Paradigm Shift in Entrepreneurship Education for Sustainable Development

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Abstract
India's Hon'ble Prime Minister Narendra Modi has started the Aatma Nirbhar Bharat Abhiyan to boost the Indian economy which is adversely influenced due to the current pandemic situation. To face this turbulent time and trigger the Indian economy government announced a massive amount of twenty lakh crore, which is almost ten percent of the GDP of our nation. A basic schema of this campaign is to increase the GDP by bringing the economy on the right track. History is the witness that by accelerating the entrepreneurship process in any country, has brought positive figures to the GDP. Additionally, the National Educational Policy (NEP) 2020 also focuses on developing more job givers. All these facts mentioned above take us to a captivating need to impart Entrepreneurial education. Entrepreneurship education is the only way to give life to the industrial sector by developing entrepreneurial attributes in human resources. This paper emphasizes on review of entrepreneurship educational curriculum, design and implementation strategy in different parts of the world. This article examines the relationship between entrepreneurship education and economic development.

The paper discusses the curriculum design for Entrepreneurship Development course at Vellore Institute of Technology, Vellore. It highlights the pedagogy adopted herein so that complete handholding support is provided to aspiring entrepreneurs along with the project ideas for their business. The paper develops a sustainable conceptual model and an integrated approach to entrepreneurship development, with the educational ecosystem playing a vital role, can necessarily lead to generating more successful entrepreneurs and enterprises.

Keywords: Aatma Nirbhar Bharat Abhiyan, educational ecosystem, entrepreneurship educational curriculum, National Educational Policy, sustainable conceptual model etc.

INTRODUCTION:
India is the 5th largest growing economy of the world, has the second-highest population of more than 1.3 billion. A growing economy demands skilled labour and entrepreneurs. Entrepreneurship is a process of vision, change, and creation. It is an essential element in preparing young people for self-employment. The skills of an
entrepreneur can be inculcated in the aspirants by imparting entrepreneurial education. Economic development is directly proportionate to the growth of the industry and manufacturing sector in specific. India has improved its rank from 77th in 2018 to 63rd in World Bank’s Ease of Doing Business index 2020. Thus, to take this momentum ahead, education for entrepreneurship development is considered as one of the most impactful and hence imperative forces that determine the health of the economy.

The major focus of Entrepreneurship Education in today’s India in particular and the world in general, gradually recovering from the Pandemic situation is alignment to the Millennium Development Goals (MDGs). The 5Ps of MDGs has gathered more momentum and prominence. Planet, People, Peace, Partnership and Prosperity have emerged as prime drivers for sustainable Business for the future. So, the formal Entrepreneurship Education curriculum and Educators have laid emphasis on the same.

The MDGs has also laid foundation for the 17 Sustainable Development Goals (SDGs), each of them being relevant for future and existing Startups. In an attempt to align to the blueprint of UN to provide a better and sustainable Future for all, the corporate boardrooms to Startup teams, everywhere there are marked initiatives as well as Implementation plans. Both manufacturing as well as service Startups have started reorienting themselves to SDGs like clean water and sanitation, affordable and clean energy, reduction in hunger and poverty, promoting gender equality, etc. Even the Entrepreneurship Educators are engaging aspiring Entrepreneurs among their Students’ groups in immersion programs in rural and urban areas to identify pain points in societies to develop business friendly solutions giving sustainability the top priority. The premier institutions promoting Entrepreneurship Education as well as Startup incubation, are developing campus ecosystems which attaches due credits within the courses promoting partnering with investors and collaborators who values SDGs.

It is high time now to focus more on entrepreneurship educational approaches for promoting self-sufficiency among the students and encourage them with start-ups, pioneering ideas, new projects and new techniques to match the global challenges in the fight for further demands.

**Literature Review:**

**Entrepreneurship:**

Entrepreneurship plays an important role in the economic growth of a nation. Many developed countries of the world support entrepreneurship because they believe it helps the economy to grow. For developing nations, entrepreneurship is the most potent weapon to fight against poverty and unemployment (Jindal & Bharadwaj, 2016). Venkataraman (1997) defines entrepreneurship as a process in which an entrepreneur recognizes the opportunity, creates good and services, and utilizes available opportunities. When we talk about entrepreneurship, innovation can’t be
separated from this process. Zhao (2005) examined in his research that innovation and entrepreneurship are interdependent, and both concepts are vital to an organization’s success.

Entrepreneurship is a promoter of the economic affluence of a nation. It leads to technological development, adds to national income, community development, rural development, brings social change, increases in lifestyle, and above all, generates employment. The Govt. of India has been trying to promote entrepreneurship by launching various schemes, realizing the favourable implications of it on the economy. The Govt. is setting up of several Entrepreneurship Institutions, organizing Entrepreneurship Development Programmes (EDPs) and launching Schemes for the promotion of entrepreneurship like Pradhan Mantri Employment Generation Programme, Credit Guarantee Scheme, etc. Recently, the Govt. of India has launched the “Atmanirbhar Bharat scheme” to combat the predicted job crisis in the post-pandemic situation. The Govt. has established Special Economic Zone (SEZs) and is setting up many more time to time, and is diverting a substantial amount of budget every year towards the expansion of MSMEs; so that they can stand on their own and contribute to the growth of the nation.

Swarupa and Goyal (2020) state that there is a need for developing motivation for achievement among students for promoting entrepreneurship in an economy. Hence, fostering entrepreneurship education can accomplish the need.

- **Entrepreneurship Education:**
  Alberti et al. (2004) assert that Shigeru Fijii taught and introduced entrepreneurship education at Kobe University in Japan in the year 1938. Wilson et al. (2009) has defined Entrepreneurship education as the way to develop attitudes, behaviours and capacities, which is applied by an entrepreneur during his/her career.
  Turner and Gianiodis (2018) state that the pedagogy in the field of entrepreneurship has improved significantly, still it is unclear in much sense that what content to teach, how to teach it, who qualifies to teach, and to what type of student should learn. In the words of Longva & Foss, (2018), there is a need for extensive investment in entrepreneurship education in terms of money, time and effort in order to increase efficiency.
  Raten & Usmanij (2020) in their research have stated that Entrepreneurship education has increased its visibility in the general education field and its advantage is, it can be applied in a variety of situations and settings.
  Entrepreneurship education in India has been gaining importance since the last couple of years. Various specializations of entrepreneurship were introduced at Postgraduate level. But, only learning the fundamentals and theories at such a higher level doesn’t meet the demand for creativity and innovation. Not many of them come forward to become entrepreneurs. Currently, the Govt. of India is planning to
introduce vocational and entrepreneurship education from the school-level under the new National Educational Policy. With the implementation of such policies, we can expect the student's entrepreneurial abilities and thoughts about doing entrepreneurship shall be broadened from the school level. They can be groomed to become potential entrepreneurs delivering them with a higher level of entrepreneurial knowledge. Various researchers have given the definition and concept of entrepreneurship education which are discussed as follows.

The education “about” entrepreneurship “follows the academic tradition and poses the question: how can we explain and understand entrepreneurship?” (Hoppe, Westerberg, & Leffler, 2017).

Kume et al. (2013) emphasize entrepreneurship education as a solution to the unemployment problem. Mensah (2013) adds that entrepreneurship education may capacitate an individual to unleash his/her entrepreneurial potential. Entrepreneurship education is designed to support aspirant entrepreneurs in the operation of their entrepreneurial ventures rather than to seek a job from someone else (Mwangi, 2011).

Nafukho and Muyia (2009) believe that capitalizing in entrepreneurship education is one of the best methods, which enhance the people of a country to boost economic development.

Garavan and Barra’s (1994) explains that entrepreneurship education and training programmes comprise the following objectives: the acquisition of knowledge and skills that are relevant to entrepreneurship; the identification of entrepreneurial drive; developing understanding and support for all unique facets of entrepreneurship; the development of positive attitudes towards change; and to encourage new start-ups and other existing entrepreneurial ventures.

• **Sustainable Entrepreneurship:**

Konys (2019) states that sustainability-related entrepreneurship has become an important subfield of entrepreneurship research along with the increased demand for conducting business in a sustainable way. The author also states that in recent years, businesses have been more and more expected to obtain more sustainable forms. The sustainable entrepreneurship highlights the important role of entrepreneurs in developing non-economic gains to society (Kuckertz & Wagner, 2010). It provides corporate social responsibility by balancing economic health, social equity and environmental resilience through their entrepreneurial behaviour (Rogers & Gardener, 2013).

Entrepreneurship education instils various skills relating to entrepreneurship, entrepreneurial competencies like determination, tenacity, leadership qualities self-awareness, emotional balance, etc. It provides complete learning for student entrepreneurs, helping them to inculcate correct values and cognitive systems, enhance their perceptions of innovation and continuously integrate, and accumulate new knowledge to shape their innovative ability and personality. Entrepreneurship is
about creativity and forward-thinking. Although all business run on money, entrepreneurs also contribute to society by finding innovative solutions to practical, financial and social issues. Entrepreneurship education is determined to support entrepreneurs with value orientation for a sustainable society (Linder, 2018).

**Research Objective:**
- To understand the current scenario of entrepreneurship education in India and across the world.
- To understand the course design process of entrepreneurship education curriculum.
- To explore the association between economic development and entrepreneurship education.
- To analyze crucial models of entrepreneurship education.
- To develop a sustainable model for designing the curriculum of entrepreneurship education

**Research Methodology:**
This research is entirely based on the data collected from the secondary sources like books, journals, magazine, newspaper and e-resources. During the research, more than 50 research articles were reviewed, out of few most relevant articles were shortlisted to be referred for the study. The review process aimed at collecting the information related to the following aspects:
- Current scenario of education in India and across the globe.
- Innovative strategies adopted by the University to design entrepreneurship curriculum
- Existing models of entrepreneurship education
Based upon the review and detailed analysis of the same, a sustainable model is developed for designing the curriculum of entrepreneurship education.

**Need for Entrepreneurship in the Curriculum:**
The future is indeterminate in the world we live and it belongs to the creators and visionaries. Thus, it is imperative to learn entrepreneurship. Entrepreneurship helps to learn the relevant skills and knowledge like risk taking and problem solving, to become a successful entrepreneur. The skills taught in entrepreneurship courses generally apply to all areas of industry. Moreover, new enterprises and entrepreneurial revolution are critical for any society to be universally competitive with technological innovation creating new employments.

**Current Scenario of Entrepreneurship Education in India:**
Entrepreneurship could be regarded as one of the significant reasons for the development of a country. The things we use every day have all been due to the hard work of entrepreneurs. Indian government has undertaken many steps to highlight the
relationship between education and entrepreneurship. Few of them can be discussed as follows.

- Entrepreneurship is taught as a compulsory course in all technical and management colleges.
- More and more incubation centers are encouraged in different technical and management colleges as well as in Universities where students are guided right from pre-ideation stage to setting up of the enterprise. The incubation center supports the students in the form of various set-ups, supervision, and opportunity for financing the start-ups.
- The nodal organizations like EDII, IED, SIETI, CED, etc. established by Government of India are toiling hard to instill entrepreneurial culture among the youths of the county.
- Several reputed private organizations and educational institutes are also contributing by strengthening their entrepreneurship curriculum and activities.

Though continuous efforts are made to make entrepreneurship education significant, still India has a long way to go especially in expanding students' knowledge and understanding in entrepreneurship.

**Current Scenario of Entrepreneurship Education across the World:**
We have studied the status of entrepreneurship education of few developed and developing nation across the world. The existing curricula in most of the developed countries encourage their students to take initiatives. Yet, it was found that in most of the country’s entrepreneurship education is limited to vocational training at the graduate level through business management courses or at the university level only.

During early 90's, China was conducting short term vocational training programmes. Gradually, with the rapid development in the rural areas, rural enterprises came into being. Later, their curriculum was modified and emphasized on the functional management skills like human resource management, financial management, marketing management, strategic management, etc. Now China has created many successful entrepreneurs doing business worldwide. In Ireland, Leave certificate vocational programs are being provided which provides an opportunity to the students for experiencing entrepreneurship. In Austria, students run fictitious firms, which is a part of their secondary level technical education. In Germany, students are placed both in school and in firms to give them a real time life experience. In Norway, the Government has partnered with Young Enterprise, Norway which helps in executing the Strategy for Entrepreneurship Education. In many African countries like Kenya, Uganda, etc. pedagogy remains restricted to classroom teaching only. Students get least scope to implement it practically. Malaysia provides wide scope for the students to learn and research on entrepreneurship. Malaysian government is making continuous effort to encourage entrepreneurship by prioritizing entrepreneurship education and skills development.
Relationship between Entrepreneurship and Economic Growth:
The education system plays a decisive role in the economic development of nations since it helps in developing the human resources of the country. Almost all theories and models across the world acknowledge that the quality of human resources and the quality of education is vital to any economic growth process. It is important to develop human resources through formal programs in entrepreneurship education, training teachers to implement new curricula that emphasize on the development of entrepreneurship knowledge and skills and promoting entrepreneurship and small enterprise creation. It is important to determine an educational change initiative that is supporting the establishment of an "entrepreneurial culture" through entrepreneurship education. In a developing economy like India, it has been advised it must now provide prospects for (1) education directed towards development of entrepreneurial skills, (2) financing of entrepreneurial efforts (3) development of risk taking abilities in the individuals.

(Fig1: Relationship between Entrepreneurship and Economic Growth)

[Source: National Knowledge Commission, 2008]
This relationship can be better understood from the figure above. Education plays a vital role in inculcating skills and competencies like risk taking and problem-solving abilities in an individual for innovation. Innovation means creating new products, new business ideas, new business processes, etc. which can make a difference in the society. It leads to establishment of new enterprises in different sectors. The enterprises help in providing employment, creates wealth by attracting capital, helps increase standard of living, contributes in balanced regional development, GDP & per capita income of the nation also increases. This creates a new horizon or perspective. The trend of establishing own business and becoming successful entrepreneur has massively influenced the educational
Entrepreneurship as specialization and new methods for teaching the substance are made part of the curriculum. Entrepreneurship education is given priority in all professional courses. As the horizon expands, these new ideas can help the economy to excel in all spheres.

**Course Design of Entrepreneurship Education in Premium Intuitions:**

- **Vellore Institute of Technology (VIT), Vellore, TamilNadu:**

  VIT, Vellore, being a premier Institution, is providing ample scope for entrepreneurship development. Students here study entrepreneurship development as an elective subject. Furthermore, a dedicated cell “Technology Business Incubator” is working on promotion and acceleration of young and aspiring entrepreneurs. To carry this effort to a next level, we are planning to introduce Technology Entrepreneurship as minor specialization for B. Tech. students from upcoming session. Students can opt for this specialization irrespective of their branch.

  We have planned to propose around 12 number of subjects under this specialization.

1. **Basics of Technology Entrepreneurship:**
   - This subject will provide the fundamental concepts and knowledge for technological start-up. With the help of this course techno-preneurs shall be able to run their business effectively.

2. **Creativity, Incubation or Innovation:**
   - This subject will provide a detailed understanding of purpose, process and tools of creativity.

3. **Business Development for Early Stage Company:**
   - This Subject will provide a bird-view regarding the overall business development process of early stage company.

4. **Family Business Management:**
   - This subject will be helpful for understanding of the various family business models and structures and their complexities. This subject is also getting sensitized towards the need for professionalism in family business management and how to go about achieving the same.

5. **Technology Management:**
   - This subject will provide a brief idea regarding the application of appropriate technology to increase the productivity and efficiency of the Industry.

6. **Strategic Management for Innovation:**
   - This subject is helpful for identifying, implementing and practicing the management strategies for continuous innovation.

7. **Entrepreneurial Finance:**
   - This subject will helpful for understanding various debt and equity sources of financing available to new and growing business.

8. **Innovation in Established Firm:**
This subject will provide an overall idea regarding the needs and ways of innovation practices within the established Industries.

9. **Product life cycle management:**
   This subject is helpful for understanding the techniques in handling the various stages of product life cycle.

10. **Venture capital and private equity:**
    This subject will provide a basic idea regarding the various sources and aspects of venture capital and private equity.

11. **Design Thinking:**
    This course is an introduction to theories and practices of design and futuristic think. The design thinking elements of the course offer a critical understanding of methods for researching interactions between humans and the social and built environment.

12. **International Business & Tax Law:**
    This subject is helpful for understanding the different angles of tax laws in International business.

In all the subjects, project components will be attached with the theory Lectures. The course is planned to be introduced in the 3rd semester and shall continue up to 8th semester. During the course, students are supposed to prepare initial business plan to detail project report for a single venture of their choice. The evaluation of their business report shall be done by both the internal experts and external experts. The external experts may belong to business or banking or financial sectors or officials from State and Central Ministry.

Students can choose the subjects as per their convenience. They can select minimum of 4 subjects and maximum 6 subjects from the aforementioned list. They will have the privilege to change their selected subject within 2 weeks if they realize it is not their cup of tea. The main objective of this specialization is to inculcate entrepreneurial spirit among students. Thus, after the completion of course, we facilitate 360-degree support to enable interested students to emerge as young entrepreneurs.

Unconventional Teaching Methods and Pedagogy:
- ExpertTalk
- CaseStudy
- ManagementGame
- SimulationGame
- Role play
- BusinessModel
- Industry Visit & FieldTrip

Teaching Methodology:
- Expert Speakers (Informational /Case Study/Demonstration)
• Management Games/Simulation
• Brainstorming sessions- GD & RolePlay
• Films
• Picture Perception Test (PPT)
• Competitions
• Industrial Visit/ FieldTrip
• Projects

Teaching Aids:
• Chalk & Talk
• PPT
• Video Films/Documentary
• Business/Technical Model
• e-Sources

Assessment Techniques:
• Written Test- Internal/ External- Objective Type & Subjective Type
• Group Discussion
• Project Presentation
• Mock Interview

Model for Entrepreneurship Education:
A model was formulated by Van Vuuren & Neiman Model (1999) which provide a guideline to develop and design the entrepreneurship curriculum.

Mathematical statement of this model:
\[ \text{E/P} = [a \text{M} (b \text{E/S} \times c \text{B/S})] \]

Where
\( \text{E/P} = \) Entrepreneurial Performance
\( \text{M} = \) Motivation
\( \text{E/S} = \) Entrepreneurial Skill
\( \text{B/S} = \) Business Skill
\( a, b, c = \) Constants

\( a \) (Motivational Constant)- It includes the drive and desire for achievements.
\( b \) (Entrepreneurial Skill)- It includes the factors like risk taking, Initiative, problem solving etc…
\( c \) (Business Skill)- It includes the skills like managerial, communication, business planning etc…

B. Pretorius Model (2000):
This model not only provides a brief idea regarding the content of entrepreneurial education but also it provides a bird-view regarding the platform upon which these programs can be executed and the methodologies adopted for the same.
This model focuses upon five constructs i.e.

a. Entrepreneurial success theme
b. Business knowledge and skills
c. Business plan utilization
d. Learning approaches
e. The facilitator.

(Fig 2: Pretorius Entrepreneurial Learning Model and Constructs)

[Source: Pretorious, 2001 (p: 145)]
Proposed Framework for Entrepreneurship Education
(Fig 3: Sustainable Model for design the curriculum of Entrepreneurship Education)

The Van Vuuren and Nieman Model and Pretorius Model proposed by the respective experts are very appreciative. These entrepreneurial education model proves to be relevant in global context. The models have the capacity of measuring and evaluating existing entrepreneurship development programmes. After understanding both the models, we have come up with a simpler model from the Indian educational system context. It can also be a preferred option. This model can be useful in designing, developing and managing the curriculum of entrepreneurship education which is need of the hour. It can be explained as follows:

An entrepreneurship educational curriculum is comprised of three major facets, namely, entrepreneur, entrepreneurship and enterprise. Therefore, it is necessary to consider the perspective of person, process and place before designing the curriculum. Entrepreneurship curriculum may be broadly divided into three fundamental aspects such as entrepreneurial aspect, personal aspect and corporate aspect.

Firstly, the entrepreneurial aspect is about the procedure through which an enterprise can be established. It can be further divided into entrepreneurial process and entrepreneurial competencies. Entrepreneurial process includes identifying the opportunity, grabbing the opportunity, resource planning, preparing IPR and DPR, determining feasibility of the project, etc. Entrepreneurial competencies enables to learn about risk taking, initiating, problem solving, seeking information, persuading or influencing, creating synergic effect, etc.

Secondly, the personal aspect speaks about the required skill and temperament to become an entrepreneur. It is again divided into two major categories such as
interpersonal and intrapersonal skills and cognizance. The interpersonal and intrapersonal skill teaches about leadership skills, communication skills, perception, conflict handling, participation in team activities, etc. The cognizance is about inculcating traits like readiness to take up a venture, self-awareness, self-regulation, discipline, building self-confidence, enthusiasm, being creative, etc. in an individual to become a successful entrepreneur.

Thirdly, the corporate aspect is about the place where above two aspects come to practical implementation by establishment of the enterprise. This aspect can be further divided into management and environmental factors. The management factors include all the functional areas like HR, marketing, finance, production and operations, supply chain, etc. And the environmental factors talk about how an enterprise interacts with various internal and external environments. Internal environment includes organizational culture, employee satisfaction, hierarchy, working condition, etc. on the other hand the external environment includes technological, political, economic, legal, cultural, social environment, etc.

**Conclusion:**
Although more than seventy years of independence has passed, India is still regarded as a developing nation, not a developed one. There are several causes behind this. One of the major causes is the unemployment. The best medicine to treat the disease of unemployment is “entrepreneurship development. Perseverant efforts on entrepreneurship education will set the trend and accelerate the development of entrepreneurship. This paper highlights the current scenario of entrepreneurship education in India. This research article also analyzes major models of entrepreneurship education and purposes of a new model to design the vehicle of entrepreneurship education to run on the platform of our educational system.

In the words of Nelson Mandela “**After climbing a great hill,** one only finds that there are many more **hills** to **climb**.” Though India has taken remarkable initiatives to promote entrepreneurship, but that is not enough. It will take a lot more effort to establish India as an entrepreneurial economy.

**Reference:**


