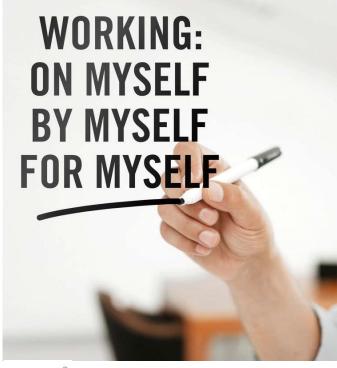
ENTREPRENEURSHIP: A PROFESSION OF CREATIVITY, SELF-EMPLOYMENT, AND **EXPLORATION**



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Innovations in product development and research are at the heart of fastest growing and all-inclusive Indian economic developments. The widespread penetration of digital technology in daily use by the Indian population has opened many opportunities for new products and services that are convenient, economically affordable, and energy-efficient [1]. Therefore, many aspiring scientists and engineering graduates wish be to entrepreneurs. It is self-employment with ample creativity and scope for professional exploration. They foresee their ventures in product development as a scalable startup, which could lead to a new company or its acquisition by а corporate sector for production.





The present decade is most favorable for Indian technocrats to become entrepreneurs for various reasons. The "Atma Nirbhar Bharat" program of the Government of India has opened numerous possibilities to make and promote "make in India" products. The National Education Policy of the Government of India (NEP2020) promotes liberal education in which students can study optional subjects of their interest. Skill development can be obtained by acquiring interdisciplinary knowledge during college education. Atal Incubation Centres, established as Tinkering Laboratories in schools and colleges, provide an opportunity to develop skill sets for youth. Competitions organized by the Maker Bhavan Foundation, the Innovation Foundation, and other regional and national competitions allow an aspiring entrepreneur to test his or her ideas. The technical readiness levels of the product can be checked during competitions by the experts from level one to level ten based on the maturity stage of the product development. [2]



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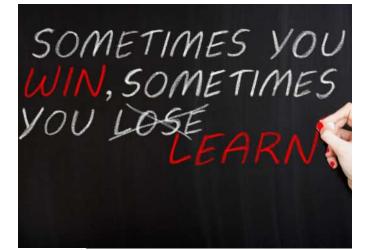


Changing demand patterns

New products with value-added features are being introduced every year due to rapid (and sometimes disruptive) advancements in various technologies like materials, batteries, user interfaces, wireless connections, cloud computing, etc. Today, the average life of various products is much less than a decade for mobile phones, laptop computers, washing machines, TVs, and other consumer electronics items, while it may be just a decade for automobiles. Therefore, becoming an entrepreneur is an exciting profession in terms of creativity and large profits. However, the beginner must consider associated risk factors such as financial limitations, obsolete skill sets, and market competition.

Learning from success and failures

Many accomplished entrepreneurs cultivated their ideas in automobile garages or modest spaces during their early stages. They dared to stand against initial failures and learn from mistakes. Dr. APJ Abdul Kalam once said, FAIL is 'First Attempt in Learning'. All of us do not have equal talent, but having equal opportunity to develop our talent is the common belief among potential entrepreneurs.



In the skill development class, the professors advise students, "Try, try, and try. Make as many mistakes as early as possible and learn from them before your competitors". Every failure is a learning experience. One should remember that failing last week does not mean that you will also fail this week. The same is true with success. You have to own your failures and override them for future developments. One should remember that every problem has a solution, and your own motivation and faith will give you the energy and patience to solve it.



However, if one fails in every attempt and at all times, then a large correction factor may be required to change the path and way of thinking, like looking at oneself in the mirror to find and accept the truth. In this respect, there is no one formula for success since continuous corrective measures are needed during the journey since market needs might be changing faster, and as they say, "old maps may not be valid to find the road." Remember, that market, buyers, is full of wise, intelligent, and selective people who would choose the best possible solution among the competitive solutions. They know what they want. Therefore, instead of fighting with the market (or convincing your ideas), ride your way on the market, since the risk-benefit ratio is high in the case of entrepreneurship. Once the pioneering work is done, entrepreneurs should quickly explore and encash the market before the "ready-to-serve" exploiters use their successful ideas to make quick money in a free economic society [3].



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Entrepreneurs believe in learning by themselves and have a fire of sustained faith in pursuing their ideas into a product. They are ready to put all of their time, wealth, and sometimes even health into the product to see the light of day. They believe that failures are not bad since there would be blind spots in any first-time activity, and creating a fault is okay. Some people compare their understanding of market needs to a learning experience like riding a horse. The market is a horse, and entrepreneurs are like jockeys. The horse will make you fall many times. Finally, with practice, one will learn to ride the horse, and the journey will be much faster. As market needs are dynamically changing, an entrepreneur may have to change his ideas about developing his product. The design focus could be on a stronger product or in the dimensions of aesthetics, versatility, cost, etc.



A successful entrepreneur starts by exploring markets by conducting surveys and listening to customers. Compared intended to biq companies, entrepreneurs have the advantage of low inertia regarding their existing customer base, factories, and other infrastructure. This resilience is an advantage for an entrepreneur. An entrepreneur is like a dreamer. He or she has to make a story to sell his idea and produce a nice picture of the future. However, sustaining more customers requires a lot of work since the perceived or believed market may be much smarter. It may not welcome the product with the enthusiasm it promised in the initial phase.

Entrepreneurship is also like a problem-solving activity that prioritizes finding the potential of selling the product. Thus, an entrepreneur gives a possible solution to a problem for which the market is in need. Entrepreneurs should realize that everyone has ideas, and each one thinks that his idea is unique and great. One must be creative in selecting an appropriate product from possible solutions for the intended market [4]

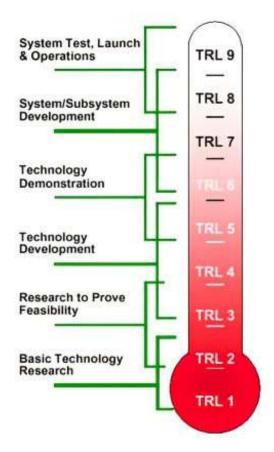


Remember that whatever market opportunity he or she is viewing, many people in society have similar visions. In this sense, one should continuously study the market needs and be ready to modify the product rather than saying that I have a great idea and will convince the market later. Your absolute trust and faith in your idea will show the path to success. However, the idea must resonate with the expectations of society for the new product. Therefore, an entrepreneur should be open to changing his ideas instead of being emotionally attached. Successful entrepreneurs realize that often their solution is an incremental development of existing technology. In this sense, it is like a value addition (i.e., plugging a hole) in an already existing system [4].

Technology Readiness Levels (TRL)

The journey from making a toy-like prototype to prove your idea to engineering a field-worthy product is long. The entrepreneur should be aware of the system readiness levels of product development as categorized in the following Technology Readiness Levels (TRL) [2].





Going Solo

Sometimes, entrepreneurship is a lonely and rough personal journey. The personal inner strength of passion, patience, perseverance, practice, and proactivity is tested occasionally. Like successful medical practitioners, entrepreneurs must sharp possess observational qualities, a deep sense of analysis, and be ready to take corrective action. He or she should also have the capabilities of self-learning, using modern software tools, and solving complex multidisciplinary problems with a team spirit of brainstorming sessions and collaborative learning. Handling a team is much more challenging than solving one isolated problem. Since the team would have smart people in their field, each one should respect the views of the other and realize that they have the right to speak and accept each other.



Partnership for progress

Typically, two to three partners in the group have a similar mindset but divergent ways of thinking. There are divided opinions on whether the family members could be part of the team. One could be strong technically, and others in finance, marketing, and related fields could get the full 3D (or 360-degree) view of the various phases of product development. The ultimate aim would be for the product to be accepted by the market. Therefore, instead of being emotionally and lovingly involved with your development idea, it would be better to change your views if they do not match the market reality.

Closing remarks

Finally, a startup's future lies in selling the technology to already established companies or starting their own companies. Some of the entrepreneurs' products will not see the light of day, but for the rest, the return on investment could be at least two to three orders of magnitude greater than the initial investment. On the journey, an entrepreneur may become super famous and rich. Otherwise, since he or she has pursued the dream until dawn, he or she becomes happy and anonymous. He or she can be both, as in the case of Wimbledon champion Stefen Edberg.

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