

2015

2015

KERALA TECHNOLOGICAL UNIVERSITY

Learning Models for
Entrepreneurship Development

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Learning Models for Entrepreneurship Development 2015

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Introduction

While entrepreneurship classes are designed to give budding entrepreneurs the tools to turn a new idea into reality, their value may be even greater than that: I think it gives all students the ability to view their careers and opportunities in a different light. It's so important that the benefits of an entrepreneurial-focused education are available to all students and not just those planning on entering the startup world.

- John Dearborn-

Kerala Technological University (KTU) is envisaged to implement a new culture of entrepreneurship as a lifeline component of curriculum. The development of entrepreneurship as a field of study in engineering courses has been largely inspired by the acceptance of entrepreneurship as a legitimate tool for economic growth. This document aims to establish a new entrepreneurship education regime in Kerala to propose an effective ecosystem for integrating and promoting entrepreneurship education as fundamental to mainstream engineering education in Kerala. The article culminates in the development of a proposed working framework for an effective entrepreneurship education ecosystem in each affiliated colleges of KTU. This also intends to give the student the skills and competences with which to be able to identify possibilities, as well as create and develop business ideas firmly based in methodology in order to develop sustainable companies or activities in existing campuses. Colleges can choose any one or more from the four proposed methods or can introduce a new method with the approval of the University. Students also have the flexibility to choose the method they prefer. Through the specified model, one should take an application-oriented practice aimed at giving the student the knowledge, skills and competences as well as the "mind set" for creation of new technology, more employment opportunities and more wealth in our society.

Proposed Models

Considering the importance of the right entrepreneurship culture and education for the growth and development of an emerging economy such as Kerala, the present article aims to comprehend different models of globally acclaimed entrepreneurship methods inspired from Massachusetts Institute of Technology (MIT), Stanford, University of California Berkeley (UCB) and Startup Village.

**Model Proposed by Rajesh Nair, Visiting Scholar, MIT,
Senior Lecturer & Director, Innovation & Entrepreneurship
Center, Asia School of Business, Kuala Lumpur**

1. Introduction & Beliefs

1.1. Key Points:

- Entrepreneurs are not born that way, they can be made
- Building Self-Efficacy through experiential learning is critically important
- A supportive ecosystem attracts and develops aspiring entrepreneurs
- A nurturing entrepreneurship ecosystem can be built in a college community
- Classroom learning of management subjects and entrepreneurship case-studies can complement experiential learning opportunity
- In short, we should focus on building an entrepreneurship ecosystem to build sustainable entrepreneurship activity in a college community.

With the median age at 27 years, India needs to create one million new jobs a month for the next decade to address the needs of the growing population. A study by the Kauffman Foundation shows that corporations have been net negative job creators for decades and startups are responsible for net job creation. Startups need

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entrepreneurs. Attracting and nurturing entrepreneurs require an active and supportive ecosystem. Developing colleges as active ecosystem can create student entrepreneurs and startups right from the college.

The five elements that help build a nurturing entrepreneurship ecosystem are:

- University (technology, education),
- Government (policies, funding),
- Corporates (need, training),
- Investors (capital), and
- Entrepreneurs (inspire and mentor new entrepreneurs).

In a college environment, building an ecosystem starts with creating a critical mass of entrepreneurs who build a culture that attracts other aspiring entrepreneurs. The other four players that form the pentacle can then support the entrepreneur. Research at MIT has shown that entrepreneurs can be nurtured and developed in a college environment in regions that have no supportive culture. Here are some links to this work.

1. TEDx Talk on “Starting Up Entrepreneurs”
LINK: <https://www.youtube.com/watch?v=oY0BbZg7qcM>
2. 48-Hour Makerfest is a weekend program to teach Design thinking and Intro to Digital fabrication.
LINKS: <http://www.asb.edu.my/innovation-entrepreneurship-center.html>
<https://vimeo.com/135908753>
3. Innovation Workshops are conducted by MIT Media Lab India Initiative. It is a week long program on: Design, field visit, pitching and creating a working prototype for a project. Students from across India attended them.
LINKS: <https://www.facebook.com/MLIndia>
<http://india.media.mit.edu/>
4. Innovation, Fabrication and Entrepreneurship Workshop (IFE Workshop)
This is a weeklong residential program conducted at Fablab in India, where students have full access to fablab 24x7. They learn digital fabrication, design thinking, startup fundamentals. They create business proposals for real needs and pitch them. Several startups have come out of this program.

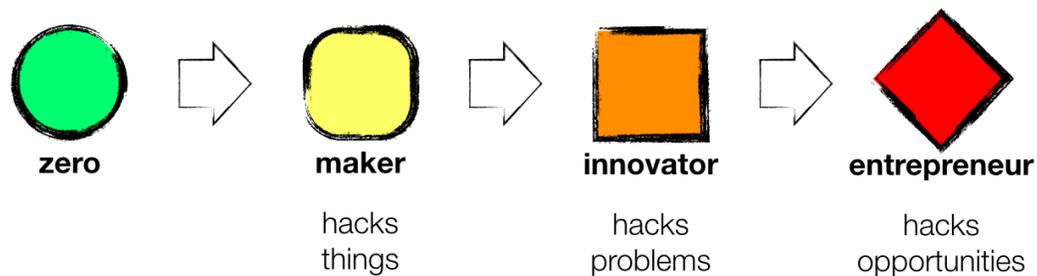
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LINK: <https://www.youtube.com/watch?v=zGNnkLrNRA0>

5. MIT Make In India: This is a 4-week long residential program along IFE held for students from MIT and India.

LINK: <https://www.youtube.com/watch?v=a5L45EmPuEY>

This proposal is based on the methodology that was developed at MIT through these events and focused research on “Catalyzing Entrepreneurs from the Ground Up in Rural India.”



The development of an innovation driven entrepreneur goes through these general phases.

1. Going from Uninitiated or Zero to a Maker, the student is exposed to maker experience and learns to create things. This builds experience and develops craft in physically realizing concepts. They could be hardware products, software applications or new processes.
2. From Maker to Innovator happens when the student learns to understand a need and develop solutions. At this stage the student understands the importance of customer problem, stakeholder behavior and solution strategy development.
3. The Entrepreneurship stage is when the student learns fundamentals of business models to monetize the solution, methods to identify and evaluate opportunities and basics of execution through practice.

The method proposed here takes any average student through these stages, exposing them to the process of entrepreneurship and building self-efficacy to take the journey. The proposal also addresses three elements required for developing individual entrepreneurship skills and building entrepreneurship ecosystem in a college.

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1. Hands-on workshops in Innovation, Fabrication & Entrepreneurship, where the students learn Design Thinking, Digital Fabrication, Team Working, Presentation skills, and Startup Process. This is not a classroom session, but real Action Based Learning.
2. Establishment of an Innovation & Entrepreneurship Centre in the college where the students can practice developing products and work in teams to start ventures
3. Access world-class courses on different aspects of entrepreneurship and management. We will work with the MIT Office of Digital Learning to develop programs for specific needs for KTU and utilize existing courses at MITx|EDX and other MOOCs

1.2. Entrepreneurship Starts with Developing Self-Efficacy

Studies show Self-Efficacy, the self-confidence in taking on a challenge, even without any prior experience, is the critical ingredient in the journey of an entrepreneur. Self-efficacy is built through actually doing and is often accelerated through failure experience. Lecture-based theoretical learning alone does not build this quality.

Self-efficacy is built through three ways in students:

1. Through doing, failing and learning
2. By vicarious experience, where students feel what their colleagues have done is doable
3. Through mentoring by experienced entrepreneurs

2. The Proposal

We propose the following methodology to build an entrepreneurship culture and a sustainable entrepreneurship ecosystem within the college.

The major steps are:

- Inspire and train a critical mass of students in entrepreneurship through workshops
- Build a center in the college where the students may practice and learn the process of entrepreneurship. Early successes attract other students to join.
- Offer classroom and mentorship learning opportunity so we see more entrepreneurship activities and some early startup launches in the first year.

An innovation lab or Fablab is required at the college for conducting these programs and for the students to continue the practice later.

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In addition to the training offered, EnCube Lab proposes to build these Fablabs at colleges and maintain them overtime for productive engagement. A proposal for building such Fablabs can be requested directly.

We offer this a short version of this program to students who are not part of the colleges that have signed up through week-long programs conducted at EnCube's FabLab in Chirayinkil. The charge for the event is around Rs 25,000 per individual.

2.1. Innovation, Fabrication & Entrepreneurship Workshop

- One-week long intense workshop on Innovation, Fabrication & Entrepreneurship
- Learn to identify startup opportunities
- Develop skills to make products
- Learn to startup companies right from college
- Two 2-day in-person follow-up sessions per year on campus
- Ongoing online mentoring sessions

The primary goal is to create a founding team of students to initiate the entrepreneurship culture in the college. This team is nurtured through an intense weeklong workshop on the premises.

This workshop will include training the students in the following:

- Design Thinking: How to identify problems with worthwhile financial potential or social impact
- Solution Ideation: Analysis of the problem for solution strategy and development of product concept
- Digital Fabrication: Students learn to make products that involve mechanical, electronics and software, to realize their solution concept.
- Entrepreneurship: Students learn to develop business strategies, financial analysis, business plan development and pitching.

Workshop details:

Duration: 7 days, Nearly 12-15 hours per day. Maker facility is available 24 hours per day.

Location: Host college

Attendees: About 50 students from all majors and academic years, and with gender balance

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Access to Facilities: EnCube Lab will help setup an affordable Fablab in the college. In addition, the workshop will use the mechanical lab, electronics lab and a large class room to be used as the base for the workshop EnCube Lab will bring necessary equipment and components to conduct this workshop. EnCube Lab will offer two follow-up 2-day courses on the campus in a year, so the host college can reach out to more students and mentor any student in the process of starting up. EnCube Lab will also offer online mentoring to students at other times in the year.

2.2. Establishing Center for Innovation & Entrepreneurship

- Help host college acquire equipment & components for FabLab
- Set up FabLab at the host college
- Train local mentors & students in the use of equipment and innovation process
- Help setup Entrepreneurship processes and policy at the host college EnCube Lab will help the host college to establish an Innovation and Entrepreneurship Center, with the Fab Lab at the core. The center offers the students a place to form startup teams, ideate business strategies, fabricate prototypes of product and launch startups, to mature as an entrepreneur.

2.3. Education and Mentorship

- Offer online courses from MITx|EDx
- Offer mentorship to students in innovation and entrepreneurship
- In-person and online mentoring sessions through the year Connect with MIT Office of Digital Learning to offer MOOC to students on need basis. These courses need not be certified or counted for grades, but are primarily to teach them to startup ventures.

3. Rollout Plan for the Program

- Program starts in September with regional workshops for colleges that sign up
- Follow-up programs at individual colleges also start in the same semester
- Acquisition of equipment and components to Setup FabLab at the colleges
- Establish connection with MITx program

3.1. Schedule

This program is rolled out in colleges according to the demand by the colleges. It is not a mandatory program from the university that all colleges must provide. As

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colleges start offering this program, they will start seeing student startups in a matter of months. This, in turn, attracts more students and thus forms a virtuous cycle. To support entrepreneurship development in Kerala, EnCube Lab will conduct an annual entrepreneurship competition, in association with TechTop, where students from these colleges are invited to compete with their business plans and pitch in front of judges.

Starting of the Program: After September 2015.

Length of engagement for each college: 1 Year (extendable)

Number of students initially trained in each college: 50

Expected number of student entrepreneurs by first year in each college: 5-10

Expected number of startups from each college: 1-2

3.2. Charges

Estimated Charge for the program for Year 1: \$35,000 per college This amount is inclusive of workshop and mentoring programs. This does not include any certification costs for the free MITx courses or FabLab. Expected cost of equipment and materials for a Starter FabLab at the college is about \$15,000 (Including 3D printers, and electronics components). Larger FabLab models may be discussed as requirement arises.

4. Bio of Rajesh Nair

Rajesh is a researcher at Massachusetts Institute of Technology, developing methods to catalyze innovators and entrepreneurs in communities from the ground up and build local entrepreneurship ecosystems. He is one of the founding faculties of Asia School of Business, started by MIT-Sloan School of Management and Bank Negara Malaysia, in Kuala Lumpur. He serves as Senior Lecturer and Director of ASB-Innovation & Entrepreneurship Center. He is the Founder and Chairman of Degree Controls Inc., in Milford, NH USA and Founder of TechTop, a Trust working on promoting innovation & entrepreneurship among Indian youth. He believes that, with the right kind of exposure and training, average individuals can be transformed into entrepreneurs. His experiments in remote engineering colleges in India have generated several entrepreneurs and startups. He spoke at TEDx BeaconStreet on his experience in 'Starting Up Entrepreneurs' Rajesh is a Product Designer and a

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Serial Entrepreneur. His founded company, Degree Controls Inc., (degreeC.com) develops solutions for thermal design of high reliability electronic products in medical, IT, military and consumer markets. He developed several industry standard products and holds 13 US patents. He received the Entrepreneur of the Year award from New Hampshire High Tech Council and was a finalist at Ernst & Young EoY-New England program. He received Masters degrees in Engineering & Management (MIT), Manufacturing Engineering (UMass, Amherst) and Electronic Product Design (Indian Institute of Science, Bangalore). He holds Bachelor's degrees in Physics and Electronics & Communications engineering. He founded the annual TechTop National Innovation Competition in India in 2006. He currently works at MIT-Tata Center for Technology and Design with a focus on commercializing technologies developed at the center. His current personal mission is to create a thousand entrepreneurs in the next three years through the method he developed at MIT. He founded EnCube Lab, to address this mission through teaching the curriculum that changes entrepreneurship attitude of students with no past experience.

4. References

1. "From poverty to empowerment: India's imperative for jobs, growth, and effective basic services", The McKinsey Global Institute, Feb 2014
2. "The Importance of Startups in Job Creation and Job Destruction", Tim Kane, Kauffman Foundation, July 2010
- 3.http://www.boston.com/business/blogs/globalbusinesshub/2014/01/greater_boston_1.html
4. "Catalyzing Entrepreneurs from the Ground Up in Rural India", Rajesh Nair, MIT SDM Master's thesis, Massachusetts Institute of Technology, 2014.

Physical + Online Model Proposed by Bootup Ventures, Silicon Valley

Creating a business takes more than pure academic knowledge. It takes people skills, communication skills, negotiation skills, information gathering, decision-making, and emotional intellect. These approaches are rarely systematically taught. In order to supplement the entrepreneurship taught in traditional academia, Silicon Valley's BootUp is complementing that with the experience it brings to corporate innovation programs and startup acceleration for KTU. On top of that, BootUp will grant the top performers of each class access to our world-class mentors and professors, a large group of serial entrepreneurs and corporate executives as well as for select alumni an opportunity to be part of Silicon Valley's best and brightest after their university.

Overview:

Located in Silicon Valley, BootUp and its 350+ corporate and serial entrepreneur mentors consistently teach entrepreneurs these skills to guarantee greater business growth. At BootUp, our philosophy is to create better entrepreneurs, not just successful start-ups. In addition to business knowledge, entrepreneurs must develop the social skills necessary for leading, growing, and creating a successful company. The BootUp team believes in the power of people, innovation, capital and social networking that has no technological or geographical boundaries. This philosophy begins at the beginning of every educational endeavor we create and sets up students for a realistic entrepreneurial journey with a higher success rate.

Bootup is changing the way we think about Entrepreneurship by making it a process-based approach. We are building global highways between Silicon Valley, the supposed "Mecca for Entrepreneurship" and the rest of the world by integrating Education, Incubation, Acceleration, and Corporate Innovation. All of these are an essential part of a company's lifecycle. The education component will be the first step towards creating a successful company.

Philosophy

The pathway for an entrepreneur begins and ends with self-growth. After a personal assessment, an individual must decide where they want to go and map the journey. BootUp creates your personal growth map and then educates you where necessary. The final step is leading you through the stage of applying those skills in the real world. The following program has been outlined to bring students through the entire process, from assessment to application.

Introduction:

The KTU Entrepreneurship program is structured as a 1yr program with year-by-year extensions up to four years. The program aims to help drive and elevate innovation and entrepreneurship. Based on a minimum of 5000 students a year, the program costs \$299/year for the onsite + online program and \$100/year for the online only program for each student. Lectures will run for 2 hours every week for 30 weeks per year. A customized BootUp certified LMS system supports the ability to track attendance, monitor plagiarism, and generate multiple-choice online tests for the students. At the end of the program the top startups will be invited for a boot camp at the BootUp World campus in Menlo Park for a 3 week hands on acceleration, access to VC's and top serial entrepreneurs.

CORE GOALS:

1. Everybody wins... They might not become entrepreneurs, but leaders in life
2. Make KTU a leading example of global thinking with local learning and with it create a working model for the rest of India.
3. Create a strong entrepreneurial support ecosystem, which is self-sustaining in the long term.
4. Most students should (want to) be a part of the program.
5. Create a simple path which Students can follow to pursue their Entrepreneurial dream of starting a company
6. Build the soft skills required to be successful rather than taking half your life working on those skill sets. ex: communication, Creativity, power of relationships, strategic thinking, focus, vision, critical question to ask yourself before starting " who, why, what, where, when, how "

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7. Teaching storytelling: A good story offers inspiration to drive change. On the Entrepreneurship side unless you can tell a great story about your company, your product, about your vision how will you have investors, vendors, partner's customers come to your side.

Structure:

Students can learn at their own pace online, and then go over issues with weekly class sessions. Each month, the current top performers will have mentoring sessions with a high value serial entrepreneur. The best we will potentially place with local incubators in India through our high value network. BootUp plans on incubating them further before helping them launch in the USA and globally.

As a leader in media and content management, we will utilize our video capabilities to maximize class and learning impact. To that effect:

- Each segment will be 10 minutes long with intro and extra branding bumpers and packing
- Each segment will begin with a story told by the serial entrepreneur who has been there done that and then the lessons learnt from the experience
- In order to ensure student engagement and participation during the video clips, we will have multiple choice questions occurring simultaneously as well as at the end of each segment
- Class will be 2 hours a week for 15-week semesters. Each week will have a lecture from a serial entrepreneur, Fortune 1000 management, or a top tier Professor.
- We will teach both the traditional curriculum taught at US and European schools, as well as customized content for both India and focused on Emotional Intellect development

Resources:

1. We will use a certified LMS "Learning management system" that allows us to track attendance, has control on any duplicating material, prevents copying on tests, and generates multiple choice testing categories while students are online – which allows us to grade students on specific material as well as track attendance at the same time.
2. Bootup.tv: live streaming possibilities
3. Competitions

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4. Access to our Beam/telepresence robot, a product used by the White House and top consulting firms like Deloitte. This allows for virtual learning and ability to participate in events at BootUp.

Video & Class Format:

As a leader in media and content management, we will utilize our video capabilities to maximize class and learning impact. To that effect:

- Each segment will be 10 minutes long with intro and extro branding bumpers and packing
- Each segment will begin with a story told by the serial entrepreneur who has been there done that and then the lessons learnt from the experience
- In order to ensure student engagement and participation during the video clips, we will have multiple choice questions occurring simultaneously as well as at the end of each segment

Differentiators

1. Silicon valley Branding
2. Success stories around helping scale companies
3. Mentor/Serial Entrepreneurs
4. Focus on soft skills and teaching based on practical / real world scenarios

Program Details:

Year One: Intro to Entrepreneurship.

Key elements would be around the mindset, process, skills and abilities

- ABCD of Entrepreneurship. Self-Assessment. What is an entrepreneur?
- Focus on soft and hard skills that are needed ex: Communication, Relationships, and Attitude.
- Basics of Business Development, Finance, Operations, HR, Communications, Marketing, PR, Ideation.

Year Two: Second year will be focused on building upon the basic learning that is obtained in year one

- Intros to tools to become a better entrepreneur (e.g. how to present, how to lead, how to sell, how to choose and pick a team, a co-founder, how to hire and how to fire)

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- Intros to models of thinking
- Design thinking, choosing a problem that matters, building up an idea to a prototype, testing it with your friends, getting your first testers that are not your friends, etc.
- Critical thinking
- Process thinking
- Six thinking hats

Year Three:

Third year we focus on applying all the skills learnt using practical workshops

Using the tools created in the first two years of the program, students will be asked create a entrepreneurship profile that will work best to lead their startup concept and learn how to assess their skills, personality traits and business attributes for the role of entrepreneur/leader. This will include: leadership profiles; problem solving capabilities; decision-making; partnership assessment; networking capabilities. Know your market, competitive analysis, etc.

- How to market and create a MVP
- How to create a brand
- How to test your ideas and make them foolproof
- Creating your Business Canvas
- Building Your Financial Pro-Formas for Long-term Success
- Creating Operational Processes for a Growing Organization
- The Do's and Don'ts of Building a Growing A - Team
- How to Create the Communications Program to Make a Difference in Your Market
- Building a multi-tiered Marketing program by integrating media relations, social media, online content and public relations events and activities

Year 4: Build your Company

- Building a Market Ready Startup: By the time students reach Year #4, they will be ready to have assessed the feasibility of their product/service offering through the creation of a business plan; product plan; pricing model; marketing campaign; sales and strategic partnership model; customer profiles; sales projections; investor profiles; investment opportunities;

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- Refining the Entrepreneurial Portfolio: Refined Entrepreneurial Skill Set Assessment; Introduction to Business Planning; Entrepreneurship Leadership Skills; sales 101; Marketing 101; Content Marketing; Product Planning; Creating a Corporate Culture; Human Resource Planning; The Legal Basics for your Startup; Hiring and Firing; Team Building; Decision Making and Problem Solving.
- Preparing the Perfect Pitch: students will learn how to create a presentation for investors, media and customers including product demos and investor power point decks that sell.

Lecturers

Here is a sample of lecturers out of our pool of 350+ mentors.

Marco ten Vaanholt

Product, Business Canvas, Design Thinking

www.linkedin.com/in/marcotv

SVP R&D SAP, Mentor, MP BootUp

Tony Perkins

Trends and news Silicon Valley

<https://twitter.com/TonyPerkins>

Founder RedHerring Magazine, Churchill Club, CEO AON

Sandeep Shroff

BootUp Finance

www.linkedin.com/in/sandeepshroff

CFO, GM Investor Relations

Peter Boda

UI/UX design

www.linkedin.com/in/peterboda

Creative Director InfoSys Labs, Super Designer

Jay Shah

Business Development

www.linkedin.com/in/jaymshah

CEO, Early VP WebEx

Alex Garcia Tobar

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Marketing & Sales

www.linkedin.com/in/alexgarciatobar

CEO, VP, Mentor, Sales

Surina Piyadasa

Brand

www.linkedin.com/in/surinapiyadasa

Coach of Shaquile O'Neil, Mark Hurd, CEO's

Steven Xi

Venture

www.linkedin.com/pub/dir/Steve/Xi

Managing Director Eastlink Capital, Riverwood Capital

Ricardo Gonzalez

Business Development

www.linkedin.com/in/ricardogonzalezgarcia1

VP & SVP roles

John Merrels

Architecture 101

<https://www.linkedin.com/in/merrells>

Senior Architect Sencha, Mentor

Jonathan Spier

Serial Entrepreneur and CEO

www.linkedin.com/in/jspier

CEO Plae, EIR Altos Ventures, CoFounder Netbase

Adrian Turner

Secrets of Silicon Valley

www.linkedin.com/pub/adrian-turner/0/129/aa1

CEO Mocana, MD Borondi, Advisory Board Accenture

Miguel Casillas

Super Connector

www.linkedin.com/in/miguelcasillas

CEO SV Links

Tony Espinoza

Consumer StartUp Advisor

www.linkedin.com/in/tonyespinoza

CEO of CouchSurfing

Mikey Kelly

Marketing and PR

www.linkedin.com/in/michelekellypublicrelations

CMO, ABC News, KFG

Ed Fogelman

Marketing and PR

www.linkedin.com/pub/ed-fogelman/6/589/77b

SVP and CFO Landor, CEO KFG

Summary

Located in the Silicon Valley, BootUp Academy members are serial entrepreneurs with multiple exits with hands on experience. Each have an extended network of key leaders and advisors, allowing us to provide the best support and coaching for students after they completed the program.

We are international - our ecosystem houses people from all over the world so our ability to connect various entrepreneurial and innovative students during and after the program are extensive and diverse – with better potential for ultimate learning and maximum leverage.

We are close to curriculum builders and professors teaching at Stanford, Cal Tech, UC Berkeley, MIT but we combine the academia with real world experience, creating successful companies with better outcomes. We have taken the best and built an even better approach. We will work with local startup ecosystems in Kerala as well as in India to increase the support system for the aid of our future entrepreneurs. Our reason to do this is to give back, to grow entrepreneurialism and to build a better and brighter future.

Testimonials

http://www.mercurynews.com/peninsula/ci_28066687/rising-menlo-park-startup-sprung-from-22-by?source=email

<http://fortune.com/tag/cuckoos-nest/>

<http://www.bootupworld.com>

Hybrid Model Proposed by FICE

FICE is an Indian Social Enterprise that is focused on bringing the best global education practices and systems to Indian academia. FICE has extensive experience with engineering students across India. FICE has helped Indian students leverage technology to create innovations that have large social and economic impact. It has conducted short term and long term education programs, immersive camps and events that promote “learning by doing” and “idea to market”.

FICE is proposing a model that is university wide and which will ensure that students, across campuses, collaborate with a global faculty pool that brings together the best global practices in this area with region specific approaches.

FICE has relationships with many top rated universities in the United States of America and will bring them in as collaborators in this initiative.

Over the years of working with engineering students in India, FICE has learnt that the best delivery model is hybrid – combining face to face learning with online resources and actual field work.

Program Details:

The four-year program can be schematically shown as follows:



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The program may be taken in series as suggested above. It is also possible to deliver this program in distinct modules that are not dependent on each other. For example – we can offer this program in 4 distinct modules, each targeting students at different academic levels. They may or may not choose to progress to the subsequent level(s).

The different levels are defined below in more detail.

Year 1: Foundation Program in Breakthrough Innovation

- Sets the stage for next 3 years
- Starts with a FICE BIE Camp lasting 2 days (face to face learning)
- Covers the basics of innovation
- Entrepreneurship Basics
- Helps students work on a live project of social importance in their area of interest.
- Work with students and help them test the market viability of their idea
- Total coverage of 60 hours over the whole year (2 semesters)
- Successful completion leads to award of a certificate jointly by FICE and KTU
- Fee: INR 6,000 / student

Year 2: Certificate Program in Breakthrough Innovation and basics of entrepreneurship

- Starts off with a 2-day face to face camp on Breakthrough Innovation covering the ‘science’ and ‘process’ of innovation
- Technology to Market Accelerator covering key issues related to taking products to market
- Online and face to face learning on various topics including:
 - Basics of finance (finding money and using it to advantage)
 - Basics of marketing (finding customers and keeping them)
 - Basics of logistics and operations (getting products over to customers, keeping them happy and satisfied)
 - Basics of HR (handling employees, partners and consultants)
- Getting a 30,000 feet view of things (seeing the big picture and not getting muddled by the ground view)
- Process understanding from prototyping to product creation

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- Successful completion leads to a certificate from FICE and KTU
- 60 hours total over 2 semesters
- Fee: INR 6,000/student

Year 3: Certificate Program in Entrepreneurship

- Comprehensive coverage of the entrepreneurial process
- Student groups will be encouraged to come up with 'viable' projects using past learning
- Starts off with 2-day face to face boot camp covering starting a real venture covering topics like marketing, finance, distribution, operations and human resources
- Exposure to global current and best practices
- End goal will be to create a complete business plan (or canvas) for their real business.
- Coverage – 60 hours over 2 semesters
- Two possible tracks:
- In collaboration with a leading American university: INR 40,000/student
- Certificate awarded by FICE and KTU: INR 10,000/students

Year 4: Certificate Program in Entrepreneurship Management

- Help students start their own venture, create minimum viable products that have the capability to be sustainable in the market.
- Exposure to and support with angel and venture finance
- Prototyping and testing support
- Understanding scale – helping students create and manage a 'scalable' business
- Product launch in the market to a 'pilot' customer group to validate assumptions and business model and to adapt as needed
- Exposure to global launch options – starting a company in the United States leading to listing on NASDAQ or similar stock exchanges in the future.
- Coverage: Minimum 60 hours of classes and mentoring over 2 semesters
- Delivery can be done in two ways – using local resources only and/or using international faculty groups
- Fees: INR 40,000/student (International certification) or INR 15,000 (local)

Scope:

- 50-100 participating colleges in Kerala

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- Estimated 50-100 students/college
- Estimated 5000 students minimum/year
- Campus cohorts likely staggered in waves to spread the workload for mentors/instructors

ADDITIONAL INFORMATION ABOUT THE OPTIONAL INTERNATIONAL COMPONENTS (YEARS 3 AND 4)

This program combines the credibility & quality education from FICE's link with leading US universities like UC Berkeley; a credential/certificate of distinction; leverages the tested capability of Launchpad Central's platform, which has been used by UC Berkeley, Harvard, dozens of universities around the world, the Mayo Clinic, National Science Foundation, Intel and many other leading institutions; directed by a team that has worked well together (FICE and Senior Fellows of The Lester Center and close colleagues with the core team at Launchpad Central); a powerful, integrated and tested "learn by doing" teaching approach; anchored in the spirit of "everyone wins" collaborative philosophy and teaching style; blends high-quality asynchronous content from the US with hands-on face to face teaching and mentoring in Kerala by Indian team members

- "Everyone Wins" theme: Not every student will emerge from this program choosing to launch or join a startup venture; nor will all venture ideas necessarily focus on high tech and/or large-scale businesses. Therefore, we have designed the curriculum to include both Business Fundamentals that will increase the employability and business fluency of every student participant, and adapted the content to cover a broad variety of small to large-scale ideas regardless of industry/technology/product or service.
- We would like every team to view its tuition for this program as if it were seed capital for their idea. For example, let's say 4 team members paid \$300 each for this program; we'd challenge them to develop ventures capable of generating at least \$1200 in revenue to get their investment back plus a higher return on top of that. It would be a straightforward way to ground this thing in real practical terms.
- Please note that the pricing does not include the cost of visiting India. If a visit a needed from the US team members, their travel costs (including time, ticketing, stay...) will need to be borne by KTU.

PROPOSED MODELS

Curriculum:

- **Content:** Reflects global best practices in entrepreneurship education and hands-on experiential training
- **Spirit:** Overall program designed to expose all students to the challenges and rewards of engaging in startup and emerging ventures, with an eye towards anchoring their personal fluency about e-ship generally (whether or not they choose to immediately launch a venture) and improving the odds for success of those students who do choose to begin or join new ventures now
- **Business Agnostic:** This program will not be limited to high tech-centric startups, but will welcome all business ideas strong enough to have coalesced a team around them
- **Collaboratory Philosophy:** While there will be competitive elements along the way, the program will assume and model a highly collaborative style of both teaching and team-to-team cooperation in which every participant has a stake in each other's success
- **Platform:** Under FICE's overall direction and branding, we will use the Launchpad Central platform to ensure reliable integration of all teams across all campuses, centered around our core content.
- **Core Content:** This will be a comprehensive course of "learn by doing" training in the core skills of e-ship, including: the 9-element Business Model Canvas; team formation, leadership and dynamics; industry dynamics and market entry timing; aligning financial needs with sources and strategic milestones; design thinking in solution/prototype creation and refinement; personal and team presentation skills; sales and marketing tactics; as well as "Indianized/Keralized" specifics on the local context and culture (laws, regs, etc.) to avoid assuming US-centric ideas will work there.
- **Certificate:** Upon satisfactory evidence of completion of all program requirements, each student will receive a Certificate of Study issued by either a University of California Berkeley entity or a similar entity.

Methodology:

- **Hybrid format:** FICE will combine its expertise with on-the-ground face-to-face teaching and mentor support for teams with the finest online asynchronous learning resources.

PROPOSED MODELS

- Integrated menu: asynchronous web-based materials will accommodate scheduling flexibility along with on-campus seminars/sessions for in-depth engagement for campus-based venture teams + periodic live interactive broadcast sessions with US faculty to monitor progress, keep the momentum going, sample team presentations to model feedback style, and provide encouragement for next stages
- FICE will be responsible for overall program leadership and day-to-day operation (LMS support, attendance/deliverable verification, local faculty and mentor recruitment and oversight, records management, etc. FICE will be the primary interface with all campuses and the US team.
- US university (UC Berkeley or similar): Two 60-90-minute asynchronous sessions/month focused on that month's issue (total of 12-18 hours of content); periodic virtual office hours handled through FICE-coordinated emails and/or live interactive Q&A "clinic" sessions every 6 weeks with Kerala students, faculty, mentors – with possible sample team progress presentations from different campuses on a rolling basis; quarterly live Program Progress Review sessions with core faculty & FICE staff; possible face-to-face Finals Event for winning campus teams in India
- Learning resources that will be used: US university faculty session videos; Launchpad Central video vignettes, key books and e-books (*Art of the Start*, *The Other "F" Word*, *Lean Startup*, *The Startup Owner's Manual*, etc.); and regular scheduled team:mentor/faculty progress check-ins, presentations and major team artifacts (every 1-2 weeks to start, then every 3-4 weeks until program end)

Lead instructors (United States)

1. **John Danner** is a Senior Fellow of The Lester Center for Entrepreneurship at UC Berkeley's Haas School of Business, where he usually teaches the core MBA course on entrepreneurship, as well as other graduate courses on business model innovation and strategies for startups. He is Faculty Advisor to the Global Social Venture Competition, and launched UC's campuswide undergraduate course on entrepreneurship and global poverty. He also teaches entrepreneurship in the Berkeley-Columbia Executive MBA Program, and is a Visiting Professor of

PROPOSED MODELS

Entrepreneurship at Princeton University each fall. He began his entrepreneurial career as an undergraduate at Harvard, appropriately enough (for this I290 course) in a venture called IGS (Information Gathering Service); and has since been involved in startups of various types as entrepreneur, advisor and investor. In addition, he has worked as a management consultant, lawyer or senior executive in the private, nonprofit and public sectors - in fields from education and healthcare to telecommunications and energy. A frequent speaker on innovation and entrepreneurship at conferences and seminars around the world, he is also senior moderator with the Aspen Institute's executive and global leadership programs, as well as the Federal Executive Institute. For those of you are fans of TED, he's also the guy who came up with the idea for TED University; and gave a mini-TED talk at last summer's TEDGlobal event in Edinburgh. He received his JD, MPH and MAEd degrees from UC Berkeley.

- 2. Mark Coopersmith** served as the Founding Chief Executive Officer of pioneer online payments company WebOrder, now part of Motorola. A leader and innovator in technology, media and consumer products, Coopersmith has spent more than 20 years launching, building and restructuring high-growth global businesses. He led the \$300mm Global Technology Brands group at consumer products company Newell Rubbermaid; has served as President of Strategy for brand consultancy Addis Creson (where he is a board member); and co-founded and built a \$150mm division at Sony which was focused on consumer products, content licensing and e-commerce. Earlier in his career he was a strategy consultant with Ernst & Young. He has advised leading technology and media businesses such as DirecTV, Intel, Sony and Viacom/MTV, and has also worked with many innovative earlier stage companies. He served as a Member of Advisory Board at Pixsy, Inc. He also spends time with students at UC Berkeley where he is an adjunct professor of Entrepreneurship and Innovation at the Haas School of Business. He is an alumnus of UC Berkeley, where he earned his BA and MBA degrees.

Startup Village Model

Startup Village is offering a model of entrepreneurial learning that is 80% practical and 20% theory.

Year 1 - The 20% Theory of Entrepreneurship

The Theory of Entrepreneurship is what we cover in Year 1 at Startup Village. We offer this knowledge FREE OF CHARGE through the Startup Village Online Playbook. Its constantly updated and contains around 60 hours of content which colleges can use as a Syllabus for teaching at 2 hours per week. Most of the content is simple reading and online videos and has been setup from our extensive knowledge of building student startups. The content can be accessed at <http://playbook.sv.co/index.html>

Support Offered:

We offer the following support to colleges and students during Year 1

1. Support Helpline for Teachers and Students through our Public Slack Channel. The Startup Village team monitors this public channel every day and you get live support either from the team or from other startups in the community
2. Analyst Notes - We share funding data in various industry trends, especially emerging industries. A sample report can be downloaded [here](#)
3. Industry Notes - We share comprehensive Industry Trends. A sample report can be downloaded [here](#)
4. Startup Village Community Events - We host events for the Startup Community most weekend and access would be provided to these events usually hosted by Google Developer Groups, Head Start, Startup Saturday etc
5. Competitions and Hackathons - Our premium partners such as Blackberry, Samsung etc sometimes organize Hackathons over weekends where students can participate
6. Graduate Case Study Videos - 3-4 Minute Stories by Startup Founders to inspire student startups.
7. Case Study Material - Startup Village co-authors case studies with IIM-A which are taught for PGDM (MBA) classes. These materials would be offered free of charge to colleges. It is easy for students to relate as all the cases are of startups from Kerala.

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8. Leadership Series Videos - We offer Leadership Series on Startup Concepts for students to easily understand complicated concepts. A sample video is here

From Year 2-4 - The 80% practical way of learning

Students learn from practical experience and can start by building a real company. Over the next three years, students learn to work in a team, create an actual startup, start building actual products and try to market it to customers and raise funding. In this process, they fail many times and we hand hold them to learn from the experience and customer feedback on starting their next product. Over a period of three years, an average startups builds 3 more products and this prepares him for Graduation. The over-all summary of the Startup Village offering right from how its compliments class room learning, university academic partnerships, etc.

Here's how Startup Village compares to a traditional school or college:

Area	Colleges & Schools	Startup Village
Focus	Your primary or major area of study	Your secondary or minor area of study
Admission	Colleges admit an individual	Startup Village admits a team
Learning	Teachers and guides lecture you about topics	Mentors help you out, but self-learning is emphasized
Duration	A structured duration of semesters or thesis evaluations	You learn at your own pace and you move ahead when you are ready
Evaluation	Theory exams, with practical labs	Practical results that you produce with your knowhow
Graduation	You score above the pass percentile and get a job, or you go for higher education	Six ways to graduate

University Academic Partnership for Minors Degree as part of B.Tech

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To help founders in colleges build great startups, SV.CO has tied up with Universities to give young founders academic degrees and certificates. The first University that we have a partnership up with is Gujarat Technological University, an AICTE and UGC recognized University that has an excellent pedigree.

The intent of this programme is to make sure that the skills & knowhow that founders learn when they start a company is recognized and validated by an accredited institution. Moreover, since we have six ways to graduate, this achievement will be valuable to every future path founders choose. Every founder who joins SV.CO is part of this program, and has the opportunity to earn these valuable credentials.

Programs on Offer

- For students who are currently studying in GTU-affiliated colleges, we're offering Minor and Specialization in Technology Entrepreneurship.

From academic Year 2016-17, KTU will be a partner to this programme so that students who learn the foundations in year 1 can have a seamless transition into this programme.

Evaluation

SV.CO evaluates teams based on an evidence-based evaluation criteria. In other words, it's what you do that matter, and not what you reproduce in an exam.

Teams will have to complete one of these milestones for earning academic credentials:

- Revenue Realised: The team should recognize a revenue of at least ₹ 250,000 either from a single product or cumulatively for its products
- Profits Generated: The team should to be able to generate a profit of at least ₹ 100,000 either from a single product or cumulatively for its products
- Angel/Venture Funding: The team should be able to raise an angel or venture capital funding of at least ₹ 5,00,000 for its startup by way of dilution of equity shares.
- Patent Granted: The team should be able to win a Patent Grant in India or anywhere in the world for its invention.

If you don't meet the evaluation criteria, you will not be awarded the corresponding KTU minor or certificate. However, all the entrepreneurial learning that you do by creating a startup will be reflected on your Verified Timeline and certified both by KTU and SV.CO and this can be a valuable tool for a career or further study.

Program Duration

Unlike traditional models which have a fixed time duration, all resource materials, progress milestones and graduation methods are given upfront so that teams can move at their own pace depending on the number of hours they are putting in, quality of the team, the product and market opportunity and of course a bit of luck. We have noticed teams graduating in as short as 823 days to 1946 days.

Program Fee

Both programs have the same fee of Rs.15,000 a semester per student. If you are an eligible founder, there are scholarships available. There is no fee for the participating college.

Scholarships

We'll soon be announcing extensive scholarships for eligible founders. We'll have three kinds of scholarships available: Performing Scholarships: for high-performance teams, Women Leader Scholarships: to encourage women to pursue leadership roles, and Financial Scholarships: to ensure that meritorious candidates who are from financially weaker families are not denied an opportunity to be part of this learning process.

Graduation

At Startup Village, we give students six ways to successfully graduate:

1. Get funded

Your startup gets funded through a venture capital firm or an angel investor.

2. Get into a Startup Accelerator

Your team is selected into a recognized Startup Accelerator¹.

3. Get Acqui-Hired

Your founding team is hired on by another company that values your skills.

4. Become Self Sustainable

Your revenue and cashflows stabilize and then grow, allowing you to scale up.

5. Get a job

You get hired at a great company because of the skills that you acquired while building your startup.

6. Go for Higher Education

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You decide to build upon the skills you acquired by getting a formal degree.

Startup Village is currently the National Award Winner for BEST TBI in India.

Unlike other incubators, our core focus is student entrepreneurs and all our programmes are designed especially for students and the Kerala context.

A lot of additional support is given to startups through the SV.CO platform once they are accepted. This starts from basic things like forming a company, filing annual reports, opening bank accounts to really complicated UI/UX Design Help, Product Design Workshops, Design Sprints to meeting investors, and successfully graduating using the amazing experience through one of the six methods we have identified.

Conclusion

All KTU affiliated colleges may implement atleast one entrepreneurship learning model proposed from Rajesh Nair, Massachusetts Institute of Technology (MIT) Model, Bootup Ventures (Stanford) Model, FICE (University of California Berkeley -UCB) Model and Startup Village Model. Any other learning model can also be used by the institution, which deems to fit them with approval of the University. Students are also free to choose the model they prefer from the below.

Sl	Affiliating Agency	Primary Method of Learning	Domain of Learning	Cost	How can we contact?
1	Rajesh Nair EnCube Lab	Hands-on, Action Learning	Product development, Fabrication, Innovation & Entrepreneurship	\$35,000 per college	rajnair@mit.edu
2	Bootup Ventures	Physical + Online Learning	General Entrepreneurship	\$100/per year/per student	mukul@bootupve ntures.com
3	FICE	Online and Physical	Digital Technology Startups	Year 1: INR 6,000 Year 2: INR 6,000 Year 3: INR 10,000 (India) or INR 40,000 (US certification) Year 4: INR 15,000 (India) or INR 40,000 (US certification) (All fees per student per year)	apurva@fice.in
4	Startup Village	Hybrid (Online + Physical)	Digital Technology Startups	15,000 per student/ semester	sanjay@mobme.in