

BEST PRACTICES **(Academic Year 2018-19)**

PRACTICE I

Practice I (a)

1. Title of the Practice: Entrepreneurship Development

2. The Context that requires the Initiation of the Practice:

In today's era, students are less willing to work under an employer and want to be their own bosses. They are keen to experiment and start their own ventures where they can apply their skill-set and decisions, and fulfill their dreams of owning an enterprise. Also, the start-up culture is developing in the country with a number of schemes being implemented by the government to promote, nurture and support entrepreneurship development. Keeping this in view, the Centre for Entrepreneurship Education and Development (CEED) of the University takes series of initiatives and brings up numerous events every year to provide an opportunity and a platform to the students to fulfill their dreams of start-ups. It adopts a proactive approach in providing all sorts of support, linkage, assistance and mentorship to the budding entrepreneurs through its incubator named 'Explore-Hub'.

3. Objectives of the Practice:

- To develop entrepreneurial mind-set and skill-set among the students.
- To create awareness and impart education about every aspect of entrepreneurship.
- To identify the students who are genuinely willing and have the potential to start their start-ups.
- To contribute in the socio-economic development in the country by making students job creators and not job seekers.

4. The Practice:

After joining the university, students are given prospect to choose entrepreneurship as a subject in order to procure an in-depth knowledge and understanding about the concept. All the students who express their willingness in joining the entrepreneurship course learn and acquire know-how by undergoing several modules through regular classes, master classes, boot camps, webinars, presentations, idea pitching etc. The CEED allows students to explore a large plethora of knowledge and skills in addition to their normal course of study. Students from different streams work in groups from the beginning which creates an interdisciplinary learning environment to discover and brainstorm revolutionary ideas. Through University's connections with the industry and entrepreneurs, CEED provide

opportunities for linkages, support, assistance and mentorship in domains of technology, market, finance and law to the budding entrepreneurs, thus, strengthening their idea, learning, skill-set and network and supply platform to pitch ideas for acceleration, prototype development, funding and collaboration.

5. Obstacles faced if any and strategies adopted to overcome them:

The present generation is quick and restless that sometimes without understanding the concept and researching the idea thoroughly, they want to implement and experiment which is not a right strategy to succeed. By going through online platforms and social media, they at times try to imitate the concept in their respective ideas which hinders its novelty and leads to failure. Hence, the CEED plays a vital role in providing clarity and understanding to the budding entrepreneurs that the concept or technique used by others may not be applicable to every idea. Through appropriate mentoring and industry-linkage of the students, the centre tries to overcome this challenge.

6. Impact of the practice:

Students are able to develop aptitude and skills for entrepreneurship. They learn to identify and apply different approaches to a life problem and provide best solution to it through their innovation and creativity for the benefit of the society. They get industry exposure through events like boot camps, mentor-mentee series, workshops, start-up weekend etc. which not only nurture them in multiple aspects but also build their networking and help in assessing market trends. The success of budding entrepreneurs of the University in successfully establishing their start-ups motivate other students to take risk, innovate and fulfill their dream. The initiatives adopted by CEED benefits students from diverse socio-economic backgrounds by promoting their unconventional talents and skills, and giving them platform to explore their full potential and achieve success.

7. Resources Required:

- University Infrastructure (like land and building, equipments, furniture etc.)
- Support Services (like cafeteria, sports complex, dispensary, transportation etc.)
- Financial Assistance and Support to organize events
- Administrative Support
- Industry Connections (for linkages, assistance and mentorship from existing entrepreneurs, legal advisors, technical experts etc.)

Practice I (b)

1. Title of the Practice: Seed Funding – Financial Support to Start-ups

2. The Context that requires the Initiation of the Practice:

Seed funding is required by the budding entrepreneurs to reach prototype or commercialization stage with a valid proof of concept. Researches exhibit that students have innovative ideas and the required entrepreneurial skills but often fail due to unavailability of seed funding. Lack of finance is one of the major problems faced by the budding entrepreneurs. A number of financial schemes have been launched by the government and a large number of angel investors exist to fulfill financial needs of start-ups at initial stages. However, start-ups are unable to access finance from such sources either due to lack of awareness or non-fulfillment of essential requirements. Here comes in the role of the University Incubator.

3. Objectives of the Practice:

- To provide financial support to the start-ups by means of seed funding to develop prototype and commercialize innovation.
- To provide linkage with industry investors, angel investors and venture capitalists etc. for fulfilling their future financial needs of the start-ups.
- To create awareness and understanding regarding different sources of finance available for entrepreneurial ventures.
- To contribute in the socio-economic development in the country by making students job creators and not job seekers.

4. The Practice:

CEED provides seed funding to the entrepreneurial ideas of budding entrepreneurs who genuinely wish to convert their innovation into successful start-ups.

PHASE I – ADMISSION/MEMBERSHIP PROCESS

In order to receive seed funding internally from the University, students are required to first register themselves as CEED Members. After registration, students learn about concepts of entrepreneurship and participate in Entrepreneurship Development Programs (EDPs).

PHASE II – SUBMISSION OF BUSINESS IDEA/PLAN/PROJECT PROPOSAL

After the initial development programs, students submit their Business Idea/Plan/Project Proposal having potential business opportunity for kick starting start-ups through CEED. The budding entrepreneurs and their teams get an opportunity to pitch and present their ideas to the panel of experts.

PHASE III – APPLYING FOR CEED SUPPORT

The proposals are scrutinized on certain criteria and shortlisted for possible support from CEED. Based on idea validation, the eligible students/teams earn a grant of up to Rs. 2 lakh. The grant is given in installments based on the milestones achieved. The purpose of the small dose of assistance is to support students of the University to try out their innovative ideas (processes and products) at the laboratory or workshop stage and beyond (to the extent possible) and to carry forward the idea from its mere conception to know-how and then to do-how stage. The students/teams also get a chance to apply to CEED for assistance in terms of space at its incubator ‘Explore Hub’, mentoring services etc.

PHASE IV – SUPPORT FOR HARDWARE DESIGN/PROTOTYPING SERVICES

If the students need further support and funding from CEED to develop hardware design /prototype/minimum viable product (MVP), then, they need to present their proposal before the CEED committee. The committee decides about the nature and quantum of support to be provided to such projects purely on the basis of merit and viability of the idea.

PHASE V – CREATE A CAMPUS COMPANY

Once the idea is ready to be successfully commercialized, students create a campus company and form a founding agreement between the involved parties. Afterwards, start-ups register their company with Registrar of Companies, apply for company’s PAN card and open a current account in a bank for financial transactions for further operations.

5. Obstacles faced if any and strategies adopted to overcome them:

Balancing the venture with academics is quiet challenging for the students. At times, the students become restless and take rash decisions without much research. The unrealistic expectations cause problems among the team members. Through mentoring services and CEED, students are counseled about the importance of logical decision making, team building and management, and leadership. The students are educated about risk management and financial management to help them in developing strategies for managing cash flows. Industry experts are roped in to share tips with students required for understanding, analyzing and tackling market competition. Hence, CEED tries to overcome the obstacles through efficient mentoring services to the budding entrepreneurs.

6. Impact of the practice:

Students come up with innovative ideas for solving problem in the benefit of the society. They get an opportunity and a platform to present their idea and avail initial financial support for idea development, test marketing and pre-commercialization. This encourages the budding entrepreneurs, creates positivity among them and enables them to focus on other important aspects related to developing start-ups. They gain valuable early stage operating experience during graduation which facilitates them to progress in professional

life. Through mentoring and industry interaction, students gain knowledge, build network, avail expert services, and create prospects for meeting future financial requirements. The success received by the start-ups through grant provided by the University motivates other students to bring up new ideas and become entrepreneurs. The financial support extended by CEED benefits students having viable innovative idea and entrepreneurial skills but facing financial constraints to establish their start-ups.

7. Resources Required:

- University Infrastructure (like land and building, equipments, furniture etc.)
- Support Services (like cafeteria, sports complex, dispensary, transportation etc.)
- Financial Assistance and Support (to provide grant and seed-funding, organize events etc.)
- Administrative Support
- Industry Connections (for linkages, assistance and mentorship from existing entrepreneurs, legal advisors, venture capitalists, angel investors, technical experts etc.)

8. About the Institution:

- i. Name of the Institution: Chitkara University, Himachal Pradesh
- ii. Year of Accreditation: 2016
- iii. Address: Atal Shiksha Kunj, Atal Nagar, District Solan, Himachal Pradesh – 174103
- iv. Grade Awarded by NAAC: B
- v. E-Mail: info@chitkarauniversity.edu.in
- vi. Contact person for further details: Dr. Varinder Singh Kanwar, Vice Chancellor
- vii. Website: www.chitkarauniversity.edu.in

PRACTICE II

Practice II (a)

1. Title of the Practice: Science, Technology, Engineering, Arts and Maths (STEAM) School

2. The Context that required the Initiation of the Practice

In today's era, setting students up for future success means exposing them to multiple disciplines holistically in order to develop their critical thinking skills. According to a Financial Times article, "Education is under pressure to respond to a changing world. As repetitive tasks are eroded by technology and outsourcing, the ability to solve novel problems has become increasingly vital". Thus, STEAM education is an approach to learning that uses Science, Technology, Engineering, Arts and Mathematics as access points for guiding student's critical thinking, creativity, brainstorming and innovation. It is an

educational discipline that aims to spark an interest in students involving different creative processes. Teaching relevant, in-demand skills prepare students to become innovators in an ever-evolving world not only for their personal benefit or bright future but for the betterment of the country. It is important particularly in scientific disciplines because the next generation students need to develop their communication skills through both traditional means of writing and speaking, as well as more artistic means of expressing their ideas. It is a unique approach of learning and applying basic skills to be able to better comprehend one's own ideas.

3. Objectives of the Practice

- To impart knowledge and inculcate skills in students for better employability and promotion of entrepreneurship.
- To develop critical thinking, problem solving and creative skills among students by following integrated-multidisciplinary approach for their holistic development.
- To enable students in applying unique ways of understanding, expressing and transforming their ideas.
- To provide training, support and guidance to students across different streams for their personal growth contributing to national development.

4. The Practice

STEAM School is designed and run by Chitkara University Research & Innovation Network (CURIN) to impart basic skills in Science, Technology, Engineering, Arts and Maths (STEAM) in a fun filled– activity-based structure. The activities done under STEAM school do not offer any credits but impart essential skills, required to instigate, breakthrough and shape new ideas. There are no prerequisites but just the zeal to learn and do. The STEAM School operates on pre-determined days during entire academic year in evening hours from 4:30 pm to 6:30 pm. Students have a choice to enroll in any number of courses by referring to time table and booking slots as per convenience. Hostel accommodation is offered to the day scholars as per the requirement. Using STEAM framework, the courses are designed in a way not only to teach students how to think critically, problem solve and use creativity, but also to prepare them to work in fields that are poised for growth. Each course is designed for approximately 10 hours and completed within a week. Some of the courses offered were based on themes like Game Development, Augmented Reality Application, Linux Shell Scripting, Internet of Things, Solar Cell Device Simulation, Python Programming, Nanocomposites, Food around the world, Personality Development etc. A special course "ERASMUS+" of 36 hours has been offered through international faculty leveraging on global university collaborations. The courses were collaboratively planned including a cross-section of teachers, adjusting schedules to accommodate new ways of teaching and learning. The STEAM School adopts student-centric teaching pedagogies like inquire-based and cooperative learning to favour critical analysis, re-elaboration and deep

thinking through content and group discussions. It also used seamless lesson implementation processes and strategies.

5. Obstacles faced if any and strategies adopted to overcome them

Successful continual of STEAM School required the stay of the faculty/trainer in the campus in the late evening. As the entire faculty used to leave the campus after normal working hours (4:30 pm), it was important to motivate and encourage them to willfully spare few more hours to stay in the campus for successful implementation of STEAM School. To resolve this issue, the University decided to arrange free overnight stay of the concerned faculty members/trainers in the campus. Also, chance was given to all faculty on rotational basis based on their expertise to conduct courses in STEAM School.

6. Impact of the Practice

The STEAM School received lot of appreciation from students. They were trained according to the specialization and interests in specific courses for better employability. The smaller groups enabled one to one student – teacher interaction. Students made utmost use of labs and library to explore and perform new activities using different technologies, thus, improving their learning curve. It helped in preparing students for life, regardless of the profession/stream they choose to follow. Under the STEAM framework, students were taught not just the subject matter but also how to learn, how to ask questions, how to experiment and how to create. It meant much more than just teaching five different subject areas under a common acronym. It empowered teachers to employ project-based learning that crossed each of the five disciplines and fostered an inclusive learning environment in which all students were able to engage and contribute. It not only proved to be a great learning experience for students but also led to the professional development of faculty in STEAM practices and principles.

7. Resources required

- University Infrastructure (like classroom, laboratories, library etc.)
- Support Services (like cafeteria, dispensary, hostel etc.)
- Administrative Support
- Faculty/Trainers

Practice II (b)

1. Title of the Practice: Engineering Exploration

2. The Context that required the Initiation of the Practice

Keeping in view the dynamic industry environment, increased competitiveness for job opportunities, changing industry trends and advancing technology, it becomes imperative for

an institution to work on the holistic development of the students. With this aim, a multi-facet course “Engineering Exploration” is offered to the first and second year engineering students in accordance to the University’s motto “Explore your Potential”. This course offers an opportunity to the students to identify their areas of interests and discover greater career options and employment opportunities through interdisciplinary integrated programs.

3. Objectives of the Practice

- To introduce multi-domain latest technologies to the students providing them a platform to comprehend advanced technology market.
- To ease down career selection path for students by helping them identifying their key interest area.
- To enable students explore their potential in interdisciplinary fields for better employability.
- To provide training, support and guidance to students across different streams for their personal growth contributing to national development.

4. The Practice

To provide an interdisciplinary learning environment to the engineering students, Engineering Exploration course is offered in first and second year of the degree programme. Approximately, 4 practical sessions are scheduled in a week aligned with the time table for this course. The elective subjects offered as part of this course is given as below.

First Year

- Analytical Algorithmic Studies
- Internet of Things (IOT)
- Red Hat Linux
- Digital Marketing
- Engineering Problem in Community Services (EPICS)

Second Year

- Machine Learning with Python
- Data Mining
- Image processing with MATLAB
- Digital Marketing
- MOOC
- Engineering Problem in Community Services (EPICS)
- Advanced Programming

Small groups are made segregating day-scholars and hostellers to give adequate attention to each student, improve student-teacher interaction and provide customized teaching-learning

experience etc. Students are encouraged to participate and perform through integrated group projects as part of the curriculum of this course, promoting team building, creativity, critical learning, problem solving and interdisciplinary learning. An open-house atmosphere allows freshers and second year students to interact with faculty, senior students, and academic advisors ensuring better learning experience, inclusiveness, employability and research opportunities.

5. Obstacles faced if any and strategies adopted to overcome them

There was hardly any difficulty faced by faculty and students in implementing this course. The faculty was allotted subject according to their expertise and area of interest.

6. Impact of the Practice

The course was helpful to the students to explore their capability, gain interdisciplinary knowledge and enhance career opportunities. They learned skills like team management, leadership, problem solving etc. They gained experience about latest industry trends and modern technological advancements by working on integrated projects based on real-life problems. Not only students, even faculty got a chance to enrich their knowledge, skills and experience.

7. Resources required

- University Infrastructure (like classroom, laboratories, library etc.)
- IT, E-content and ERP Facility
- Administrative Support

8. About the Institution:

- viii. Name of the Institution: Chitkara University, Himachal Pradesh
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- xiii. Contact person for further details: Dr. Varinder Singh Kanwar, Vice Chancellor
- xiv. Website: www.chitkarauniversity.edu.in