

THE RELEVANCE OF PEDAGOGICAL PERSPECTIVE ON STUDENTS ENTREPRENEURIAL INTENTIONS AND SELF-EFFICACY - A PLS-SEM APPROACH

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Abstract:

With the buzz word “Make in India” the Indian economy is now moving towards employment creation. For this entrepreneurial courses are developed which enhance the student’s entrepreneurial abilities, skills, knowledge and stimulate intentions for start-ups. From a pedagogical outlook the varied teaching methods adopted may not be in sync with the underlining notion. The paper explores how the teaching pedagogy categorised as theoretical and practical courses influences the student’s entrepreneurial intentions and self-efficacy belief in the curriculum. This paper is an attempt to validate the relationship between entrepreneurial intentions in students and their self-efficacy belief in the curriculum and pedagogy of the entrepreneurship course.

Keywords: Innovation, entrepreneurship education; entrepreneurial intentions; entrepreneurial pedagogy; entrepreneurial self-efficacy; Social Cognitive Theory

I. INTRODUCTION

Entrepreneurship education has gained momentum in recent times globally. It ranks very high on policy maker’s agenda in countries like India, Europe and the US (Graevenitz et al., 2010). New venture formation is considered crucial for a country’s economic growth. To foster this initiative further, many universities have started imparting education in entrepreneurship (Kuratko, 2005; Linan, 2004; Fayolle, 2000). In literature, the effects arising from entrepreneurship education are yet to receive consensus. Several studies highlight a affirmative impact of university programs on education of entrepreneurship on the perceived feasibility and attractiveness of the start-up or idea generation (Souitaris et al., 2007; Fayolle et al., Peterman and Kennedy, 2006). Although there are few studies which confirms the adverse impact of entrepreneurship education (Oosterbeek et al., 2010).

While universities are imparting entrepreneurship education, special care needs to be taken on how the curriculum is designed. Both theoretical and practical courses need to be blended in the curriculum. While theoretical courses are aligned with classroom teaching, practical courses are focused on providing hands-on experience. The current study finds the impact of these courses on student’s entrepreneurial intentions and self-efficacy belief in the curriculum. It is anticipated that entrepreneurial intentions in students will see a positive impact when aligned with course curriculum. The second component of the study self-efficacy beliefs as defined by Bandura (1997) is one’s capabilities to execute activities required to complete a task, also includes people’s motivation level and affective states. Betz and Hackett (1981, 1997) find the importance of self-efficacy in influencing career intentions since there is direct linkage between student’s confidence level and what career he chooses.

The paper intends to make two contributions. Firstly, we show entrepreneurship education can have a blend of theoretical and practical courses and how one defines these courses in the curriculum. Secondly, what impact these courses have on the entrepreneurial intentions and self-efficacy belief of students. Does theoretical courses impact

self-efficacy and entrepreneurial intentions towards practical courses. PLS using ADANCO is adopted to answer this question.

II REVIEW OF LITERATURE

A. Self-Efficacy

The phenomenon of Self-efficacy helps an individual to feel motivated or behave in certain manner towards some activity or towards some job. An individual who is high on the self-efficacy boosts self-accomplishment and is high on personal wellbeing (Bandura, 2010) which is explained in the social cognitive theory. (Pajares, 1996) researchers studies the relationship between the social cognitive theory with the motivation and self-regulation in the academic setting. The researchers (Schunk, 1991) explain that the individual develops the high self-efficacy towards the academia, which further helps in establishing high scores and individual performance. Self-efficacy (Cooper, 2014; Cooper et al, 2017) is also persuaded by the various social models and the experiences provided by them. The social persuasion also helps in strengthening the self believe that the individual can solve problems.

B. Pedagogy methods

Tracey and Phillips (2007) believes that entrepreneurial programs require the practical orientation and an experimental setting, as the lecture method usually don't work the same way as the practical session works. Such entrepreneurial sessions can be taken by guest speakers where the students can (Chen et al. 1998) enhance learning and the confidence by experience and therefore increase the self-efficacy.

Cooper et al 2007 emphasis on the fact that the higher self-efficacy can be developed in the students only by exposing them to high involvement activities where the students will show a high level of involvement and participation. Artino, (2012) Explains that teacher's instructional practices/ pedagogy also influence the confidence and skill attainment in the students. Therefore, the research objective is to determine that how the entrepreneurial self-efficacy in the students is linked with the various modes of pedagogy.

C. Entrepreneurial intentions

(Krueger Jr, Reilly, & Carsrud, 2000) intentions are important for those who want to pursue entrepreneurship. As the intention process helps in identifying the opportunities for the entrepreneurship. Entrepreneurship helps in creating new jobs through brining innovation in the society and the markets. The theoretical background behind the intentions and behavior (Ajzen, 1991) in Theory of Planned Behaviour or (TPB). (Rueda, Moriano, & Liñán, 2015) studies the attitude and the entrepreneurial intentions derived from the theory of social cognitive and planned behaviour.

D. Association between Self Efficacy & Entrepreneurial intentions

(Krueger Jr et al., 2000) (Schunk, 1991) studies the impact of self-efficacy impacts directly the entrepreneurial intentions. Entrepreneurial intentions are influenced by the analytical and rational thinking or intuitive visions. (Boyd & Vozikis, 1994) develops the BIRDS model of entrepreneurial intentions which suggests that self-efficacy of an individual influences the entrepreneurial intentions and individual behaviours and actions.

Therefore, the second objective of the study is the how the self-efficacy is linked with the entrepreneurial intentions by taking type of courses pedagogy.

III Theoretical Model & Hypothesis Development

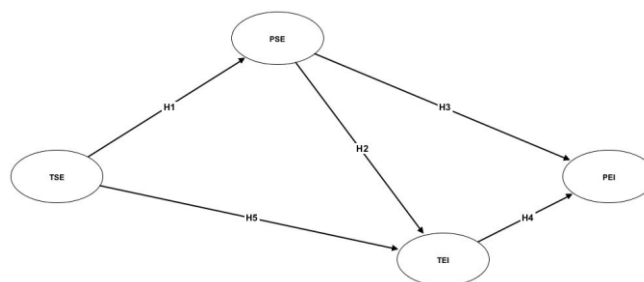


FIG 1. CONCEPTUAL MODEL

The derived literature helps in conceptualizing the following hypothesis:

H1 –Self-efficacy of theoretical course (TSE) significantly impacts self-efficacy of practical Course (PSE).

H2 – Self-efficacy of practical course(PSE) significantly impacts the entrepreneurial intentions from the theoretical courses(TEI)

H3- Self-efficacy towards practical(PSE) course significantly impacts the entrepreneurial intentions for the practical courses (PEI) .

H4 - Entrepreneurial intentions from the theoretical courses(TEI) significantly impacts entrepreneurial intentions for the practical courses (PEI) and Entrepreneurial intentions from the theoretical courses(TEI) is mediating between Self-efficacy towards practical(PSE) and entrepreneurial intentions for the practical courses (PEI)

H5- Self-efficacy of theoretical course (TSE) significantly impacts the entrepreneurial intentions from the theoretical courses(TEI)

IV RESEARCH METHODOLOGY

A. Research Design:

The current study applies quantitative exploratory analysis to test the hypothesis using PLS technique. A questionnaire is developed to capture the responses of the students. The questionnaire is divided for demographics and questions adopted from Cooper, (2014) capturing self-efficacy and Piperopoulo& Dimov (2015) entrepreneurial intentions. The 5 point Likert scale is used in from strongly disagree (1) through to strongly agree (5) to capture the responses of the consumer. 59 responses are used for data analysis. Due to less data the relative techniques is used.

The uses PLS - SEM analysis using ADANCO (Hanseler 2015). This is the second generation multivariate technique having a focus on the predictive ability of the model. In PLS –SEM analysis the inner model (Structural model) and Outer model (Measurement model) are analysed simultaneously. it was suggested that when have a complex model, small sample and if the data is not normally distributed in such environment PLS works better than the co-variance based SEM analysis (Joe F Hair, Ringle, & Sarstedt, 2011). The researchers have carried out a reflective mode analysis wherein each endogenous latent variable is manifested by 3 to 4 indicators.

The target population was the students studying the entrepreneurial courses, which infinite in nature. A convenience sample collection method was used to collect the data. According to Cohen, 1992, using the tables of sample size selection, since we have 3 independent variables 59 sample size will be sufficient to achieve a statistical power of 80% for predicting R square value of at least 0.25 at probability error of 5 % (Cohen J, 1992).

- The Evaluation of measurement model: In PLS based analysis, since we have used reflective model, measurement model evaluation is done using Internal consistency reliability, Convergent validity and Discriminant validity.
- Internal consistency reliability: It is a measure of how well the items of a test construct measure the same idea or construct. The Cronbach's alpha measures to the reliability of a set of indicators. The value of more than 0.7 is regarded as an accepted value (Fornell & Larcker, 1981b). The table 1 shows the values of Alpha are more than the accepted value of 0.7. The table also shows the values of composite reliability which is Jöreskog's rho value, which is also above 0.7(Chin, 2010) for all the constructs. This concludes that there exists internal consistency reliability among the constructs.
- Convergent validity: It refers to the degree to which the two or more measures of the same constructs are correlated positively with each other. To evaluate convergent validity, we consider two indicators, factor loadings and average variance extracted (AVE). The table 1 shows the values of standard loadings of each of the items on to their respective constructs are more than 0. 708. The Average variance extracted should be above 0.5, It means that the latent variable should explain at least 50% of its item variance. The table shows the values of AVE for all the constructs are more than 0.5. This concludes that the criteria for convergent validity are met with (Fornell & Larcker, 1981a; Joseph F Hair, 2010).

TABLE 1 MEASUREMENT MODEL

Construct	Indicator Item	Item		Std. Loading
TSE ($\alpha=0.8455$; CR= 0.8940 ; AVE= 0.6793)	TS E3	Venture into successful start-up, if you feel so	Cooper, (2014)	0.7689
	TS E5	Understand requirements to venture into the start-up		0.8912
	TS E6	Understand the business language of start-up creation		0.8544
	TS E8	Make efforts for achieving objective of the start-up project		0.7756
TEI ($\alpha=0.8022$; CR= 0.8839 ; AVE= 0.7177)	TEI 1	I will start a new company, if I get an opportunity in the next few years	Cooper, (2014)	0.8143
	TEI 3	I often dream of new ideas and ways for venturing into a start-up	Piperopoulos & Dimov (2015)	0.8249
	TEI 4	I will have to make a Business Plan to start my own company		0.8997
PSE ($\alpha=0.8283$; CR= 0.8845 ; AVE= 0.6576)	PS E5	Understand practicality of starting your own business		0.8029
	PS E6	Practically Understand the business language of start-up creation		0.8543
	PS E7	Practically Understand requirements to venture into the start-up	Piperopoulos & Dimov (2015)	0.7415
	PS E8	Make Practical efforts for achieving		0.8404

		objective of the start-up project	
PEI ($\alpha=0.8517$; CR= 0.9100 ; AVE= 0.7712)	PEI 1	Practically, I will start a new company, if I get an opportunity in the next few years	0.8568
	PEI 3	I often dream of new feasible ideas and feasible ways for venturing into a start-up	0.8738
	PEI 4	Practically, I will have to Execute a Business Plan to start my own company	0.9033
		Notes: n = 46, α = Cronbach's α , CR = Composite Reliability	

*Note Construct formation and the loading values

TABLE 2 DISCRIMINANT VALIDITY: FORNELL-LARCKER CRITERION

Construct	TSE	TEI	PSE	PEI
TSE	0.6793			
TEI	0.2546	0.7177		
PSE	0.5066	0.2830	0.6576	
PEI	0.3576	0.6233	0.4361	0.7712

Note Squared correlations; AVE in the diagonal.

- The Evaluation of Structural model: In PLS is called an evaluation of the inner model. The evaluation of structural model results enables to understand the capability of the model to predict one or more endogenous constructs (Chin, 1998).
- Path Coefficient: Path Coefficient is the coefficient that links the construct in the structural model. It represents the hypothesized relationship and the strength of the relationship. The table 4 below shows the values of path coefficients it's t-value & p-value. All the paths are statistically significant at 1% level of significance, except PSE \rightarrow PEI relationship is statistically significant at 5% level of significance, the more the value of the path Coefficient closer to 1.0 the stronger is the relationship (Joseph F Hair, 2010). All the H1, H2, H3, H4 are showing significant relations except H5 for which the study unable to establish the relation.

- Coefficients of determination R square: The value of R square represents the variance explained of the endogenous variable by the exogenous variable. The R-squared value close to 1.0 indicates a higher level of predictability of the model (Joseph F Hair, 2010; Henseler, Ringle, & Sinkovics, 2009). The table 3 below shows the values of R square since they are more than 0.25 it represents the moderate level of predicting accuracy of the model.
- The Mediation Effect: The table 5 below shows the total effect and indirect effect. As in the indirect effect PSE-->TEI-->PEI, since '0' does not exist in confidence interval the researchers conclude that it is statistically significant so also the direct effect between PSC -->PEI is statistically significant. This indicates that there exists a partial mediation effect between PSC and PEI through TEI (Baron & Kenny, 1986; Joseph F Hair, 2010)

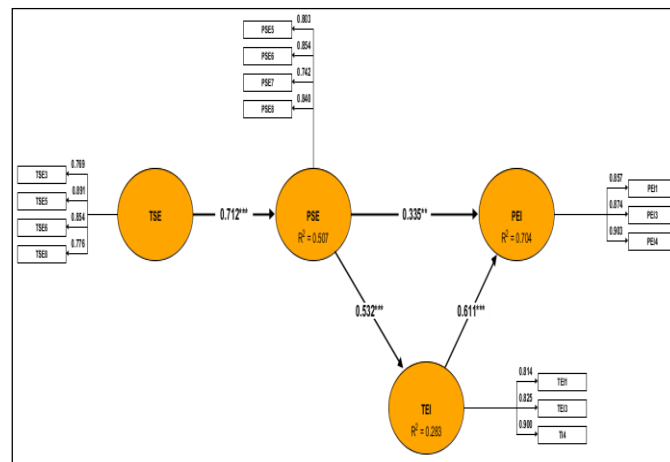


Fig. 2 Structural Model

Note: TSE- Self-efficacy of theoretical course, PSE Self efficacy of practical course, TEI entrepreneurial intentions from the theoretical courses, PEI Entrepreneurial intentions from practical courses

TABLE 3 R-SQUARED

Construct	Coefficient of determination (R ²)	Adjusted R ²
TEI	0.2830	0.2668
PSE	0.5066	0.4954
PEI	0.7038	0.6901

*Note Table 5 showing adjected R^2

TABLE 4 SIGNIFICANCE TESTING OF STRUCTURAL EQUATION MODEL PATH COEFFICIENTS

<i>Path posited</i>	<i>Path Coefficient</i>	<i>t-value</i>	<i>p-value</i>
<i>TSE -->PSE</i>	0.7118	7.79	***
<i>TEI --> PEI</i>	0.6111	6.35	***
<i>PSE-->TEI</i>	0.532	5.44	***
<i>PSE-->PEI</i>	0.3352	3.06	**
B. Note: ** $p < 0.05$; *** $p < 0.000$			

*Note Table 4 showing the path coefficients

TABLE 5 HYPOTHESIS TESTING

Hypothesis	Total Effect		Indirect Effect	
	Beta	t-value	Estimate	%bootstrap 95% confidence interval Lower Upper
PSE-->PEI	0.6604 ***	7.0 146		
PSE-->TEI-->PEI			0.3251***	0.20609 0.4950

*Note *** show level of significance at 1 %

V DISCUSSION, LIMITATION AND FUTURE SCOPE

The result of the study supports the fact (Cooper, et al 2007; Piperopoulo& Dimov 2015) that the concept of self-efficacy is malleable and the intention of following the career of entrepreneurship (Cooper, 2014) is positively affected (fig. 2) by the self-efficacy mainly derived from the practical courses studied by the students. The practically oriented courses help in nurturing the self-efficacy and therefore entrepreneurial intentions in the students studying the entrepreneur courses. The paper establishes significant relation mentioned in all the hypothesis H1, H2, H3, H4. But the significant relation mentioned in the H5 not found.

The paper helps the universities and academicians to design courses (Fayolle, 2006) for entrepreneurial programs with an optimal mix of theoretical and practical courses. This design will help the students to develop innovative skills (Bandura, 2010) so that they can harness the market opportunities. The paper also suggests that theoretical courses should adopt the pedagogy which has a greater influence on the practical courses and thus influence the self-efficacy and entrepreneurial intentions of the students positively. The study also confirms the mediation effect of the entrepreneurial intentions on the self-efficacy and entrepreneurial intentions towards the practical courses. This simply

means that theoretical concepts are important and they mediate positively to have high entrepreneurial intentions of students. The limitation of the paper is sample size and scope. Which can be taken up for future research.

The paper can be extended in future by increasing the scope in terms of sample and covering many entrepreneurial programs. Researchers can also draw a distinction in intentions between the MBA levels years (Rastogi, Sharma, & Panse, 2019).

VI CONCLUSION

A course on entrepreneurship should be designed to help students identify their potential in this domain (Fayolle, 2006). Categorised as theoretical and practical courses, the paper offers insights on the pedagogy adopted in entrepreneurship education. We believe entrepreneurship education will develop further and be multifaceted. A combination of both the types of courses will facilitate to meet the needs and expectations of the concerned stakeholders (students, universities and government). As discussed, both entrepreneurial intention and self-efficacy of the student form building blocks for entrepreneurial journey. The pedagogy offered is directly linked to these building blocks. Hence, we propose that the program designers must understand and interpret numerous facets of education in the entrepreneurship domain and incorporate the same for quality output.

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