

Systematic Planning and Organizing Entrepreneurial Activities: A Holistic Approach for Fostering Entrepreneurial Thinking

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Abstract—Entrepreneurs are important in every economy to close gaps and create market innovative products/technology/services by using the necessary knowledge and effort. A nation's total development is accelerated by an entrepreneurial culture since it encourages the emergence of more venture capitalists, which in turn strengthens the economy of the country. In order to develop students into entrepreneurs, Rajarambapu Institute of Technology (RIT), Rajaramnagar, an Autonomous institute, introduced a choice-based curriculum system (CBCS) in 2017–18 that featured Entrepreneurship Development (ED) as one of the four tracks. It was investigated that, students were lagging in the skills like critical problem-solving, creative thinking, communication, and teamwork abilities that an entrepreneur need. In this paper, 4 thrust area were identified viz; Inspiration, Motivation and Ideation, Validation and Concept Development, Prototype, Design, Process Development for Business Model/ Process/ Services, Awareness about Startup and related Ecosystem Support Services for Startup Development. Various activities were conducted addressing the above thrust areas which benefited the students in term of development of prototypes.

Keywords— Design Thinking; Entrepreneurial culture; Startup Ecosystem; Active learning.

I. INTRODUCTION

Entrepreneurs are essential to the development of a country's economy. They aid in addressing the problems that clients have, which stimulates the creation of new goods, technologies, or services and, ultimately, jobs. As a result, because they are associated with a country's rate of economic growth, government agencies give entrepreneurship promotion a high priority (Bosma, 2020). India is working hard to foster an entrepreneurial culture in this setting as it strives to have the third-largest economy by 2030 and has the second-highest population in the world. (Aamir, 2021). But there are several obstacles to advancing this entrepreneurial spirit in society. (Irfan, 2018). Most engineering students focus on MNC careers because they think these roles will have a bright future. (Matthew, 2021). Therefore, it is crucial to foster an

entrepreneurial culture in students' minds so that a select few of them can go on to found successful startups. Rajarambapu Institute of Technology (RIT), Rajaramnagar has implemented choice-based curriculum system (CBCS) since 2017-18. Under this approach, students in their final year can select from three options: Undergraduate research experience (URE), Industry internship and projects (IIP), or Entrepreneurship development (ED) (Pratik, 2023). However, it was found that students on the ED track are falling behind in some prerequisites needed to become successful company owners. Consequently, authors made the decision to methodically design and coordinate a series of entrepreneurial events and programmes for the entire year that will focus on inspiring and motivating people to start their own businesses. Idea generation, concept validation, prototype creation, business model canvas preparation, and startup ecosystem (Jonassen et al., 2006; Passow and Passow, 2017). In addition, young entrepreneurs need to understand how technology can be successfully commercialized and introduced to the market. (Barr et al., 2009; Bilán et al., 2005). Furthermore, pupils think that innovation is not methodical and hold misconceptions about invention and originality. As a result, there was a general need to foster students' entrepreneurial mindset, which led to the development of a systematic plan for entrepreneurship activities. These activities were planned and organized throughout the year for students interested in entrepreneurship.

This paper is divided into the following three sections:

- i) Systematic planning of the activities round the year.
- ii) Proper and effective implementation of the activities.
- iii) Impact of above set of activities on students' understanding regarding Entrepreneurial Thinking.

II. METHODOLOGY

A. Systematic planning of the activities

In order to encourage and support students in establishing, expanding, and maintaining profitable firms, entrepreneurial

development involves a wide range of activities and priority areas. These focus areas can change depending on the particular requirements and circumstances of a location or industry, but the following are some typical thrust areas need to be focused for entrepreneurship development. Figure 1 shows the flowchart of crucial thrust areas. Quarter wise activities were planned to address each of the below thrust areas.

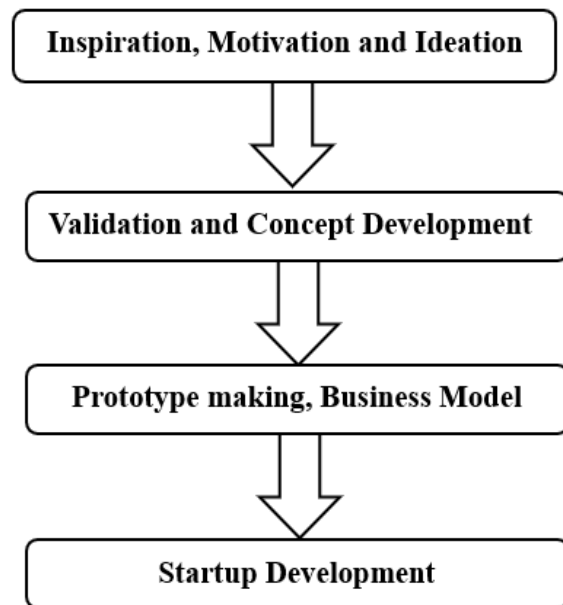


Fig. 1. Flowchart of Thrust area

1) Inspiration, Motivation and Ideation

Inspiration, motivation, and ideation are essential components in the development of entrepreneurship since they give people the groundwork to start their own firms, maintain their efforts, and come up with novel and profitable ventures. Here is why each of these components matters:

- **Inspiration:**

Fosters Entrepreneurial Aspirations-

The impulse to launch an enterprise can be sparked by inspiration. People are more inclined to view entrepreneurship as an option when they are motivated by the success stories of others or by an inspiring goal.

Overcomes Fear and Doubt-

Many aspiring business owners struggle with self-doubt and fear of failure because they find starting a business to be scary. By giving people the courage to start, inspiration can assist people in overcoming these psychological obstacles.

Catalyzes Action-

Acting on inspiration is common. It encourages people to start learning, preparing, and moving forward with their business ambitions in a tangible way.

- **Motivation:**

Driving Action-

Entrepreneurs are motivated to act because of this fuel. Motivation aids business owners in staying dedicated and goal-focused throughout the lengthy and arduous process of creating a company.

Risk-Taking-

To be an entrepreneur, you must take calculated risks. Motivation can give someone the guts to leave their comfort zone and pursue chances that may be fraught with risk and failure.

Adaptability-

Motivation can promote flexibility and a readiness to change course or pivot when required. It enables business owners to remain receptive to criticism, learn from setbacks, and modify their plans as necessary.

- **Ideation:**

Generating Innovative Ideas-

Ideation is the process of coming up with fresh, innovative company concepts. Entrepreneurs that are successful are frequently skilled in problem-solving, brainstorming, and thinking creatively to develop original solutions.

Market Differentiation-

A strong concept can differentiate a new business from rivals. Effective ideators are in a better position to develop goods or services that cater to specific market demands.

Continuous Improvement-

Idea generation is a continuous process. It's a constant process that helps business owners update their products, adjust to shifting consumer tastes, and maintain their relevance in the marketplace.

In a nutshell, ideation, inspiration, and motivation are all crucial aspects of the entrepreneurial process. The initial spark and vision are provided by inspiration, perseverance and dedication are fueled by motivation, and new solutions and a competitive advantage are produced by ideation. These factors are frequently used by prosperous businesspeople in order to turn their concepts into thriving enterprises. Thus 2 activities were planned in quarter 1 (June-August) as shown in Table 1.

2) Validation and Concept Development

The stages of concept development and validation are critical to the process of entrepreneurial growth. They aid potential business owners in honing their concepts, reducing risks, and raising the likelihood of creating a profitable firm. Here is why these steps are crucial.

- **Validation:**

Market Viability-

Validation entails determining whether there is actually a need for the good or service you intend to provide. It assists you in

confirming that there are possible clients who are prepared to pay for what you propose to produce.

Evaluation of product/market fit-

It helps to discuss direct feedback from customers, including surveys, interviews, and reviews. Highlight positive indicators such as customer satisfaction, loyalty, and the perceived value of the product. Include any testimonials or quotes that underscore the product's impact on users.

Risk Mitigation-

You may detect potential traps and obstacles before devoting a considerable amount of time and resources by verifying your idea early on. As a result, you can reduce risks and make wise judgements.

Resource Allocation-

You can distribute resources more effectively if you use validation. You can prevent wasting time and money on a concept that has no commercial potential if your idea doesn't make it past the validation stage.

- **Concept Development:**

Refinement of ideas-

The goal of concept development is to develop your initial idea into a clear concept by giving it more detail. In this process, the product or service is improved together with the target markets and a defined value proposition.

Competitive Edge-

You can gain a competitive edge in the market by creating a distinctive concept. It enables you to set your product apart from those of your competitors and show why your solution is superior.

Attractive Investment-

Investors and partners are more likely to be drawn to a well-developed pitch. You are more likely to obtain the funding required to bring your ideas to reality when you can effectively express your idea and convey a compelling vision.

In conclusion, concept development and validation are crucial processes in the entrepreneurial process because they enable you to verify your hypotheses, hone your concepts, and raise the possibility of creating a long-lasting and profitable company. Skipping these steps increases the probability of failure, wastes resources, and misses opportunities. You may position your business for development and long-term success by thoroughly validating and developing your concept. Keeping this in mind, 3 activities were planned in quarter 2 (September-November) as mentioned in Table 1.

3) Prototype Development and Design of Business Model

When it comes to developing and improving company models, procedures, and services, prototype development, design, and process development are essential elements of Entrepreneurship development. Why these components are crucial is as follows:

- **Prototype Development:**

Testing and Iteration-

Entrepreneurs can materialize their ideas into tangible representations of their goods or services by using prototypes. Testing these prototypes on prospective customers or users yields insightful feedback that helps with iteration and refinement.

Minimizing Risks-

A prototype can be quickly and affordably built to test an idea's viability before investing a lot of money. The likelihood of failure is decreased through early identification and resolution of possible problems.

Securing Investment-

Before investing money in a project, investors and other stakeholders frequently need to see demonstrable results. A well-done prototype showcases your dedication and development, which makes it simpler to get funding.

- **Design:**

User-Centered Approach-

The emphasis of design thinking and user-centric design concepts is on developing goods, procedures, or services that cater to the requirements and preferences of the intended market. A well-designed solution has a higher chance of connecting with customers.

Differentiation-

A distinctive design might help your company stand out from the competition. Your brand's reputation and competitiveness can be improved by using a visually appealing and user-friendly design to draw in and keep customers.

Scalability-

Scalability may be facilitated by careful design. It makes sure that when your company expands, the systems and procedures can change and still be effective.

- **Process Development:**

Efficiency and Quality-

The goal of process development is to create standardized and effective workflows. This is essential for minimizing operational inefficiencies and consistently providing high-quality goods or services.

Cost Management-

Well-designed processes can aid in cost management and maximize resource use. For new companies and small firms with limited resources, this is especially crucial.

Adaptability-

Your organization may respond to shifting market conditions and consumer needs by developing flexible procedures. It encourages responsiveness and agility.

In conclusion, the creation and refinement of business models, procedures, and services that are market-ready, user-friendly,

effective, and scalable are made possible by prototype development, design, and process development. By lowering risks, luring clients and investors, and making sure the company can adjust to changing conditions, these factors help a new endeavour succeed and last. Thus 2 activities were planned on above content in the third quarter (December-February) as shown in Table 1.

4) Prototype Development and Design

For the development of entrepreneurship, knowledge of the startup ecosystem and associated support services is essential for various reasons:

- **Access to Resources:**

Funding-

Startups can get the funds they need to expand their company by being informed of the many funding alternatives available, such as venture capital, angel investors, grants, and crowdsourcing.

Mentorship-

Startup founders can benefit greatly from knowing about mentorship programmes and seasoned business owners that provide assistance.

Co-working spaces-

Knowing about co-working spaces and incubators can give entrepreneurs access to inexpensive office space and a network of like-minded people.

- **Networking Opportunities**

Connecting with peers-

Understanding the startup ecosystem enables business owners to network with colleagues who may have had similar difficulties. Collaborations, partnerships, and shared learning opportunities can result through networking.

Engaging with investors-

Interactions with prospective investors and business partners are facilitated by being aware of startup events, pitch contests, and investor networks.

- **Knowledge Sharing and Learning**

Access to Workshops and Training-

Entrepreneurs can learn new skills and information by being aware of conferences, seminars, and training programmes devoted to entrepreneurship and particular business verticals.

Learning from Failure and Success-

Understanding the experiences of both successful and unsuccessful firms can give important insights into what works and what doesn't in entrepreneurship.

- **Navigating Regulations and Compliance**

Legal and Regulatory Requirements:

Startups must be knowledgeable of their industry's and region's legal and regulatory requirements. By being aware of these rules, they can stay clear of legal snares.

Taxation and Compliance-

Startups function legally and avoid expensive penalties when they are aware of their tax duties and compliance requirements.

- **Access to Support Services**

Incubators and Accelerators-

Startups can benefit from mentorship, resources, and network access by being aware of incubators and accelerators that are customized to particular industries or phases of startup development.

Government Initiatives-

Understanding government-sponsored programmes, subsidies, and incentives for entrepreneurs might result in cash support and development prospects.

- **Building Credibility**

Investor and Customer Confidence-

Possessing understanding of the mechanics of the startup ecosystem and how it works might provide customers and investors more assurance that you're serious about your business.

As a result, understanding the startup ecosystem and associated support services is crucial for the growth of entrepreneurship since it enables startups to access resources, fosters networking and learning, helps them comply with regulations, and positions them for success in a cutthroat market. Entrepreneurs who are knowledgeable about the ecosystem are better able to overcome obstacles and take advantage of opportunities. Hence 2 activities related to this point have been covered in last quarter (March-May) as shown in Table I.

TABLE I
LIST OF ACTIVITIES FINALIZED

Sr. No.	Quarter No.	Name of Activity	Thrust Area
1.	1.	Workshop on “Entrepreneurship and Innovation” as Career Opportunity.	Inspiration, Motivation and Ideation.
2.		Session on Problem Solving and Ideation Workshop.	
3.	2.	Workshop on Design Thinking, Critical thinking and Innovation Design.	Validation and Concept Development.
4.		Organize an Expert talk on Process of Innovation Development, Technology Readiness Level (TRL); Commercialization of Lab Technologies & Tech-Transfer.	
5.	3.	Workshop on Prototype/Process Design and Development.	Prototype, Design, Process Development for Business Model/ Process/ Services.
6.		Workshop on Intellectual Property Rights (IPRs) and IP management for startup.	
7.	4.	Session on Innovation/Prototype Validation – Converting Innovation into a Start-up or Session on Achieving “Value Proposition Fit” & “Business Fit”.	Awareness about Startup and related Ecosystem Support Services for Startup Development.
8.		Session on Accelerators/Incubation - Opportunities for Students & Faculties -Early-Stage Entrepreneurs.	

B. Effective implementation of the activities.

The above activities were conducted for the selected set of interested students towards entrepreneurship as a career option. The activities were organized by the institute, while the expert resource persons were invited to deliver the sessions.



Fig. 2. Glimpses of the activities conducted round the year

C. Results and Discussions

The impact of the activities conducted round the year considering the thrust areas cannot be assessed in the immediate 1 or 2 years. It will need at least 3-4 years to assess the change in the skillsets acquired by the students interested in

Entrepreneurship. However, in this paper the number of prototypes developed by the students learning the Entrepreneurship course is analyzed.

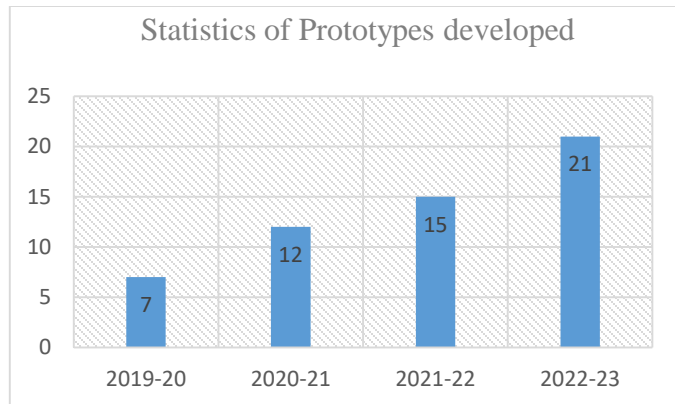


Fig. 3. Statistics of prototypes developed from the year 2019-20 to 2022-23

The statistics for the quantity of prototypes developed since 2019–20 is shown in Fig. 3. Since activities were not adequately implemented in the first half of 2019–20, there were few prototypes generated. Additionally, the entrepreneurial activities were carried out successfully in 2022–2023, which greatly benefited the students. The number of prototypes then rose by 75.0%, resulting in the development of 7 prototypes in the 2019–20 academic year. Further, the number increased to 12 in 2020–21, a 71.4% rise. With 21 prototypes at the end of the previous academic year, the total climbed by 40%. In summary, the number of prototypes increased steadily (by 200% from 2019–20 to 202–23), which amply demonstrates the improvement in students' comprehension levels since 2019–20.

III. CONCLUSIONS

Since 2017–18, RIT Rajaramnagar has used the choice-based curriculum system (CBCS). It was noted that students on the ED track's final year were having difficulties accomplishing the program's main goal, which is to launch a firm. This led to the determination of the thrust areas for the students' training. The entire year was divided into four quarters, with a thrust region being the focus of each quarter.

1. Following thrust areas were defined:
 - a. Inspiration, Motivation and Ideation.
 - b. Validation and Concept Development
 - c. Prototype, Design, Process Development for Business Model/ Process/ Services.
 - d. Awareness about Startup and related Ecosystem Support Services for Startup Development.
2. The activities were implemented in an effective manner by employing experts in the given domains.
3. However, the impacts or results of the activities cannot be assessed immediately, it will need at least 2-3 years to get a complete facelift in the knowledge and the entrepreneur attributes gained by the students.
4. In the year 2021-22, the number of prototypes developed

by the students were 15, which elevated to 21 in the year 2022-23 after conducting the above set of the activities. Thus, the number of student-developed prototypes increased by 200%.

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