

## THE IMPORTANCE OF ENTREPRENEURSHIP EDUCATION IN ACADEMIA TO ENCOURAGE INNOVATIVE STARTUP ECOSYSTEM

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### Abstract

*Entrepreneurship education has emerged as a critical mechanism through which academic institutions contribute to the development of innovative startup ecosystems. Universities are no longer limited to their traditional roles of teaching, exams or research but are increasingly expected to cultivate entrepreneurial mindsets, innovation capabilities, and startup oriented competencies among students and faculty. This study examines the prominence of entrepreneurship education in academia and its role in encouraging the evolution of innovative startup ecosystems. Adopting a quantitative, cross-sectional research design, data will be collected from students, faculty and academicians using structured questionnaire. The study analyzes how entrepreneurship education, experiential learning and institutional support influence entrepreneurial intention, innovation capability and perceived startup ecosystem development. The findings are expected to provide empirical evidence on the involvement of entrepreneurship education to startup creation and innovation, offering valuable implications for academic institutions, policy makers and educators seeking to strengthen university-led innovation ecosystems.*

**Key words:** *Entrepreneurship education; Universities; Startups; Innovation ecosystems*

### Introduction

Entrepreneurship education (EE) includes systematic process of developing knowledge, skills, attitudes, and competencies that enable individuals to identify business opportunities, take initiatives, manage risk and create, organize and sustain entrepreneurial ventures. It goes beyond teaching how to start a business and focuses on nurturing an entrepreneurial mindset that includes creativity, innovation, leadership, problem-solving and decision-making abilities.

In the contemporary global economy, entrepreneurship has become a key driver of economic development, innovation and employment generation. Rapid technological advancements, globalization and changing labour market dynamics have significantly reduced the availability of traditional, secure employment opportunities. As a result, entrepreneurship education has gained prominence as a vital component of modern education systems aimed at

empowering individuals in creating their own opportunities and contribute meaning fully to economic and social development.

Entrepreneurship education does not only refers to business schools or management disciplines; rather, it is an interdisciplinary approach that integrates knowledge from economics, management, technology, social sciences and innovation studies. Its primary objective is to develop entrepreneurial competencies such as opportunity recognition, creative thinking, risk assessment, resource mobilization, leadership and strategic planning. By fostering these competencies Entrepreneurship education helps individuals to convert innovative ideas into sustainable enterprises.

Unlike conventional education which often emphasizes rote learning and theoretical knowledge, Entrepreneurship education adopts experiential and learner-centered pedagogies like project-based learning, case studies, simulations, internships, startup incubation and more. Governments and educational institutions across the world have recognized entrepreneurship education as a strategic tool for addressing unemployment, promoting inclusive growth and encouraging innovation-led development. Universities now have entrepreneurship cells, incubation centers, tech- parks, and startup accelerators to support students transforming ideas into viable business ventures.

#### Need and Importance of the study

For present era the study is needed to understand the role of entrepreneurship education in addressing unemployment and promoting self-employment among students. Although entrepreneurship education is increasingly included in academic curriculum there is a thin line between theoretical knowledge and concrete entrepreneurial skills. This study helps identify the challenges faced in implementing effective entrepreneurship education. It also examines whether existing programs on entrepreneurial mind set, innovation, and risk-taking ability.

#### Review of literature

1. **Gorman, Hanlon, and King (1997)** examined the characteristics of entrepreneurship education in economic development using a conceptual and descriptive approach. The study emphasized entrepreneurship education as a major enabler of innovation and enterprise creation. It highlighted the need for early-stage entrepreneurial training. The study lacked empirical validation and modern pedagogical perspectives. Additionally, institutional and technological challenges were not considered.

2. **Pittaway and Cope (2007)** investigated learning mechanisms in entrepreneurship education through qualitative case studies. The study emphasized experiential and reflective learning as critical for entrepreneurial skill development. Results showed that interaction with real entrepreneurs enhances learning outcomes. However, the study was limited by a small sample size and qualitative scope. It did not provide measurable outcomes or comparative analysis across institutions. Thus, it clearly shows that the study did not focus on quantitatively assessing experiential learning effectiveness in entrepreneurship education.
3. **Sharma and Madan (2014)** studied the how entrepreneurship education impact on entrepreneurial intentions among Indian management students. Using a quantitative survey-based methodology, the study found that entrepreneurship courses positively influence creativity, risk-taking, and self-employment intentions. The research highlighted the importance of experiential learning and institutional support. However, the study was limited to management students and did not examine practical outcomes such as startup creation.
4. **Fayolle and Gailly (2015)** explored the pedagogical impact of entrepreneurship education using an experimental research design. Their study emphasized experiential learning methods such as project-based learning and simulations. Results showed a significant improvement in entrepreneurial attitudes and competencies among students. However, the study was conducted in a European context and focused primarily on short-term outcomes. Long-term impact and contextual relevance in developing countries were not addressed.
5. **Suresh, Thomas, and Mathew (2020)** analyzed entrepreneurship education and training initiatives in India using secondary data and policy analysis. The study emphasized the advantages of entrepreneurship education in employment generation and inclusive growth. Findings showed that government-supported programs have increased entrepreneurial awareness among youth. The study lacked primary data and student-level analysis. It also did not assess institutional effectiveness or pedagogical practices.
6. **Singh and Gaur (2022)** investigated entrepreneurial intention among Indian university students using a structured questionnaire and statistical analysis. The study reported that entrepreneurship education suggestively influences attitude, perceived feasibility, and intention. The research highlighted the how institutional support systems such as incubation centers. However, it focused mainly on business students.

7. **Ratten and Usmanij (2023)** explored innovative educational approaches in entrepreneurship education, focusing on digital and experiential learning methods. Using qualitative case studies, the research found that technology-enabled learning enhances student engagement and creativity. The study emphasized adaptability in entrepreneurship education post-COVID-19. However, the research was limited in scale and lacked quantitative validation.

### **Research gap**

The Review of Literature reveals that EE has been widely studied for its influence on entrepreneurial intention and skill development, most studies focus on short-term attitudinal outcomes rather than actual venture creation. There are limited studies focusing on how entrepreneurship education translates into practical skills. Furthermore, institutional support and modern digital pedagogies remain underexplored. Therefore, this study addresses these gaps by analysing the impact of entrepreneurship education on entrepreneurial intention, innovation capability and startup ecosystem development among students.

### **Statement of problem**

Recent national and international reports indicate a steady increase in the inclusion of EE in higher education institutions, with a growing number of universities offering entrepreneurship-related courses and skill development programs. Survey-based studies report a positive association between entrepreneurship education and entrepreneurial intention; however, empirical evidence also shows variability in outcomes across institutions and teaching methods. Despite this expansion, limited quantitative research examines students' perceptions of program effectiveness, institutional support, and implementation challenges. Hence, the present study seeks to assess the effectiveness of entrepreneurship education in developing startup ecosystem among students.

### **Scope of the study**

The study is only confined to Faculty and students (UG, PG) in Bangalore.

### **Objectives of the study**

1. To assess the level of awareness and perception of EE among students and faculty.
2. To examine the effect of EE on entrepreneurial intention and innovation capability.
3. To determine the impact of entrepreneurial intention and innovation capability on Startup ecosystem development.

### Hypothesis of the study

H1: EE have a significant impact on Entrepreneurial Intention (EI).

H2: EE positively affects Innovation Capability (IC).

H3: EI and IC is significantly associated with Startup Ecosystem Development (SED).

### Research methodology

The present study is descriptive and explanatory in nature. Primary data were collected using questionnaire from 192 respondents. To analyze the data SPSS Software was used. The statistical tools like percentages, graphs descriptive statistics (mean, standard deviation), Correlation and Regression Analysis (Hypothesis Testing) are applied.

### Limitations

1. The study was restricted to 192 respondents, hence, the results cannot be generalized
2. Only primary data is considered.

### Data analysis and interpretation

Chart No. 1: Chart showing the awareness of concept and importance of Entrepreneurship Education

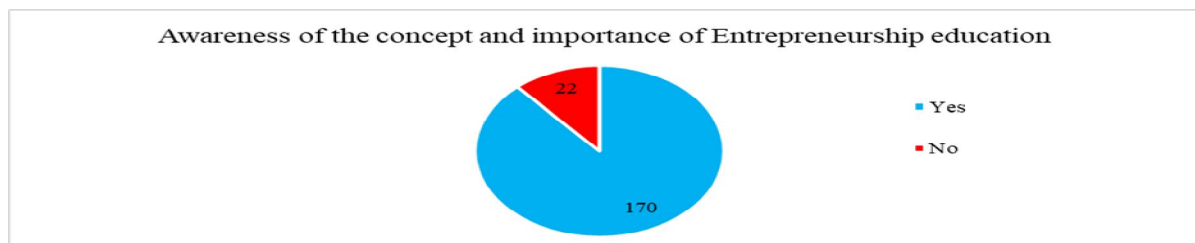


Fig. 01

The above pie chart helps us to understand that 88.54% of the respondents are aware about the concept and importance of Entrepreneurship Education and only 11.45% of them are not aware. This shows a higher level of awareness and EE is well recognized. (Fig. 01)

Chart No. 02: Chart showing the influence of Entrepreneurship Education

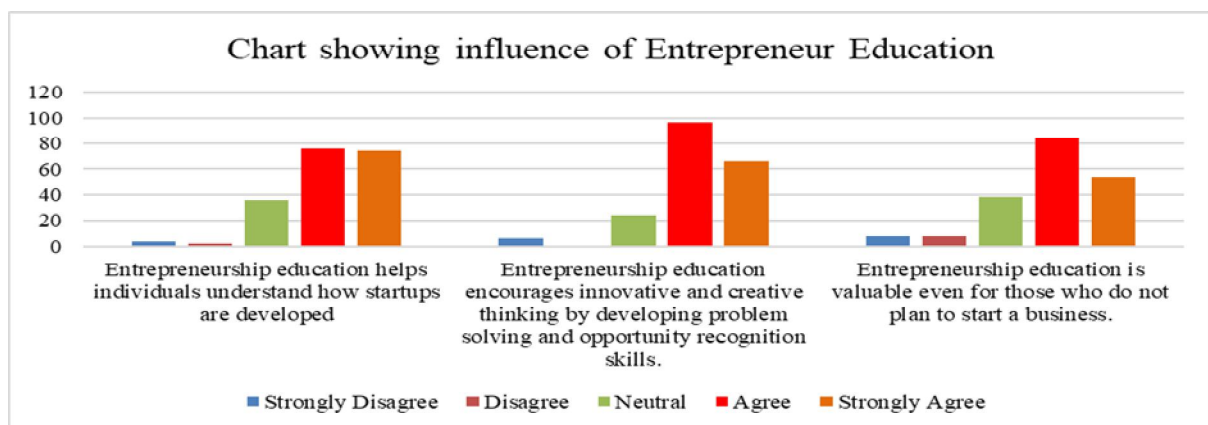


Fig. 02

The above chart shows that majority of the respondents hold a positive perception regarding entrepreneurship education influencing the entrepreneurial intention. Most of the respondents either concurred or strongly agreed that entrepreneurship education enhances the understanding the startup development, promotes innovative thinking and remains valuable even for those individuals who do not intended to start a business. This helps us to understand that EE develops skill and enhances optimistic mindset among students about entrepreneurship. (Fig. 02)

Chart No. 03: Chart showing Entrepreneurial Intention

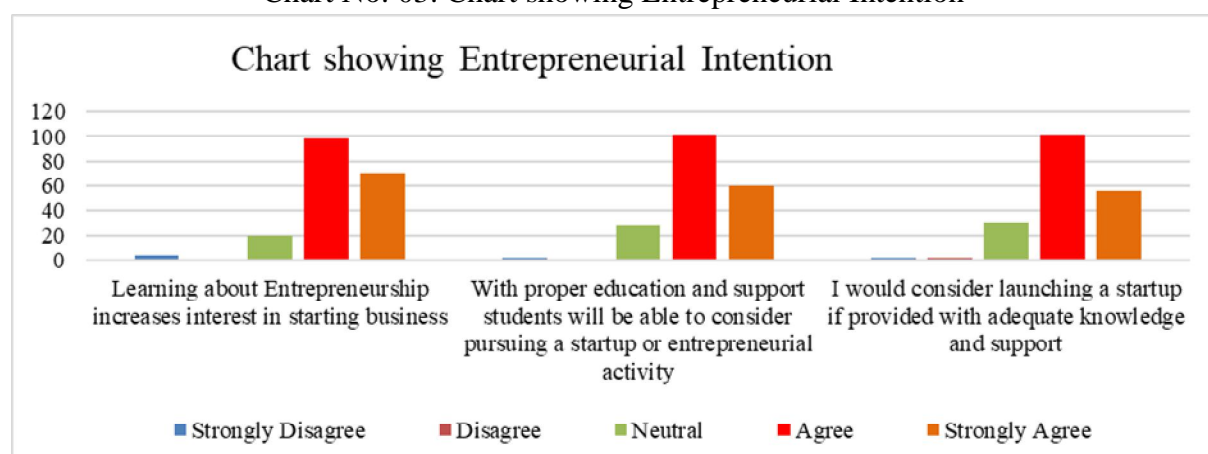


Fig. 03

EE enhances the EI among the students by increasing their interest, proper guidance and support. The chart above depicts a clear picture showing that mainstream of the respondents i.e. more than 80% have an optimistic opinion that EE enriches entrepreneurial intention. Only small group of respondents have a disagreement towards this aspect. These results supports us to understand that exposure to EE significantly enhances students concentration in starting a business. Further respondents demonstrates that appropriate education and institutional support mechanisms acts as an enablers of entrepreneurial engagement. There is a majority of respondents who expressed their personal willingness to launch a startup under the conditions of adequate knowledge and support. These findings demonstrates the broader theoretical perspective that educational exposure and support environments play a pivotal role in fostering entrepreneurial intention among students. (Fig. 03)

Chart No. 04: Chart showing Innovation capability

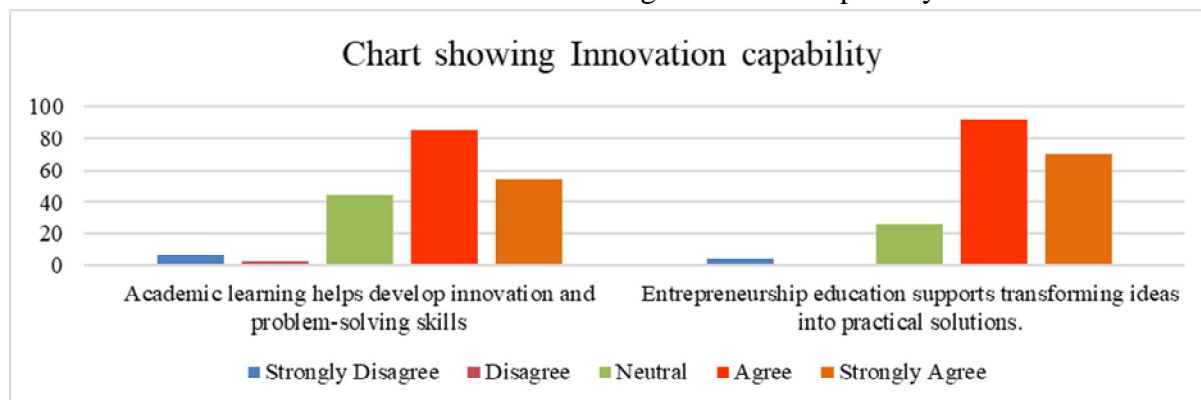


Fig. 04

Enhancing innovation capability among the student fraternity is one of the most important aspect for developing entrepreneurial mindset. The two statements in the above chart demonstrates that respondents recognize both general academic learning and entrepreneurship specific education as important contributors to innovation and practical skill development. Slightly higher level of strong agreement for entrepreneurship education in transforming ideas into practical solutions suggests that students may perceive entrepreneurship-focused programs as more directly linked to real-world application and venture creation. It sharply indicates that entrepreneurship education plays significant role in connecting the dots between academic knowledge and practical application. (Fig. 04)

Chart No. 05: Chart showing Startup Ecosystem Development

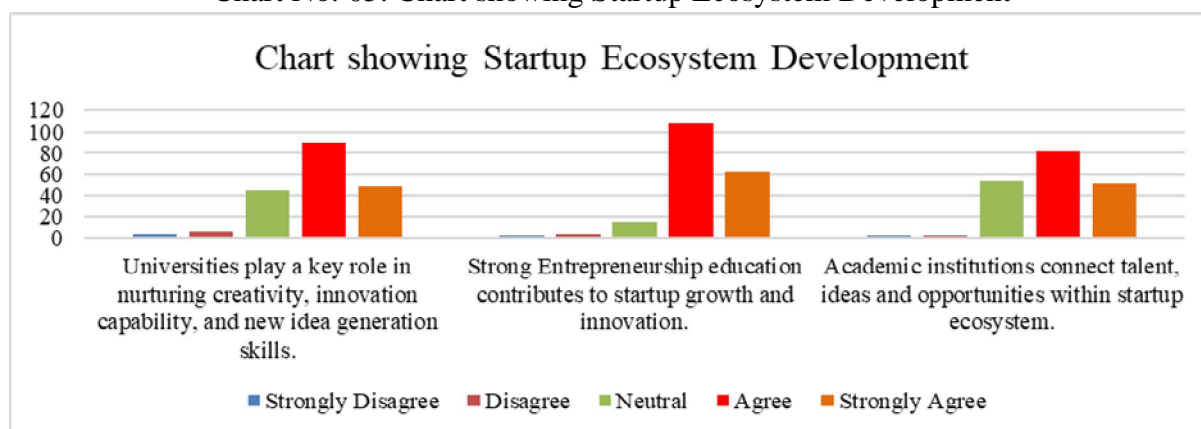


Fig. 05

The chart above indicates the strong support for the role of universities and entrepreneurship education in fostering innovation, supporting startup growth and facilitating ecosystem linkages. Majority of respondents i.e. around 80% recognize educational institutions as key contributors to innovation capacity and entrepreneurial development, comparatively there is equal neutral responses regarding ecosystem connectivity, it suggest potential areas for

institutional improvement in strengthening industry linkages and startup support networks.

(Fig. 05)

### Hypothesis Testing

1) H0: EE does not have a significant impact on Entrepreneurial Intention (EI)

H1: EE have a significant impact Entrepreneurial Intention

### Descriptive Statistics

	Mean	Std. Deviation	N
EI_MEAN	4.1285	.66206	192
EE_MEAN	4.0243	.77369	192

### Correlations

		EI_MEAN	EE_MEAN
Pearson Correlation	EI_MEAN	1.000	.623
	EE_MEAN	.623	1.000
Sig. (1-tailed)	EI_MEAN	.	.000
	EE_MEAN	.000	.
N	EI_MEAN	192	192
	EE_MEAN	192	192

### Model Summary <sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.623 <sup>a</sup>	.388	.385	.51921	1.835

a. Predictors: (Constant), EE\_MEAN

b. D V: EI\_MEAN

### ANOVA <sup>a</sup>

Model		SS	DF	Mean Square	F	Sig.
1	Regression	32.499	1	32.499	120.552	.000 <sup>b</sup>
	Residual	51.221	190	.270		
	Total	83.720	191			

a. D V : EI\_MEAN

b. Predictors: (Constant), EE\_MEAN

### Coefficients <sup>a</sup>

MODEL		Unstandardized Coefficients		Standardized Coefficients	t- Value	Sig..
		B	Std. Error	Beta		
1	(Constant)	1.983	.199		9.966	.000
	EE_MEAN	.533	.049	.623	10.980	.000

a. Dependent Variable: EI\_MEAN

P value is less than 0.05 hence null hypothesis is rejected, it was agreed that EE significantly

influences Entrepreneurial Intention. And  $R^2$  value is 0.388 which means Entrepreneurship Education explains 38.8% of the variation in Entrepreneurial Intention.

2) H0: EE does not positively affects Innovation Capability (IC)

H2: EE positively affects Innovation Capability.

#### Descriptive Statistics

	Mean	Std. Deviation	N
IC_MEAN	4.0417	.77482	192
EE_MEAN	4.0243	.77369	192

#### Correlations

		IC_MEAN	EE_MEAN
Pearson Correlation	IC_MEAN	1.000	.624
	EE_MEAN	.624	1.000
Sig. (1-tailed)	IC_MEAN	.	.000
	EE_MEAN	.000	.
N	IC_MEAN	192	192
	EE_MEAN	192	192

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.624 <sup>a</sup>	.390	.386	.60692	2.057

a. Predictors: (Constant), EE\_MEAN

b. D V: IC\_MEAN

#### ANOVA<sup>a</sup>

Model		SS	DF	Mean Square	F	Sig.
1	Regression	44.680	1	44.680	121.296	.000 <sup>b</sup>
	Residual	69.987	190	.368		
	Total	114.667	191			

a. D V: IC\_MEAN

b. Predictors: (Constant), EE\_MEAN

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.526	.233		6.561	.000
	EE_MEAN	.625	.057	.624	11.013	.000

a. D V: IC\_MEAN

P value is less than 0.05 hence null hypothesis is rejected and it is agreed that EE significantly influences Innovation capability. R<sup>2</sup> value is 0.390, variation level. The beta value 0.625, t value 11.013 indicates that EE has a strong positive impact on IC.

3) H0: EI and IC does not significantly associated with Startup ecosystem development (SED).

H3: EI and IC are significantly associated with Startup ecosystem development (SED).

#### Descriptive Statistics

	Mean	Std. Deviation	N
SED_MEAN	3.9896	.72108	192
EI_MEAN	4.1285	.66206	192
IC_MEAN	4.0417	.77482	192

#### Correlations

		SED_MEAN	EI_MEAN	IC_MEAN
Pearson Correlation	SED_MEAN	1.000	.627	.613
	EI_MEAN	.627	1.000	.779
	IC_MEAN	.613	.779	1.000
Sig. (1-tailed)	SED_MEAN	.	.000	.000
	EI_MEAN	.000	.	.000
	IC_MEAN	.000	.000	.
N	SED_MEAN	192	192	192
	EI_MEAN	192	192	192
	IC_MEAN	192	192	192

#### Model Summary<sup>b</sup>

MODEL	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.658 <sup>a</sup>	.432	.426	.54611	1.863

a. Predictors: (Constant), IC\_MEAN, EI\_MEAN

b. D V: SED\_MEAN

#### ANOVA<sup>a</sup>

MODEL		SS	DF	Mean Square	F	Sig.
1	Regression	42.946	2	21.473	72.000	.000 <sup>b</sup>
	Residual	56.366	189	.298		
	Total	99.312	191			

a. D V: SED\_MEAN

b. Predictors: (Constant), IC\_MEAN, EI\_MEAN

### Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.089	.251		4.347	.000		
	EI_MEAN	.413	.095	.379	4.343	.000	.393	2.541
	IC_MEAN	.295	.081	.318	3.634	.000	.393	2.541

a. Dependent Variable: SED\_MEAN

P value is below 0.05, so null hypothesis is rejected, and entrepreneurship intention and innovation capability affects startup ecosystem development. Beta value 0.318, t value 3.634 shows the moderate effect.

Multicollinearity check – tolerance value 0.393 (<10) and VIF 2.541 (<5) shows that there is no multicollinearity problem and model assumptions are satisfied.

### Findings

- 1) It was found that majority of respondents (88.5%) are aware about entrepreneurship education indicating strong familiarity among the study population.
- 2) It was detected that most of the respondents have a positive perception that entrepreneurship education helps in understanding startup development, encourages innovative and creative thinking.
- 3) It was found that more than 80% of the respondents supports that entrepreneurship education enhances the students interest and by proper education and institutional support many of them prefer to launch startups.
- 4) It was observed that academic learning increases problem solving skills and transform ideas to solution. The analysis also revealed that entrepreneurship education significantly enhances innovation capability.
- 5) Majority of respondents recognizes educational institutions as major enabler of startup ecosystem development. The role of academia proves to be important. The analysis also shows that EE increases entrepreneurial intention and innovation capability. The EI and IC influences the startup ecosystem development.

### Suggestions

- 1) Entrepreneurship education need to be strengthened through practical training, real-life case studies, project-based learning and startup simulations.

- 2) Institutions should design programs in such a way that it promote creative thinking, problem-solving skills and innovation-driven capability.
- 3) Universities and colleges should collaborate with entrepreneurs, startups and industry to provide internships, incubation support and technology transfer facilities.
- 4) Seminars, business plan competition, entrepreneurship cells, startup boot camps should be organized regularly to strengthen the entrepreneurial intention.
- 5) Institutions need to focus on long-term entrepreneurial development programs.

### Conclusion

The study concludes that entrepreneurship education plays a very important role in enhancing an entrepreneurial intention and innovation capability among students. Also the findings shows the positive and statistically significant relationship between entrepreneurship education and startup ecosystem development. EI and IC will directly affect the startup development. Therefore, strengthening the EE can contribute to developing innovative and sustainability-oriented future entrepreneurs.

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