level of entrepreneurial intention.  | .292     | .001    | Supported                 |
| <b>H2:</b> Subjective norm concerning to start own venture positively influence the level of entrepreneurial intention.                                | -.136    | .048    | Supported                 |
| <b>H3:</b> Strong perceptions about one’s ability to successfully found one’s own company positively influence the level of entrepreneurial intention. | .13      | .049    | Supported                 |

| Hypothesis Statement  | Estimate | P-Value | Result of Hypothesis Test  |
|---|----------|---------|--|
| <p><b>H4</b> : Entrepreneurial Network positively related to change in intention</p> <p><b>H4a</b> : The link between entrepreneurial network &amp; change in intention is mediated by participants' subjective norm.</p> <p><b>H4b</b> : The link between entrepreneurial network &amp; change in intention is mediated by participants' perceived behavioural control.</p>  | .043     | .645    | <p>Not Supported</p> <p>Not Supported (No Mediation)</p> <p>Supported (Full Mediation)</p> |
| <p><b>H5</b> : Introduction of role models in entrepreneurship education is positively related to enhance the intention of participants to start their own venture</p> <p><b>H5a</b> : The link between introduction of role model &amp; change in intention is mediated by participants' attitude towards behaviour.</p> <p><b>H5b</b> : The link between introduction of role models &amp; change in intention is mediated by participants' perceived behavioural control</p> | -.034    | .642    | <p>Not Supported</p> <p>Supported (Full Mediation)</p> <p>Not Supported (No Mediation)</p> |
| <p><b>H6</b> : Use of business plan activities in entrepreneurship education is positively related to enhance the intention of participants to start their own venture</p> <p><b>H6a</b> : The link between use of business plan &amp; change in intention is mediated by participants' perceived behavioural control</p>   | .183     | .050    | <p>Supported</p> <p>Not Supported (No Mediation)</p>                                       |

| Hypothesis Statement  | Estimate | P-Value | Result of Hypothesis Test                                |
|---|----------|---------|--|
| <p><b>H7</b> : Providing feedback during entrepreneurship education is positively related to enhance the intention of participants to start their own venture</p> <p><b>H7a</b> : The link between providing feedback &amp; change in intention is mediated by participants' perceived behavioural control.</p> | .239     | .005    | <p>Supported</p> <p>Not Supported<br/>(No Mediation)</p> |

Table 5.28 shows the summary of hypotheses testing results in which seven out of thirteen are supported.

## 5.8 Conclusion

Overall the final results provide good insights about the future guidelines for entrepreneurship education courses as business plan activities (H5) and feedback (H7) are shown to have a direct influence so these two characteristics should be looked carefully while designing entrepreneurship education courses. Teachers and mentors should be actively involved in the design process and communicate with the participants about their feedback. Teachers and mentors can provide feedback at various stages in formative and summative forms. If these two characteristics are handled appropriately, then they can influence the participant's intention to become an entrepreneur and there will be more entrepreneurs.

Additionally, two other hypotheses were supported. Entrepreneurial network influences change in intention through participants' subjective norm (H4a). Also, the introduction of role models influences change in intention mediated by participants' attitude towards behaviour (H5a). This suggests that entrepreneurship education providers should also look in to these two characteristics and make appropriate use of them by providing relevant resources to the participants.

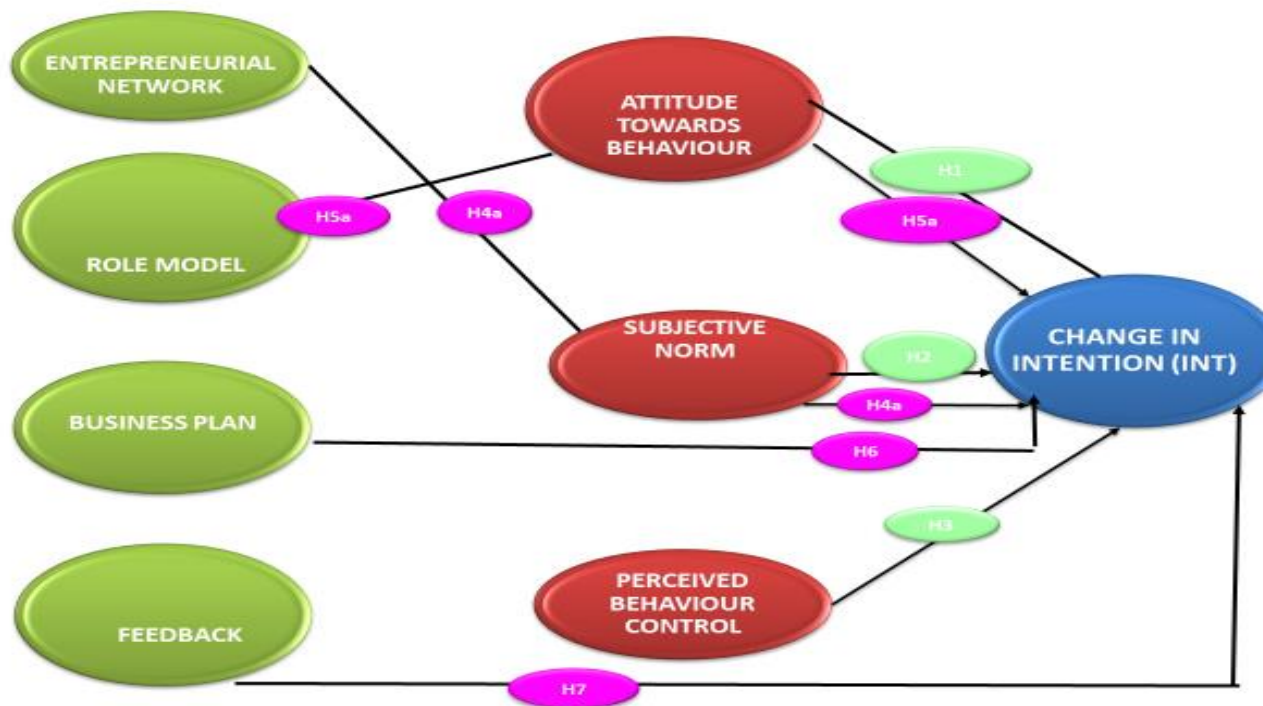
## . CHAPTER 6: Discussion

### 6.1 Introduction

The previous chapter reviewed the research hypotheses and reported the results of their testing using data collected in London and Delhi. This chapter interprets and discusses the results, which can help to answer the research questions and achieve the research objectives. This study examines the influence of students' intention to become involved in business and start their own ventures which are role models, entrepreneurial network, business planning and feedback (characteristics of entrepreneur education), attitude toward behaviour, perceived behaviour control and subjective norm (characteristics of entrepreneurial behaviour). The function of attitude toward behaviour, perceived behaviour control and subjective norm between entrepreneur's education characteristic and entrepreneur intention are discussed in this chapter. This chapter will revisit and discuss the results of these hypotheses proposed in the previous literature.

Figure 6.1 illustrates the conceptual model based on our results. The findings from the primary data show that there are six surprising results. Firstly, there is no significant relationship between *entrepreneurial network* and *change in intention*. Secondly, there is a negative influence on *intention towards starting own venture* through introduction of *entrepreneurial network* which is not mediated by *perceived behavioural control*. Thirdly, the introduction of role models in entrepreneurship education is negatively related to enhancing the *intention of participants to start own venture*. Fourthly, there is a negative influence in *intention towards starting own venture* through the introduction of *role models* that is not mediated by *perceived behavioural control*. Fifthly, there is a negative influence in *intention towards starting own venture* through *business plan* activities that is not mediated by *perceived behavioural control*. Finally, there is a negative influence in *intention towards starting own venture* through feedback that is not mediated by *perceived behavioural control*.

**Figure 6.1: Validated Conceptual Framework**



## 6.2 Positive attitudes to start their own venture increase the level of entrepreneurial intention.

Attitudes refer to predisposition or inclination to respond positively or negatively towards a certain idea, situation, person or object. (Ajzen, 1991). There are four major elements of attitude; firstly, affective (feelings or emotion), secondly cognitive (belief of opinion held intentionally), thirdly, conative (tendency for action) and finally evaluative (response in positive or negative to stimuli) (Ajzen 1991). Entrepreneurs with positive attitude will create creativity and help them to make better decisions. The entrepreneur with this kind of attitude makes better decisions, is more resilient and improves their relationships with other people and can even live longer so, consequently, boosts their chances of success in any endeavour (Hamilton, 2010). Higher education courses can increase the positive attitude of entrepreneurs to start their own businesses consequently increasing their level of intention (Nagarathanam & Buang, 2017; Packham et al., , 2010).

Personal attitude is a person's mindset on an issue (Dinc & Budic, 2016). Eagly and Chaiken (1993) stress that attitude is a propensity to make positive or negative evaluations

of the right issues or entities. The thinking of an individual about certain issues depends on their beliefs about the end results (Shook & Bratianu, 2010). The more positive the result, the more encouraged people feel and so they develop a positive attitude (Dinc & Budic, 2016). The research base on Global Entrepreneurship Monitor (GEM), and the results for GEMs countries shows that the theory of planned behaviour confirm that the antecedents to entrepreneurial intentions have significant impact on entrepreneurial intentions (Walker et al., 2013).

These findings are consistent with previous studies on the hypothesis that positive attitudes towards starting their own venture increase the level of entrepreneurial intention (H1). The findings of this study reveal that positive attitudes have considerable positive impact on entrepreneurial intention. The results are a t-value of 3.696 and a significant p-value of  $\leq 0.05$ ; hence, hypothesis H1 is supported. According to Ajzen (1991), intention is motivation that encourages behaviour. When there is motivation (intention) to engage in behavioural enhancement, then most likely the behaviour occurs and this does not depend on gender..

### **6.3. Subjective norm concerning to start own venture positively influence the level of entrepreneurial intention.**

Subjective Norm (SN) refers to perceived social acceptance and support for the behaviour (Walker et al., 2013). In other words, subjective norm reflects the perceived social pressure to perform or not to perform the behaviour (Ajzen, 1991). These situations depend on the specific circumstances, for instance, they could be triggered by family members, friends, teachers or lectures and maybe other role models in influencing their decision to become an entrepreneur.

The Theory of Planned Behaviour (TPB) suggests that subjective norm is one of the predictors of entrepreneurial intention (Fishbein & Ajzen, 1975) and hierarchical regression analysis on this data supports the hypothesis that attitudes and subjective norms are positively related with entrepreneurial intention. These findings are consistent with previous studies involving the hypothesis that subjective norms about starting your own venture positively influence the level of entrepreneurial intention (H2). The findings of this study reveal that subjective norm has considerable positive impact on

entrepreneurial intention. The results indicate a t-value of -1.766 and a significant p-value of 0.028; hence, hypothesis H2 is supported. Previous studies confirm these results (Peng, Lu, & Kang, 2012; Krithika & Venkatachalam, 2014; Rudhumbu, Sivotwa, Munyanyiwa & Mutsau, 2016).6.3 Strong perceptions about one's ability to successfully found one's own company positively influence the level of entrepreneurial intention.

Perceived behavioural control has been found to be an antecedent of the intention to become entrepreneurs and form new businesses (H3). The findings of this research are consistent with previous research (Debarliev, Janeska-Iliev, Bozhinovska & Viktorija, 2015; Iakovleva et al., 2011) that shows perceived behavioural control has a positive impact on entrepreneurial intention.

Iakovleva et al.'s (2011) study suggests that though strong perceptions about one's ability to successfully found one's own company positively influence the level of entrepreneurial intention, people with strong perception are more influenced towards entrepreneurial intention in a developing country compare with a developed country. This might be due to the people in developing countries being exposed to a more entrepreneurial environment like a family business, close ties to business or maybe the influence of other relatives (Carr & Sequeira, 2007; Bello, Mattana & Loi, 2018).

#### **6.4 Relationship between entrepreneurial network and entrepreneurial intention mediated by subjective norm and perceived behavioural control**

This section examines the direct effect of entrepreneurial network on entrepreneurial intention and the roles of subjective norm and perceived behavioural control as a mediator.

This research is not aligned with previous studies on the hypothesis that entrepreneurial network and entrepreneurial intention are not significant (H4). This study found that entrepreneurial network has no significant positive or adverse impact on change in entrepreneurial intention (H4). Our research is supported by Sequiera et al. (2007) which suggests that neither a personal network of weak ties nor strong ties with practical business knowledge and experience can influence entrepreneurial intention. On the other hand, when a strong tie within the network is equipped to provide "practical" support in

the form of relevant knowledge, skills or business experience, the possibility of entrepreneurship intention and behaviour is diminished.

Our results show that the subjective norm fully mediates the relationship between entrepreneurial network and entrepreneurial intention (H4a). Most previous research considers subjective norm to be one of the important factors in increasing the entrepreneurial intention either directly or indirectly (mediation) (Saraih et al., 2018; Tsai et al., 2016).

Our results show that Perceived Behavioural Control (PBC) fully mediates the relationship between entrepreneurial network and entrepreneurial intention (H4b). The type of mediation that occurs is full mediation since the direct effect of entrepreneurial network on intention is no longer significant after the mediator PBC enters the model. The direct effect of PBC on intention is also significant.

In conclusion, both subjective norm and PBC play their role as mediators in influencing the implementation of entrepreneurial intention while entrepreneurial network does not necessarily influence entrepreneurial intention.

#### **6.5 Introduction of role models in entrepreneurship education the intention of participants to start their own venture mediated by attitude towards behaviour and perceived behavioural control.**

Muller (2008) suggests that role model can be responsible for influencing the participants' attitude, perception and intention. If participants can see some entrepreneurs in their own network, or get into touch with practising entrepreneurs, this can lead directly to having conversations with them that can influence their intentions. The course which includes role models or introduces students to entrepreneurs in the courses can be more attractive to students and hence can influence their intention; therefore, this question is relevant to ask when conducting the study about entrepreneurship course characteristics.

Fayolle and Gailly (2015) revealed that entrepreneurship educational programmes have a positive relationship with students' perceived behavioural control and attitudes toward entrepreneurial behaviour in increasing entrepreneurial intention. Some studies argue the factors that provide opportunities to learn about entrepreneurial task and capabilities



related with local and social environment are, for example family, university, workplace, and neighbourhood. These may reduce the uncertainty that potential entrepreneurs face and reduce the fear of entrepreneur failure which prevents people from starting ventures (Wyrwich et al., 2016).

Wagner and Sternberg (2004, p. 229) observe “contacts with young entrepreneurs will reduce costs because they make it easier to get answers to lots of ‘how to’ type questions related to a start-up. By means the young entrepreneur normally provides the positive perception about new start up. In this respect, the information gain from this kind of role model suppose reduce the fear of entrepreneurial failure which might impede people to start the business.”

However, this research does not agree with the previous research on the hypothesis that the influence of introduction of role models in entrepreneurship education on the intention of participants to start their own venture is not significant (H5). The finding of this study showed it to have no considerable or adverse impact on entrepreneurial intention. Even so, the research by (Wyrwich et al., 2016) supports this current research as they stated that the important of role model only has an effect in West Germany where reduces the chances of entrepreneur failure, but not among older East Germans who spent a considerable time of their life living under socialism. Their research shows that entrepreneurial role models do not positively affect individual entrepreneurial perceptions if people are exposed to an anti-entrepreneurial environment for most of their life. Additionally, role models do not affect entrepreneurial intention where there is less of a social culture fit because in these circumstances, role models cannot influence people to have less fear of failure in business (Contín-Pilart & Larraza-Kintana, 2015).

Attitude towards behaviour mediates the relationship of role models in entrepreneurship education and entrepreneurial intention. Full mediation occurs since the direct effect of entrepreneurial network on intention is no longer significant after the mediator (Attitude Towards Behaviour) enters the model. Both indirect path (RM to ATT and ATT to INT) are significant. In this case, the direct effect of role model on intention is not significant when added to the model but the indirect effect is significant through the mediator.

The direct effect of Attitude Towards Behaviour on intention is also significant. Attitude towards behaviour influence the relationship between role models in entrepreneurship

education and entrepreneurial intention. The positive attitude by the people with their surrounding will increase their intention in form a new business and enjoy with the new venture. Using the 1126 university student as a sample, (Rosique-Blasco et al., 2018) review about the mediating role of attitude towards entrepreneurship. Their finding shows that, entrepreneurial attitude plays the roles as a mediator in relationship between in the relationship between entrepreneurial self-efficacy and entrepreneurial intention to set up a new business. Self- efficacy as consider the abilities of the people in order to response with the role of model in their surrounding and influence them to create a new business.

Meanwhile, perceived behavioural control does not mediate the relationship between role model and entrepreneurial intention. The result for this research indicates that no mediation occurs in this model. The mediating effect does not exist because there is no direct effect between role model and intention or indirect effect < direct effect. This finding aligns with Choi et al. (2018).

There are few studies such as Oosterbeek et al. (2010) find that role models is negatively related to entrepreneurial intention. Also “the successful role model stories have a greater impact than failure stories”. In addition, (Liu, Ma and Li, 2019) the impact through role models also depends on self-efficacy of the participants. Students may have high or low self-efficacy. Audience with high efficacy may have positive impact of role models whereas audiences with low entrepreneurial self-efficacy are less affected by entrepreneurial stories. In the current research the students were young and had no previous experience of entrepreneurship. Hence it might be the reason that these students may not able to relate with the role models and their career stories. However, It would be interesting to explore the question further that which types of role models or under which situations students get inspired through role model.

## 6.6 Use of business plan activities in entrepreneurship education is positively related to enhance the intention of participants to start their own venture and the mediation role of perceived behavioural control.

This research is parallel to previous research concerning hypotheses about business plan activities in entrepreneurship education and the intention of participants to start their own ventures. The findings of this study revealed that business plan activities have an important and positive impact on the intention of participants to start their own ventures. Our results show that there is a positive impact on the intention of participants to start their own venture.

Hopp and Greene (2018) found that using a business plan during the very early stages of setting up a venture helps entrepreneurs to make a viable business. Thus, the business plan is a form of entrepreneurship education providing a rationale for entrepreneurial behaviour and the creation of new ventures (Hopp & Greene, 2018). Business plan activity in entrepreneurial education encourages the participant to form relationships with other stakeholders, namely, business professionals, entrepreneurs, researchers, institutional representatives, enterprise support agencies, and investors (Russell et al., 2008). This relationship is facilitated through including expert-led training workshops, coaching, mentoring, and awards ceremonies. These activities encourage the entrepreneurial intention to create the new venture. This interaction enables participant to “vicariously learn” from the other experienced stakeholders (McGowan & Cooper, 2008, p. 32; Roldan et al., 2005). Furthermore, such learning supports an individual’s learning that is embedded in human relations and deemed a social and collective process of co-participation (Taylor & Thorpe, 2004). Their relationship with other participants from various backgrounds (external context) will encourage new ways of thinking, skills and a positive attitude (Cope, 2005; Davidsson & Honig, 2003; Gibb, 1997; Pittaway & Cope, 2007; Pittaway & Thorpe, 2012; Rae, 2006).

The findings of this research do not support hypothesis (6a) as there is no mediation of perceived behavioural control in the relationship between business plan activities and entrepreneurial intention. The result shows that there is a direct influence between business plan and intention.

## 6.7 Providing feedback during entrepreneurship education is positively related to enhance the intention of participants to start their own venture and the mediation role of perceived behavioural control

This research confirms previous research as it shows entrepreneurship education positively influences the intention of participants to start their own venture. The findings of this study reveal that entrepreneurial education has considerable impact on entrepreneurial intention (H7).

The result of this research does not support hypotheses (7a) as there is no mediation of perceived behavioural control in the relationship between feedback during entrepreneurship education and entrepreneurial intention. Our findings show that there is a direct effect of feedback on intention but no any indirect effect < direct effect. Perceived behavioural control does not influence the relationship between feedback and entrepreneurship intention - especially in the case of young women who have lower levels of self-efficacy than men in certain areas associated with entrepreneurship (Baronet et al., 2001).

## 6.4 Suggested approach for entrepreneurship education

Nabi et al (2017) asserts that there is a need to analyse the impact of entrepreneurship education characteristics more precisely at various level i.e. intention, knowledge and behaviour. Hence this research has used their suggested teaching model and aligned it with Ajzen's theory of planned behaviour. The results of the current study also support Ajzen (1991) and Kruger et al (2000) by suggesting that entrepreneurial intention can be understood through its antecedents i.e. perceived behavioural control, attitude towards behaviour and subjective norm.

The current study also tried to dig down deeper and explored the relationships of entrepreneurial education characteristics with antecedents and entrepreneurial intentions. Hence, this research provides very significant explanations about entrepreneurial intentions. Our research suggests that there is a significant dependent relationship between a few entrepreneurship education characteristics, entrepreneurial intentions and its antecedents. Interestingly business plan activities and feedback directly impact on

change in intention. This can provide valuable guidelines to entrepreneurship education courses and their providers. The institutes can place more emphasis on introducing various of business plan activities. Similarly, mentors and teachers can give highly constructive and regular feedback.

Also, the link between entrepreneurial networking and change in intention is mediated by participants' subjective norm. Though entrepreneurial network does not influence the change in intention directly, it can mediate through subjective norm. Similarly, the introduction of role models does not have a direct impact, but it is also mediated by participants' attitude towards behaviour.

Moreover, in this research four key characteristics of entrepreneurship education have been investigated for courses with durations of ten to twelve weeks. Hence the results and relevance of these characteristics can certainly be used for further entrepreneurship education programmes to have more entrepreneurs.

## **6.8 Concluding Remarks**

This chapter presents the conclusion of the study that investigates how elements of entrepreneurship education programmes (e.g. business plans, role models, entrepreneurial networks and feedback) relate to entrepreneurial intention and its antecedents such as perceived behavioural control, subjective norm, and attitude in terms of both the direct and indirect effect. This research developed and tested an empirical model based on 400 respondents' university students from UK and India. The structural equation modelling results show that all the variables meet the minimum requirement of the fitness index. However, there are multiple results for the relationship between the independent variables and dependent variable. The result shows that antecedents such as perceived behavioural control, subjective norm, and attitude positive relationship influence entrepreneurial intention. However perceived behavioural control does not play a role as a mediator in all situations.

Additionally, the implications of the study for business practice and theoretical contribution have been explained. Finally, the limitations of this research should prove fruitful areas for future research and assist future researchers in doing their research.

## **Chapter 7: Conclusion**

### **7.1 Introduction**

This study empirically investigates how the elements of entrepreneurship education programmes like business plan, role model, entrepreneurship networks and feedback affects entrepreneurial intention and its antecedents (perceived behavioural control, subjective norm and attitudes). This research uses the theory plan behaviour as a lens.

Education is considered to be the most important factor in improving entrepreneurial intention. Furthermore, entrepreneurial education has been recognized as one of the important instruments for enhancing attitudes of entrepreneurs (Liñán et al., 2011). However, the combination of other variables - for instance, perceived behavioural control, subjective norm and attitudes – that may influence entrepreneurial intention still remain unclear. This thesis contributes to filling this gap by providing empirically based evidence about the effect of these combinations of variables.

This chapter will conclude the thesis by giving an overview of the significant areas it has covered. It will revisit the aims and objectives of our research and the findings for each objective in the thesis. Subsequently, it will outline the research findings based on the research questions shown in Chapter 1. Then, the theoretical and practical contribution will be defined. Finally, it will outline the limitations of this study and provide recommendations for future research.

### **7.2 Meeting the Research Aim and Objectives**

The aim and objectives of the thesis have been identified in Chapter 1. Broadly, these are to find how elements of entrepreneurship education programs (i.e. business plans, role models, entrepreneurial networks and feedback) relate to entrepreneurial intention and its antecedents such as perceived behavioral control, subjective norm, and attitude. This thesis requires an objective approach using the theory of planned behaviour that highlights the relationship between the variables. Based on the findings, the objectives of this thesis are achieved. The objectives are explored through the theoretical lens of dynamic capabilities and the resource-based theory, which underpins the relationship

between the variables. Further, this chapter delimits the theoretical and practical contribution. It also states the limitations of the study and recommendations for future research.

### 7.3 Conclusions of the Study

In Chapter 2 the literature of the theory of planned behaviour (TPB) is examined. In Chapter 2, the researcher also presents an in-depth, critical review of the literature of entrepreneurial education and relates it to TPB. The literature of entrepreneurial education implies the importance of entrepreneur behaviour in improving students' intention to start a new business. Furthermore, the importance of entrepreneurial education in increasing the behaviour consequently undeniably influences the individual intention and this has been discussed extensively (Liñán et al., 2011). Further, the principles of TPB were analysed. The literature analysis demonstrates the relationships between the variables: business plan, role model, entrepreneurial networks, feedback, perceive behavioral control and subjective norms and attitudes.

Our discussion of the results in Chapter 6 provides an understanding of the key antecedents that influence the intentions of Indian and UK entrepreneurs. The results of this study resonate with previous studies on theories relating to area of entrepreneurship. This thesis uses SEM as it is useful for analyzing the theories involved in correlation analysis of a group of variables, consisting of both dependent and independent variables TPB is examined based on data and information collected using SEM. Table 5.54 shows a summary of the findings for all 15 hypotheses, four of which are not supported.

The findings reveal that an entrepreneur equipped with education and individual characteristics increases in intention to start a new venture. The results of this research are consistent with Liñán et al. (2011) regarding the importance of education and personal characteristics in influencing the intention to begin a new venture.

The findings answered the research question given in Chapter 1. This research found that attitudes significantly influence entrepreneurial intention and there is no direct relationship between entrepreneurial network and entrepreneurial intention. Nevertheless, this relationship improves after adding subjective norm acting as a mediator which fully mediates the relationship between entrepreneurial network and entrepreneurial intention.

Perceived behavioural control as a mediator has a positive impact on the relationship between entrepreneurial network and intention. The type of mediation that occurs is Full Mediation since the direct effect of entrepreneurial network on intention is no longer significant after the mediator (Perceived Behavioural Control) enters the model. The introduction of role models in entrepreneurship education is negatively related to enhancing the intention of participants to start their own venture. This result proves that the role model does not necessarily have a positive relationship with entrepreneurial intention, especially for older and more experienced people. Besides that, the role model does not affect the entrepreneurial intention due to lower social culture fit and for the people less influenced by role models in bringing them less fear of failure (Contín-Pilart and Larraza-Kintana, 2015). Attitude towards behaviour fully mediates the relationship between role models in the relationship between entrepreneurship education and entrepreneurial intention. A positive attitude will influence people to impress their role model in opening or operating a new venture. In this case, the direct effect of role models on intention is not significant when putting it into the model but the indirect effect is significant through the mediator. Meanwhile, perceived behavioural control does not mediate the relationship between role model and entrepreneurial intention. This means that the presence of perceived behavioural control does not have any effect on the relationship between role model and intention. However, use of business plan activities is positively related to enhancing the intention of participants to start their own venture. Other variables like perceived behavioural control do not affect the relationship between business plan activities and the intention of entrepreneurs in starting a new venture. Finally, providing feedback during entrepreneurship education is positively related to enhancing the intention of participants to start their own venture. Hence, the mediating variable, which is perceived behavior control, does not play a role as a mediator in improving the relationship between feedback and intention. Although the type of mediation is both partially or fully mediated, perceived behavioral control and attitudes still play their role as mediators. However, the result revealed that only subjective norm and attitudes fully mediated entrepreneurial network and role model.

As mentioned above, all the aims, objective meet the standards of validity and objectivity and this research question has been answered. This research suggests that entrepreneurs generally, and specifically education institution both government or public and private



should consider both entrepreneurship programmes and embedded positive values or characteristics. With these combinations course designers should be able to improve the entrepreneur intention to start new business ventures.

#### 7.4 Research Limitations

There are several limitations of this research that warrant future research. The limitations for this study include sample size, time, place, respondents and methodology which may open new perspectives in entrepreneurship research.

Firstly, this study looks at a small sample size. A larger sample size would create more potential for generalizing the study. The difficulty in obtaining data from students can be seen from the low rate response. Student did not bother to complete the questionnaires as they assumed it was not important for them. This could also lead respondents not to answer the questions carefully. To overcome this limitation, researchers can choose to see respondents face-to-face rather than sending questionnaires via email, web or post. Their perceptions differ when they meet researchers personally and when they know the research is by a PhD student. This is true particularly for overseas students compare to local student (Tagg, 2014).

In addition, in line with the sampling technique, stratified sampling techniques were used in this study, so respondents could be concentrated in certain geographical locations, based on their availability. However, based on the analysis in Chapter 5, the number of responses is sufficient and exceeds the minimum requirement for analysis. Therefore, for this reason, a low reaction rate is appropriate and not a problem.

Secondly, another aspect related to time is the question of when entrepreneurship education should begin. The present study focuses on entrepreneurship education at the university level, but it is possible that the impact of higher education is different from education at other levels. Attitudes and perceptions may be more difficult to change if participants have reached a certain age; therefore, entrepreneurial training may be more effective in the early stages of education. Additionally, offering courses at school level would give more people the opportunity to become involved in the topic. Therefore, research aimed at understanding the impact of educational measures at an earlier age is desirable.

Thirdly, the data for this research was drawn from India and the UK. The limitation for comparative study includes time constraints, language, and perception (Carayannis et al., 2003). These problems might be overcome with the application of funding. Additionally, more countries might be included in the study since attitudes towards entrepreneurship vary around the world. This study is based on collection the data from the same respondents in two phases, first is before starting the courses and second is after completion of the courses. It is good practice to see if see the change in intention of the participants during that period. However, no control group has been used in the research. "There are a lot of instances when a control group is not included in an experimental design. Prospective cohort studies are one, in which a group of individuals are tracked longitudinally" (Campbell, Taylor and McGlade, 2002). Due to time limitation and involvement of two countries it was very difficult to include the control group as well. It might be interesting to see if control group has been used and explore the changes between the groups.

### **7.5 Novelty and Theoretical Contribution**

The novelty of the research is related to the comprehensive development of a theoretical model that examines the antecedents of entrepreneurial intention in starting new business ventures. Hence, the major contribution and novelty in this research help determine, through an empirical data-based analysis, which variables are more important in determining entrepreneurial intentions and, from that point on, propose content and pedagogy that can enhance these elements more effectively.

This research contributes to entrepreneurship research by the combination of programmes of entrepreneurial education related to the entrepreneur's characteristics in influencing their intention in operating new ventures of business. The result for this research is, in line with Dutta et al. (2011), suggests that successful entrepreneurship does not only depend on entrepreneurship education that facilitates the creation of new businesses. This research argues that other factors, characteristic of individuals with diverse educational experience, can make a critical difference, and it is important to identify what additional educational content can be added to entrepreneurial courses to play a positive role in fostering future entrepreneurial activities.

The main theoretical contribution in this thesis is to confirm and extends that the first intentions model, and more specifically planned behavioral theory, can be used as an

indicator of the potential success of entrepreneur education programmes. This research also proposes that intention is more important than factors related to previous entrepreneurial characteristics.

From a methodological point of view, this study is also useful for its demonstration of relevant theoretical frameworks and tools that have been widely used in various works to measure entrepreneurial intentions. This paved the way for comparative analysis which uses data from India and the United Kingdom and suggests the possibility of collecting more data on the research question.

Furthermore, this study contributes by affording a contingency perspective. Although many studies have examined the effect that entrepreneurial education has on entrepreneurial intention (Carayannis et al., 2003; do Paço et al., 2015; Nabi et al., 2018), they have not investigated the mediators of the entrepreneurial education—intention relationship. This study increases the knowledge of this relationship by investigating the mediating roles of subjective norms, Perceived behavioral Control and attitudes in the relationship between elements of entrepreneurship education and entrepreneurial intention.

This research extends the role of the theory of behavior planned throughout the process of becoming an entrepreneur. Some previous entrepreneurship studies have adopted the planned behavioural theory, investigating the control of the considered behaviour, the attitude towards entrepreneurship and the subjective norms to examine the introduction of entrepreneurial intentions (Fayolle et al 2006, Kolvereid, 1996; Krueger et al., 2000). By contrast, this study suggests that these three components play mediating roles in the relationship between entrepreneurial education and intention to start a business.

Entrepreneurship education ranks high on policy agendas in Europe and the US, but little research is available to assess its impact (von Graevenitz et al., 2010) . However, this research also uses cross-sectional study methods by focusing on the impact of entrepreneur education in influencing of entrepreneur intention in operating new venture of business. Furthermore, the data were gathered from university students from the United Kingdom and India.

Finally, in terms of contribution to quantitative research methods, this research uses the Confirmatory Factor Analysis (CFA) to evaluate the fitness of the measurement model in the field of study. CFA is resolved using SEM whose goal is to determine the extent to which a model is underpinned, and what data were assembled during the research (Schumacker & Lomax, 2010). SEM has become the preferred method of verifying (or not) quantitative theory models, since SEM is capable of testing complex statistical phenomena (Wawmayura et al., 2015).

## 7.6 Practical Contribution/Managerial Implications

From a practical perspective, the findings of this research suggest that education institutions and governments should implement entrepreneurship programmes with a view to improving motivation to start new ventures.

This research is useful because it enhances our understanding of the importance of entrepreneur education and entrepreneur characteristics include perceive behavioral control, subjective norms and attitude especially those related with university students. In this way, it can provide policymakers and educators with better understanding of phenomena and help them become more effective in their interventions to increase the number of new entrepreneurs. It also provides some orientation to educators in program development by helping them to build stronger entrepreneurship classes, provide guidance that would help to make education projects more effective and appropriate, as well as promote real entrepreneurial culture. In other words, it tells course developers that they should include material about the business plan, role models, the importance of entrepreneurial networks and how to give feedback.

In terms of application for the students, the entrepreneurial education and individual characteristics which are related to perceive behavioral control, subjective norms and attitude are key indicators for profiling the students and better motivating them. This is especially important with students who don't have any exposure to entrepreneurship or who have been negatively influenced by a prior experience of entrepreneurship.

Both public and private institutions should be able to implement entrepreneurial courses for all programmes such as engineering, medicine, geography, history and others and not be just limited to business. With this range of implementation, everyone would be aware

of entrepreneurship and make it possible for anyone to become entrepreneurs. This culture will increase the growth of new companies and will contribute to a country's GDP (Nelson & Johnson, 1997; Olorundare & Kayode, 2014).

Furthermore, those people who are risk averse, institutions should focus on training for becoming an entrepreneur and educating them. On the other hand, there is no need to limit the education program to the start-up phase. It might be possible to implement initiatives to develop solid educational programmes together with dynamic behaviours in the participants (Foley & Griffith 1998). With this logic, Gibb (1987) suggested the importance of the contents of training is related not only to the pre-start-up phase, but also to the post-creation stages. In relation to this issue, Garavan and O’Cinneide (1994a) highlighted the importance of “managing growth” or “continuous team building”. However, as stated by Littunen and Virtanen (2006), more research needs to be undertaken to understand the exact nature of the relationship between entrepreneurship education and training together with encouraging positive characteristics (Rosique-Blasco et al., 2018), especially in the case of specific aspects relating to the success of new ventures.

## 7.7 Future Research

While important information has been collected for this study, there are several possibilities for future research. The first recommendation is to repeat this study in the same context using qualitative methods to acquire feedback from respondents and avoid misunderstandings on questions. For example, future researchers may use interview, observations or documentary evidence to clarify the relationship between variables, which will result in a better understanding of this relationship in the proposed model.

Another possibility for future research is, in order to understand the historical developments along with the role of business plan, role model, entrepreneurial network, feedback, perceive behavioral control, subjective norms and attitudes towards entrepreneurial intention in operating new venture business, the longitudinal approach is more reliable. In addition, this method would provide a good opportunity to understand the relationship between variables (IV, intermediaries, mediator and DV). Using longitudinal design, with conceptualization, will gain a richer empirical result.

This research only uses quantitative methods. Deeper insights could be generated using a combination of quantitative and qualitative methods. This combination of methods had proven by previous research in improving the findings especially their reliability (Barba-Sánchez and Atienza-Sahuquillo, 2018; Ngoc Khuong and Huu An, 2015; Warhuus et al., 2017). Observations and visits combined with in-depth interviews are possible qualitative methods that could be used where it is necessary to increase our understanding of the influence of education practice and its combination with individual characteristics.

This research is limited to university students. In future, researchers could consider primary or secondary students or non-students, in fact anyone taking short training or entrepreneurship courses, as respondents. There would also be a case for including respondents who finish their study or training six months after the end of the programme (Saraih et al., 2018). Such a study would add to the literature because the data comes from a different level.

This research focuses on the individual level. Another avenue for research, might be to focus on firm level which is to evaluate the factors of entrepreneur education in influencing firm performance. Some researchers have focused on entrepreneurial education and entrepreneurial competencies in increasing of firm performance (Minai et al., 2018). Other research could be conducted by measuring a combination of entrepreneurial education and entrepreneurial characteristics such as perceived behavioural control and subjective norms and attitudes.

There is also an opportunity to study further about the various situations under which chosen entrepreneurship education characteristics impacts the intention. For e.g. introduction of Role models may impact the student's intention in various ways in different situations and circumstances. Hence it will be interesting to know that under which situations Role models may play positive role for the students.

This research is based on the individual level. However, it does not include the students' own evaluations of their potential and educators need only provide the right environment so that they can test their own abilities. For the future, courses might add value by including individual level assessment as a component of assessment since its usefulness has been proved by previous studies (Maritz and Brown, 2013; Pittaway et al., 2009; Warhuus et al., 2017). Therefore, the assessment of entrepreneurial potential may be a

useful instrument for completing entrepreneurial education. Assessment also can be implemented to support decisions on appropriate educational practices.

## 7.8 Concluding Remarks

This chapter presents the conclusion of the study that investigates the relationship between entrepreneur education which is related to business plan, role model, entrepreneurs network and feedback in combination with entrepreneurial characteristic consist of perceive behavioral control, subjective norms and attitudes in influencing of entrepreneurs intention in beginning new business ventures. This research develops and tests an empirical model based on 400 respondents who were university students in India and the United Kingdom. The results from structural equation modeling show that all of the variables meet the minimum requirement of the fitness index. However, only eight out of thirteen are significant (Table 5.28). This research evaluates direct and indirect (mediation) relationships. Direct relationships related to entrepreneurial education program towards entrepreneur intention in operating new business. The indirect impact concerns the influence of perceived behavioural control, subjective norms and attitudes as a mediation in the relationship between entrepreneur education and entrepreneur intention. Moreover, research implications for business practices and theoretical contributions have been explained. Ultimately, the limitation of this research should give rise to a useful field of research for the future and to assist future researchers in conducting their research.

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## APPENDIX 1: Questionnaire Items

Questionnaire used for Pre survey

| Construct   | Item Code   | Item Measures |
|---|---|---------------|
| Attitude Towards Behaviour<br><br><i>Mueller (2009) and Kolvereid, 1996</i> | Part C (Pre and Post –<br><br>Reasons for becoming organisationally employed<br><br>1. Job security: "It is important to me to have a secure job."<br>2. Work load: "It is important to me not to work overtime."<br>3. Avoid responsibility: "I want to avoid taking over responsibility during my work."<br><br>Reasons for becoming self-employed<br><br>4. Use Economic opportunities: "I want to use market opportunities to have economic success."<br><br>5. Challenge/To have an exciting job: "I want to have exciting work."<br><br>6. Challenge/To? have a challenging job: "I want to have challenging work."<br><br>7. Autonomy/Freedom: "I want to have freedom during my work."<br><br>8. Autonomy/To be your own boss: "I want to be my own boss."<br><br>9. Authority/Have power to make decisions: "I want to take decisions on my own."<br><br>10. Authority/Have authority: "I want to have authority at work."<br><br>11. Self-actualization: "Self-actualization is important to me."<br><br>12. To participate in the whole process: "I would like to take part in the whole working process." | Lickert Scale |

| Construct   | Item Code  | Item Measures |
|---|--|---------------|
|   | <p>Direct measures: Evaluation of performing the behaviour in question? Instrumental component</p> <p>13. Usefulness: "Becoming an entrepreneur within the first 5 years after finishing my studies would be useful for me."</p> <p>14. Advance career: "Becoming an entrepreneur within the first 5 years after finishing my studies would advance my career."</p> <p>Experiential component?</p> <p>15. Enjoyment: "I would enjoy becoming an entrepreneur within the first 5 years after finishing my studies."</p> |               |
| <p>Subjective Norm<br/>Ajzen (2002)</p>               | <p>Part D (Pre and Post)</p> <p>1. My family thinks that I will become an entrepreneur.</p> <p>2. People whose opinion I value have become entrepreneurs within the first 5 years after finishing their studies.</p> <p>3. People who are important to me think that I should become an entrepreneur.</p> <p>4. The opinion of my family is very important to me.</p> <p>5. The opinions of people who are important to me influence me a lot.</p>   |               |
| <p>Perceived Behavioural Control<br/>Ajzen (2002)</p> | <p>Part E (Pre and Post)</p> <p>1. Whether I become an entrepreneur within the first 5 years after finishing my studies is entirely up to me.</p> <p>2. I think I know enough to start my own business within 5 years of finishing my studies.</p> <p>3. I have enough self-confidence to start my own business within the first 5 years after finishing my studies.</p>   |               |

| Construct                            | Item Code  | Item Measures |
|--------------------------------------|--|---------------|
|                                      | <p>4. If I started my own business I would be overworked.</p> <p>5. I am sure that I would be successful if starting my own company within the first 5 years after my studies.</p> <p>6. To start a company within the first 5 years after finishing my studies would be very easy for me.</p>   |               |
| <p>Intention</p> <p>Ajzen (2002)</p> | <p>Part F (Pre and Post)</p> <p>1. If I started my own business I would be more successful than most of my fellow students.</p> <p>2. I will try to start my own business within the first 5 years after finishing my studies.</p> <p>3. I have already taken some steps to start my own business (e.g. gathered information, worked out a business idea with friends, written a business plan).</p> <p>4. If I became an entrepreneur, it would be very likely that my company would be successful after 2 years.</p> <p>5. I strongly believe that I will start my own business within the first 5 years after finishing my studies.</p> |               |

## APPENDIX 2: Independent Variables

### Questionnaire Used for Post Survey

| Variable  | Items  | Scale                          |
|---|--|--------------------------------|
| <p>Feedback</p> <p>Muller (2011) &amp; Laurillard (2002)</p> <p>Also supported by pilot study.</p>                        | <p>Source: Ex post questionnaire, Part B, 1, 1a, 1b, 2 and 3</p> <p>1. During the class I frequently received feedback on my ideas, contributions to the discussion and/or on my work (e.g. written business plan).</p> <p>1.a) If you received feedback, please evaluate the following statement: The feedback was given by a qualified person.</p> <p>1.b) If you received feedback, please evaluate the following statement: I was able to draw on the feedback during the rest of the course.</p> <p>2. After the feedback I or my working group was able to work autonomously on our task.</p> <p>3. One to one sessions with the lecturers feedback helps me more to get more support and encourages me to start my own business</p> | <p>Likert Scale</p> <p>1-5</p> |
| <p>Business Planning Activities</p> <p>Muller (2011) &amp; Bell and bell (2016)</p> <p>Also supported by pilot study.</p> | <p>Part B 4 to 8</p> <p>4. During the class I was encouraged to develop my own business idea</p> <p>5. During the class I thought up a business Idea and wrote my business plan accordingly</p> <p>6. I enjoyed the process of business plan writing</p> <p>7. During the class I learned about business ideas that I would be able to realise successfully myself.</p> <p>8. The other participants in the class liked the idea of writing business plan</p>  | <p>Likert Scale</p> <p>1-5</p> |
| <p>Role Model</p> <p>Muller 2011 &amp; Begley et al. 1997</p>   | <p>Part B 9 to 14</p>  |                                |

| Variable  | Items   | Scale              |
|---|---|--------------------|
| Also supported by pilot study.  | <p>9 During the class I had the chance to listen to entrepreneurs' field reports (e.g., entrepreneurs' speeches, lecturer's reports).</p> <p>10 Among these entrepreneurs was at least one whose work I appreciate and admire.</p> <p>11. I understood and it was discussed extensively why the entrepreneur and the company have been successful.</p> <p>12 Without this entrepreneur, I would probably not have thought to have my own company'</p> <p>13 I find it interesting when learning is by examples and introduction of role models in the course were helping to create more interest.</p> <p>14. The other participants in the class liked the idea of introduction of role models in the course.</p> <p>15. During the class I heard about entrepreneurs or got to know entrepreneurs with whom I could identify.</p> |                    |
| <p>Entrepreneurial Network</p> <p>Mueller (2011)<br/>Lavoie et al, 2011; Dyer, 1994; Scott and Twomey, 1988</p> <p>Also supported by pilot study.</p> | <p>Ex post questionnaire Part B – 16- 22</p> <p>16. During the class I was able to establish a network which will be helpful when I start an own company.</p> <p>17. During the class I was able to get to know potential co-founders.</p> <p>18. During the class I learned who to refer to when I want to start my own business.</p> <p>19. During the class the advantages of be a part of entrepreneurial network has been communicated.</p> <p>an entrepreneur were emphasised.</p> <p>20. During the class the ways by which I can develop entrepreneurial network has been communicated</p> <p>21. Entrepreneurial Network helped me to learn the necessary professional skills for successfully starting a business.</p>  | Likert Scale : 1-5 |

| Variable | Items   | Scale |
|----------|---|-------|
|          | 22. After communication with various entrepreneur through network allowed me to assess whether starting my own business is something I should consider. |       |

## APPENDIX 3: Table of Key Literature

| Sl. No | Journal   | Author/ Year  | Article Title   | Summary  |
|--------|---|---|---|--|
| 1      | Entrepreneurship Theory and Practice                          | Tae Jun Bae<br>Shanshan Qian<br>Chao Miao &<br>James O. Fiet<br>(2014)        | The Relationship between Entrepreneur-ship Education and Entrepreneurial Intentions: A Meta-Analytic Review | Research paper based on testing 12 hypotheses which can be considered as a moderator for entrepreneurship education and entrepreneurial intentions relationships. Three dimensions of culture aspects are positively related with the relationship and can be explored further |
| 2      | Research Policy   | Hans Landstorm<br>Gouya Harirchi &<br>Fredrik Astrom<br>(2012)                | Entrepreneurship: Exploring the Knowledge Base  |  |
| 3      | Strategic Management Journal                                  | Howard H. Stevenson &<br>J. Carlos Jarillo<br>(1990)                          | A Paradigm of Entrepreneurship: Entrepreneurial Management  | Based on corporate entrepreneurship and also suggested that there should be some appropriate ways to teach corporate entrepreneurship  |
| 4      | Journal of European Industrial Training                       | Margaret Kobia &<br>Damary Sikalieh<br>(2009)                                 | Towards a search for the meaning of entrepreneurship  | The primary focus of this literature review paper is to address the question why it is difficult to define entrepreneurship despite the amount of research that has taken place in the field   |
| 5      | International Journal of Entrepreneurial Behaviour & Research | Luke Pittaway,<br>Paul Hannon,<br>Alan Gibb &<br>John Thompson<br>(2008)      | Assessment practice in entrepreneurship education   | The paper aims to introduce current debates on assessment practice in higher education and to explore educational research on assessment.  |
| 6      | Journal of Small Business Management                          | Nathalie Duval -<br>Couetil<br>(2013)   | Assessing the impact of Entrepreneur-ship Education Programs: Challenges and approaches                     | There is a need to assess entrepreneurship education programmes but due to non-availability of funds having difficulties.  |
| 7      | Higher Education Studies                                      | Zahra Arasti,<br>Mansoreh Kiani<br>Falvarjani &<br>Narges Imanipour<br>(2012) | A Study of Teaching Methods in Entrepreneur-ship Education for Graduate Students                            | Various teaching methodologies for entrepreneurship education have been tested.  |
| 8      | International Small Business Journal                          | Luke Pittaway &<br>Jason Cope<br>(2007)                                       | Entrepreneur-ship Education: A Systematic Review of the Evidence  | SLR have been used   |



|    |  |   |  |   |
|----|--|---|--|---|
| 9  | Advances in Engineering Education                              | Nathalie Duval-Couetil, Angela Shartrand & Teri Reed (2016) | The Role of Entrepreneur-ship Program Models and Experiential Activities on Engineering Student Outcomes                                 | Entrepreneurship education is being delivered to greater numbers of engineering students through a variety of courses, programs, and experiential learning activities. This research has used 501 senior level engineering students and identified the relevance of experiential learning for entrepreneurship education. |
| 10 | Education + Training   | Stephanie Alexandra Macht & Steve Ball (2016)               | "Authentic Alignment" – a new framework of entrepreneur-ship education   | This paper seeks to address an underdeveloped aspect of entrepreneurship education (EE), which is still criticised for not explicitly linking educational practice with established educational theory.   |
| 11 | International Entrepreneur-ship Management Journal             | Montserrat Entrialgo & Víctor Iglesias (2016)               | The moderating role of entrepreneur-ship education on the antecedents of entrepreneurial intention                                       | Numerous studies have found empirical evidence for subjective norms affecting the attitude toward entrepreneurial behaviour and the perceived control over that behaviour. However, cognitive models have not yet considered the moderating role of entrepreneurship education on these relationships                     |
| 12 | Journal of Small Business Management                           | Panagiotis Piperopoulos & Dimo Dimov (2015)                 | Burst Bubbles or Build Steam? Entrepreneur-ship Education, Entrepreneurial Self-Efficacy, and Entrepreneurial intentions                 | This paper contextualizes the relationship between student's self-efficacy beliefs and entrepreneurial intentions in the content and pedagogy of the entrepreneurship course.   |
| 13 | Education and Training   | Bell & Bell (2016)  | An enterprise opportunity for entrepreneurial students: Student enterprise development and experience assessed through the student voice | The purpose of this paper is to investigate the effectiveness of an experiential learning approach, available to students in all disciplines  |
| 14 | International Entrep Management Journal                        | Chen et al. (2013)  | Can the entrepreneur-ship course improve the entrepreneurial intentions of students?   | This study aims to understand whether an entrepreneurship course can improve the entrepreneurial intentions, satisfaction towards the entrepreneurship course and learning efficacy of technical university students.   |
| 15 | International Journal of Entrepreneur-ial Behaviour & Research | Kassean et al. (2015)                                       | Entrepreneur-ship education: a need for reflection, real-world experience and action   | The purpose of this paper is to explore the impact of common undergraduate entrepreneurship classroom activities on students' motivational processes related to entrepreneurial careers.  |
| 16 | Industry and Higher Education                                  | Davey, Hanon & Penaluna (2016)                              | Entrepreneur-ship education and the role of universities in entrepreneurship: Introduction to the special issue                          | Despite the considerable political and academic interest in concepts such as the triple helix of government, business and higher education as well as entrepreneurship and entrepreneurial universities, relatively little has been written about the role of the university in developing entrepreneurship               |
| 17 | Education+ Training  | Leif Christian Lahn, Truls Erikson (2016)                   | Entrepreneur-ship education by design  | The purpose of this paper is to outline a theoretical platform for a design-based approach to entrepreneurship education grounded in the ideas of the Russian psychologist and linguist Lev S. Vygotsky by reconceptualising the development of entrepreneurial expertise as artefact-mediated activity.                  |
| 18 | Journal of Small Business and Enterprise Development           | Harry Matlay (2009)   | Entrepreneur-ship education in the UK: A critical analysis of stakeholder involvement and expectations                                   | This paper aims to explore stakeholder involvement in, and expectation of, entrepreneurship education in UK higher education institutions (HEIs)  |

|    |  |   |  |  |
|----|--|---|--|--|
| 19 | The International Journal of Management Education            | Adewale. A. Adikaya & Fatima Ibrahim (2016)                           | Entrepreneur-ship Intention among students: The antecedent role of culture and entrepreneurship training and development               | The influence of entrepreneurship training programme and cultural orientation on the intention of students to engage in entrepreneurial practice.  |
| 20 | European Management Journal                                  | Galina Shirokova et al. (2015)  | Exploring the intention-behaviour link in student entrepreneurship: moderating effects of individual and environmental characteristics | Exploring the relation of entrepreneurial intention and behaviour.   |
| 21 | Education + Training   | Jan P. Warhuus et al. (2017)  | From I to We: collaboration in entrepreneurship education and learning?  | The purpose of this paper is to ask: what effect does move from individual to collective understandings of the entrepreneur in enterprising education have on the student's learning? And given this shift in understanding, is there a need for a new paradigm in entrepreneurship learning?  |
| 22 | 2nd Global Conference on Business and Social Science         | Mat et al. (2016)   | Identifying Factors that Affecting the Entrepreneurial Intention among Engineering Technology Students                                 | In recent years, entrepreneurship has become a topic of interest in Malaysia. The aim of this study was to identify the factors that affecting the entrepreneurial intention among engineering technology students. 554 engineering technology students of Universiti Kuala Lumpur were selected randomly to be the respondents        |
| 23 | Education + Training (imp)                                   | Peter Balan & Mike Metcalfe (2012)                                    | Identifying teaching methods that engage entrepreneurship students   | Entrepreneurship education particularly requires student engagement because of the complexity of the entrepreneurship process. The purpose of this paper is to describe how an established measure of engagement can be used to identify relevant teaching methods that could be used to engage any group of entrepreneurship students |
| 24 | Education + Training (imp)                                   | Alex Maritz & Christopher R. Brown (2013)                             | Illuminating the black box of entrepreneurship education programs  | The aim of this paper is to explore the components of entrepreneurship education programs (EEPs) and their interrelationships to develop a conceptual framework through which entrepreneurship education may be contextually evaluated and developed.  |
| 25 | Industry Higher Education                                    | Wing Lam (2010)   | Delivery, student engagement and the implementation of good practice in entrepreneurship education                                     | This paper presents and discusses the results of a research informed teaching project carried out to identify key factors in the content and delivery of a successful UK government initiative, the New Entrepreneur Scholarship (NES), from 2001 to 2008  |
| 26 | Journal of Global entrepreneurship research                  | Alexandros Kakouris <sup>1,2*</sup> & Panagiotis Georgiadis (2016)    | Analysing entrepreneur-ship education: a bibliometric survey pattern   | Entrepreneurship education is an evolving field that confronts obstacles due to fragmentation issues and eclectic approaches that have to be resolved utilising robust educational theories and tools able to intrude effectively the entrepreneurial research discourse   |
| 27 | International Journal of Entrepreneurial Behavior & Research | Eric Michael Laviolette, Miruna Radu Lefebvre & Olivier Brunel (2017) | The impact of story bound entrepreneurial role models on self-efficacy and entrepreneurial intention                                   | The purpose of this paper is to measure the impact of positive and negative same-gender fictional role models on students' self-efficacy and entrepreneurial intention   |

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| 28 | Education + Training                        | Sarah Robinson, Helle Neergaard, Lene Tanggaard, Norris F. Krueger (2016) | New horizons in entrepreneurship education: from teacher-led to student centered learning  | The purpose of this paper is to contribute to the discussion about the complexity and heterogeneity of entrepreneurship education. In order to achieve this objective, 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.   |
| 29 | Education + Training                        | Nielson & Gartner (2017)  | Am I a student and/or entrepreneur? Multiple identities in student entrepreneurship  | The purpose of this paper is to study different aspects and tensional forces that play a role in the internal and contextual negotiation that takes place within students in the exploration of the possible identity of entrepreneur. It expands the knowledge of how the university context influences student entrepreneurial processes from a multiple identity perspective. The findings are related to discussions of entrepreneurship education. |
| 30 | Journal of Business Venturing               | Walter & Block (2015)   | Outcome of Entrepreneurship education: An institutional Perspective  | Suggesting that entrepreneurship education has strong relationship with entrepreneurial activity.   |
| 31 | Technological forecasting and Social Change | Maresch et al. (2015)   | The impact of entrepreneurship education on the entrepreneurial intentions of students in Science engineering vs business students | Entrepreneurial intentions.   |
| 32 | Journal of Business Research                | Alian Fayolle & Francisco Linan (2013)                                    | The future of research on entrepreneurial research   | Entrepreneurial intention is a rapidly evolving field of research, with growing number of studies using entrepreneurial intention as a powerful theoretical framework.  |
| 33 | Academy of Management Learning & Education  | Nabi et al. (2017)  | The Impact of Entrepreneurship Education in Higher Education: A Systematic Review and Research Agenda                              | It's about comparing the models of entrepreneurship education models and its impact on various aspects.   |

#### Appendix 4

Table of Comparison between India and UK Respondents Data

| Hypothesis | UK   |               | India |               |
|------------|------|---------------|-------|---------------|
| H4         | .067 | Not Supported | .064  | Not Supported |
| H4a        | .838 | Not Supported | .757  | Not Supported |
| H4b        | .001 | Supported     | .026  | Supported     |
| H5         | .202 | Not Supported | .329  | Not Supported |

|     |      |               |      |               |
|-----|------|---------------|------|---------------|
| H5a | .047 | Supported     | .042 | Supported     |
| H5b | .067 | Not Supported | .062 | Not Supported |
| H6  | .001 | Supported     | .018 | Supported     |
| H6a | .057 | Not Supported | .051 | Not Supported |
| H7  | .027 | Supported     | .032 | Supported     |
| H7a | .069 | Not Supported | .063 | Not Supported |