SILICE

Best Practices for Innovation Centers in Higher Education Institutions

Co-funded by the
Erasmus+ Programme
of the European Union

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Social Innovation ideas and international cooperation at regional level between the EU, Israel, and India.

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Introduction

This handbook presents the products of the SILICE project, which has been carried out over the last three years (2017-2019) in 14 Higher Education Institutions (HEIs) in India, Israel and Europe. The goal of the project was to promote creative thinking and develop innovative solutions to social problems in fields like economy, society, women's status and health. At the same time, the project also aimed at training the students, as tomorrow's citizens, while highlighting skills and tools that will allow them to fit into the future labor market. Most of the participating institutions are located in peripheral regions, thus supporting the development of these regions and the local communities in them. As part of the project, we have established nine Social Innovation laboratories (SinnoLABs), in which around 2,000 students were active over the years. We conducted trainings for over 100 staff members, including 60 women; we created over 54 new syllabi and around 90 workshops for local residents from outside the campuses. We created a global online digital library and an online network between academics, stakeholders, industry and NGOs, all working together to promote over 200 projects that were created by students and to guarantee the sustainability of SinnoLABs in the various HEIs .

We would like to take this opportunity to thank the EU for their support and funding, and the project's personnel in each one of the different HEIs for their comradery, hard work and efforts invested in the success of this project. We would like to thank the boards of the different HEIs and their presidents for their patience and willingness to assist in any way possible, thus being part of the project's success.

The SILICE project is a proof that the concept of innovation can be introduced and incorporated into HEIs through different models, and we are grateful for the people involved in this project and their contribution to its success.

The handbook presents number of models for Innovation and Entrepreneurship centers (I&E centers, hubs or SinnoLABs) in HEIs. Entrepreneurship became a major focus of academic institutions in the early 1980s. Initially, this focus was reflected in the introduction of entrepreneurship courses, which were characterized by unique thinking patterns of their architects, contents that combine "traditional" academic learning with innovative pedagogies and links created between academic institutions and their surroundings. Entrepreneurship courses encourage students to search for solutions to

regional and local problems in fields like economy, agriculture or social issues, thus positioning the HEI as a significant institution in its local context.

The next step was the establishment of I&E centers, a trend that was dramatically enhanced over the last five years. I&E centers help increase the number of entrepreneurship courses and students, providing contents and tools that can prepare the students for the current and future labor market, while also encouraging them to be more engaged in their surroundings and highlighting the aspect of social responsibility in HEIs. Generally, I&E centers encourage students to be engaged citizens, who are committed to promoting their communities.

The emergence of I&E courses was partially the result of the growing importance of the academia's "third mission" of social responsibility. For decades, HEIs had focused on their two intertwined core missions: Research – which is defined as producing new knowledge; and education – transferring this knowledge to the students. In the early 1990s, the concept of innovation was introduced as part of the academia's third mission – social responsibility for the HEI's surroundings. Hence, HEIs started initiating ventures that involved academic staff members alongside external experts and students. All over the world, HEIs today strive to instill social responsibility as an integral part of their activities, turning into "engaged universities" (McIlrath, 2014). In recent years, social responsibility and engagement have been added as measures in various rating systems of HEIs.

Engaged HEIs are those that collaborate with their surrounding communities in searching for new knowledge, promoting learning and utilizing knowledge in order to promote and develop neighboring communities – NGOs, institutions and various social groups. These HEIs collaborate with public schools, community organizations, business partners and industry in order to address common needs by utilizing the HEI's talents and resources (McIlrath, 2014). "Social engagement" is defined as collaborations between HEIs and communities, aimed to address critical social issues and benefit the general public. HEIs are perceived as crucial change agents, which are capable of handling and solving social challenges. Thus, social engagement of HEIs is an important means of dealing with social issues, social gaps, social gaps and other issues (McIlrath, 2014). HEIs can create opportunities for underprivileged classes, youth and families, minorities or other groups who suffer from cultural gaps.

Innovation reflects the concept of constantly adopting plans, ideas and behaviors that are aimed at changing reality and finding solutions to social, technological and organizational challenges. The concept of innovation emerged in the high-tech sector, where it was used as a means of promoting growth and encouraging the development of new and unique solutions based on skilled human resources. Innovation is based on three principles: (1) Creative thinking, which is used to develop innovative solutions; (2) unique advantages of a product or service, which attract organizations to invest in the product or purchase it rather than choosing alternative solutions; and (3) an organizational structure, which encourages people from various fields to interact, form teams, identify problems and offer solutions.

The SILICE project aimed to promote innovative thinking patterns in HEIs. This aim was promoted through three different routes: First, the establishment of new I&E centers, which are equipped with state-of-the-art technological devices and enable innovative teaching methods, imaging of problems and solutions, and more. The second route was training academic staff members as teachers of social I&E through workshops as well as the development of unique teaching and training materials, stored in the virtual library on the project's website (https://www.silice.org). The third route is the creation of a shared network of HEIs, regional stakeholders and national and international partners – a shared digital platform utilized to share knowledge, experience, contacts and ideas that can promote social entrepreneurship.

The establishment of I&E centers or SinnoLABs, raised questions concerning their position as part of the organizational structure, the links between academic departments and centers, funding and training. Each institution had to deal with these questions, which required significant attention and consideration throughout the project. Different institutions adopted or developed different solutions, according to their specific needs and circumstances. This booklet presents a number of different models for innovation hubs developed as part of the SILICE project. Chapters 1 and 2 describe the organizational structures of the innovation hubs at KIIT and LTJSS in India; Chapters 3-5 describe the organizational structure of both hubs operated in Tel-Hai College; KAMA center at Oranim – a unique model for an I&E center in a teacher's seminar, and Sapir College in southern Israel. In Chapter 6, we present findings about the significance of I&E courses and the activity of SinnoLABs from the perspective of staff members who teach in these new centers and who have been part of the project.

The booklet presents some of the progress achieved by the institutions as part of the project, but its key contribution is in presenting successful models for I&E centers in HEIs. We believe that the knowledge and experience accumulated during this project, which are summed up in this booklet, can help other HEIs that strive to establish their own innovation centers in finding the right model for them and facing the challenges of such an endeavor.

Innovation and Entrepreneurship – Academic and Practical Interventions as Non-Traditional Career Paths:

Chapter 1: KIIT-SinnoLAB – A Model for Integrating Entrepreneurship into the Academic Fiber of HEI

Dr. Surekha Routray, Head, Social Incubation and CSR

Innovation and entrepreneurship are assumed to be the key drivers to a growing national economy. They can enhance productivity, generate employment and kick-start economic activity by leveraging the untapped potential in several related and unrelated domains. Furthermore, some innovations may be related to tackling major societal challenges, such as nutrition, climate change, water, energy and resource scarcity, affordable health and ageing, which are becoming more critical by the day.

Innovations from universities play an important role in driving economic growth. While looking at the innovation ecosystem across India, we can see that over the past few years, Eastern India and particularly Odisha has undoubtedly become one of the leading hubs for scientific innovation in the country. Odisha is the home of a number of strong HEIs and premier R&D institutions, which are actively engaged in cutting-edge research in life sciences and other related fields: The Institute of Life Science, Utkal University, ICMR-Regional Institute of Medical Research Centre, Ravenshaw University, IISER-Berhampur, College of Pharmaceutical Sciences-Berhampur, National Institute of Technology-Rourkela, Indian Institute of Technology, Bhubaneswar and others. This concentration of leading institutions prompted many budding innovative start-ups to choose Odisha as a base for their ventures. At the same time, as part of the innovation ecosystem of our state, some very creative social ideas from the universities are being translated from labs to the market. The line between social services, social activity and social enterprises is still very blurred, leading to unique hurdles on the path to commercialization, market segmentation and investor exposure.

The education system in Odisha has been very traditional and is divided into different tiers (primary, secondary, college/bachelor's degree, university/master's degree, and

research/doctorate). The curriculum in HEIs is aimed at assisting the students in learning and preparing themselves for the labor market. While the public institutions generally use Oriya and Hindi, English is used in private institutions.

In recent years, education in Odisha has gone through a rapid transformation. Its capital city, Bhubaneswar, has emerged as a knowledge hub in India, with several new public and private universities, including the establishment of an Indian Institute of Technology. Odisha has fared reasonably well in terms of literacy rate. The overall literacy rate according to the 2011 census is 73.5%, which is marginally lower compared to the national average of 74.04%. There is a great influx of higher education students from the neighboring eastern and north-eastern states. The growing and more diversified student population created the need to look beyond the traditional employment opportunities that are available to the students upon the completion of their degrees.

Established in 1992 and opened five years later, KIIT University is, today, one of the most prestigious universities in India. Its commitment to teaching excellence led to its recognition as university under Section 3 of the University Grants Commission Act (1956) by the Indian Ministry of Human Resources Development in 2004, only seven years after its inception. KIIT is a relatively young institution, but it prizes excellence and ambition. The contributions of KIIT's faculty, students and alumni have been earning national and international recognition. It serves more than 27,000 students through its 28 schools, imparting globally recognized bachelor's, master's and doctoral degree programs in more than 100 disciplines, including engineering, medicine, management, biotechnology, law and more. Apart from global recognition and pedagogical excellence, the university provides the best possible academic and non-academic grooming and empowerment, which enable students to become global citizens and make an impact in the global workplace.

KIIT has placed much emphasis on creating enabling infrastructure and facilities for advanced research in diverse areas. It has set up a Center for Scientific Research with seed money of 1.2 million US$, the only private university in the country to establish such a center. KIIT has also established a state-of-the-art Central Advanced Research Centre (CARC) on 120,000 sq. ft. built up area for multidisciplinary research.

More than 18 centers of excellence have been established in collaboration with industrial players, including ISRO-KIIT Satellite Centre, NI Centre of Excellence, Interdisciplinary Research Centre in Materials and Nano Sciences and IOT Centre of Excellence.

In addition, specialized school-level laboratories, such as SKF-KIIT Advanced Reliability Centre, Green Engine Technology Centre, Thin Film Photovoltaic Lab, High Frequency Simulation & Fabrication lab, etc., greatly augment research activity at KIIT. They provide ideal platforms for conducting collaborative research and development work with several partnering agencies and institutions around the world .

Research accomplishments of the faculty and students demonstrate the positive impact of KIIT's focus on research and innovation. Faculty members of the university are actively involved in research and consultancy works, attracting financial support to the tune of a few million dollars every year. Faculty members and research scholars of the university have published more than 8,200 research papers in various national and international journals of repute. KIIT has set up an Innovation and Entrepreneurship Cell to provide technical knowledge and facilities for emerging technology-driven enterprises as well as research for producing cost-effective techniques. The Cell fosters entrepreneurship among students and assists budding entrepreneurs by providing them with necessary resources. In addition, a Centre for Industry Institutional Interface has been set up at KIIT University to devise strategies for the promotion of synergistic interface with industry. The Centre sensitizes the academia toward industry needs and organizes industry-academia shared events.

KIIT Technology Business Incubator

KIIT has been promoting innovation and start-up culture in the Eastern region of India through KIIT Technology Business Incubator (KIIT-TBI), which was established in 2009. The incubator is supported by the National Science & Technology Entrepreneurship Development Board (NSTEDB) at the Indian Department of Science & Technology. Through working with innovators, the incubator has been involved in the process of developing an entrepreneurial culture. KIIT has had a thrust on biotechnology and information & communication technology (ICT) and is now also focusing on other emerging areas in engineering, technology and rural innovations. KIIT-TBI accelerates the development of entrepreneurial businesses by providing them

with assistance, specifically adapted to the needs of new companies during their key stages of development, such as product characterization, prototyping, market development and continuous innovation.

The emergence of new infrastructures of social innovators, entrepreneurs and civil society and the dramatic shifts in the development landscape are all accelerated by new technologies and new financial models. The accelerator has promoted 126 enterprises in the area of engineering, biotechnology, IT, renewable energy and society. It has created more than 1,400 jobs and is currently expanding into the field of digital health. Recently, it has been recommended by the Department of Science and Technology as the Centre of Excellence in Digital Health. KIIT-TBI is one of the largest TBI in the country, with 120,000 sq. ft. of built up space. KIIT-TBI has received a national award for TBI of the year 2017 from President of India at Vigyan Bhawan in New Delhi, which is issued by the Department of Science and Technology.

In the past, the path of entrepreneurship was taken by most people after the completion of their formal education, often as a secondary choice rather than a primary one, and mostly not by the brightest people. The last few years, however, have seen a shift in the trend. People started moving toward entrepreneurship after a few years of corporate exposure. And yet, a lot of talent and brilliant ideas get lost due to lack of proper guidance and mentorship at the right timing. Very often, it was found that individuals with creative ideas could not develop their ideas and transform them into tangible realities because they were not aware of the support facilities available for them. This situation was more prevalent in cases of social entrepreneurship, since social issues are often regarded as the responsibility of the governments, NGOs or large corporations as part of their social responsibility. According to the prevailing norm, social entrepreneurship is not supposed to be profitable, and some even view it as contradicting the concept of a profitable business.

Social I&E – the SILICE project

Erasmus+ SILICE program came across as an excellent opportunity to expose today's youth to the avenues of social entrepreneurship and enable interested individuals to delve deeper into their ideas while pursuing their academic studies, thereby creating a time buffer. Students were also offered an access to essential elements of validating their ideas. The program created an opportunity to add value to the faculty, giving the

students impetus to interact with different national and international universities. They were also able to design different pedagogical tools that can be used to create an interest among the students and nurture ideas to become enterprises in the long run. The aim of KIIT University is to enable the students to integrate technology with social impact and come up with implementable, viable and scalable solutions. The university aims at providing a conducive environment and workspace to support and promote these students, so they can become the trendsetters in the social domain and create success stories which inspire motivation among many others in the coming years.

The SinnoLAB was set up within the Technology Business Incubator, with the aim of providing a more holistic approach to the infusion of interest in the social entrepreneurship domain and catering to students beyond the purview of the host institution of KIIT. The process flow of the activities at the SinnoLAB is:

Outreach (raising awareness):

Within the parent institution, the initial exposure of students to social entrepreneurship was provided in the form of a subject integrated into existing course curricula. The depth of the subject matter offered varied between courses, based on their definition as undergraduate or post-graduate, as well as management and non-management. Management students were offered a 30-hours, 4-credit-point curriculum, and non-management students were offered a 20-hours, 3-credit-point curriculum .

Social entrepreneurship modules were integrated into the year before graduation of the bachelor's or the master's degrees, in various programs, including BBA, MBA, Rural Management, BSc Biotech, MSc. Biotech, Computer Science, Electrical Engineering and Integrated M. Tech Biotech.

To raise interest and awareness in the social entrepreneurship sector beyond the walls of the institution, two-day workshops were held in peripheral institutions in collaboration with the local management. Several collaborated and stand-alone dissemination sessions were held within and outside the premises of campus to propagate social entrepreneurship and its importance in the sustainable development of today's ecosystem. Most of the workshops culminated with an idea pitching competition, where potential viable ideas were selected, and the students were offered an opportunity to refine their ideas further under the guidance of a specialized group of experts and mentors.

Active collaboration with student-led Entrepreneurship Cells (E-Cells) within most colleges and universities has also been instrumental in creating the wave of awareness and in igniting interest and curiosity in the young generation to explore this aspect of the entrepreneurship. The E-Cell of KIIT-TBI reached out to various departments to scout for students who are interested in becoming entrepreneurs. The scouting process was also be conducted in other colleges through their in-house E-Cells or with the assistance of the KIIT E-Cell.

Apart from the traditional method of reaching out to the youth, we also initiated business plan competitions and hackathons, searching for innovative ideas that can overcome challenges in a scalable, sustainable and profitable manner. These competitions inspired and motivated youth to take responsibility for contemporary social challenges and look for viable solutions that could be adapted by the society.

The results of these efforts were: (a) Awareness amongst a large pool of students regarding social entrepreneurship as an employment option, not just for oneself but also as a way for creating jobs for others; (b) Higher social awareness among youth; and (c) Mining of creative solutions for pertinent problems of the ecosystem, particularly concerning marginalized and disempowered social groups.

Capacity Building:

Students who expressed special interest, with a creative bent of mind and a passion to follow their dreams, were offered access to the SinnoLAB. The lab acted as a tinkering space for them under the guidance of expert mentors and tutors. Apart from providing a dedicated space to develop their ideas, the students got access to 3D printers so they could create dummy models and were nurtured through regular interactive sessions held by various subject-matter experts. The sessions were divided into two categories: (a) Sessions on business fundamentals – These business sessions were generic to all the students and included hands-on training/workshops on topics like designing a business plan, business model canvas, go-to market strategy, designer thinking etc. (b) Sessions on subject matters – These sessions were sector-specific (Foodtech, Agri Tech, Health Care, IOT, etc.) and were of a more technical nature. The technical sessions were designed to provide the students with insights that would enable them to explore the structural and commercial feasibility of their ideas. These sessions also gave them a bird eye view of the developments in the designated sector from s commercial and

research perspective. This way, they were offered a greater clarity in the thought process of the consumer trend at large and the financial standpoint for the unmet need that they were planning to fulfil.

In addition, students were offered patenting sessions – Protecting one's innovation is crucial, as very often, innovations are replicated before the original one is ready for launch and all the time, money and effort put in by the inventors go to waste. To protect one's idea, entrepreneurs must gain some basic knowledge about intellectual property and inventions' protection. To this end, KIIT University established an Intellectual Property Rights (IPR) Centre and a Patent Facilitation Committee (PFC) to enable and guide patent filing by university stakeholders and promote IPR culture on campus across all departments. The PFC drafted the proposed IPR policy for the university, which was then circulated among the faculty members, staff and scholars for feedback and suggestions before issuing the final version. In addition, The IPR Cell has been regularly conducting government funded IPR Awareness and Implementation programs/workshops to increase IPR awareness among researchers/innovators. The IPR Cell works in close association with the SinnoLAB to support and protect innovative ideas.

Finally, sessions on legal compliances were also offered – Setting up an enterprise has many challenges, and a clear understanding of the technicalities involved enables the aspiring entrepreneur to take more informed and balanced decisions.

The students also get access to the state-of-the-art technical labs at KIIT-Technology Business Incubator, where they can carry out relevant experiments. One of the greatest advantages of the SinnoLAB being nested within the technology business incubator is that aspiring entrepreneurs get an opportunity to interact with real entrepreneurs, who give them a practical insight into the entrepreneurial ecosystem. Interning with start-ups is another interesting option for young entrepreneurs to experience the achievements and challenges from close quarters and to better understand their own alignment towards setting up their own enterprises. The plethora of national and international collaborations is leveraged to connect entrepreneurs with promising ideas with the experts in their respective fields.

The accelerator offers a number of different structured, time bound programs aimed to meet predetermined goals while covering the major elements of creating a business.

The accelerator programs under the SinnoLAB umbrella were designed based on the central theme of the enterprises and the maturity level of the enterprises.

The maturity level of the enterprise is measured by an indicative matrix of the Idea Readiness Level (IRL), Technical Readiness Level (TRL) and Product Readiness Level (PRL). The entrepreneurs are mapped at the onset of the program and then at the completion of the program to measure the progress made by participating in the program and the inputs from the industry experts.

Accelerator programs are basically classified into sector specific and sector agnostic types, with sub-categories according to stage: Idea to Proof of Concept, and Concept and Proof of Concept to Prototype Development.

Two accelerator programs are conducted every year. Each accelerator program includes six extensive days of training in a bi-weekly schedule. Thirty shortlisted students are offered a 10-week course (6 theoretical + 4 practical) at KIIT SinnoLAB over the weekends. After completing the course, the students are assessed on the basis on the strength of their idea and its social impact. The shortlisted students are mentored through the design of their prototypes. The prototypes are validated based on the business viability and the top three prototypes are provided with incubation space and funding assistance with the hope of taking the enterprise to the next level.

The outcomes of these programs are: (a) Structured refinement of ideas; (b) Development of the idea and the entrepreneur (personal skill enhancement); (c) Mapping of structured and outcome based growth path; (d) Offering young entrepreneurs an access to an enabling ecosystem where they can validate ideas without the pressure of failure or the parental pressure of attaining financial stability; (e) Real time exposure to the entrepreneurial ecosystem.

Facilitating Funding Support

Funding is an essential part for the kick-start of any venture, and not all students have the familial background to enable to bootstrap their ventures. All graduates of the SinnoLAB are given an opportunity to apply for various seed funding programs, like NIDHI Prayas, BIG from BIRAC, MSME Seed Fund and CSR Grant Fund, fellowship

programs like NIDHI EIR Fellowship or SIIP Fellowship and accelerator programs like IM2 accelerator and BUILD accelerator, beyond the-in house accelerator programs that are implemented at KIIT-TBI. All students get a warm letter of recommendation, which increases their chances of being admitted.

The results include: (a) Tangible outcomes as ideas turn into enterprises; (b) Low cost solutions for addressing the concerns of the bottom of the pyramid; (c) Employment creation; (d) Translating innovations from lab to land; (e) Access to funding support.

The establishment of the local SinnoLAB plays an important role in the current ecosystem, as it can be instrumental in the process of fostering a climate of innovation. The KIIT anchor model has been designed to maximize our outreach while keeping the training pattern centered to maximize impact. The SinnoLAB is designed to be the single window solution provider for aspiring and budding entrepreneurs. Part of the activity of the SinnoLAB is focused on networking with local and rural communities, developing strategies and social ideas for new businesses.

SinnoLAB Organizational Structure

Core Committee

The core committee is a two-member committee consisting of the CEO of the KIIT-Technology Business Incubator and the Registrar of KIIT (deemed to be a university). The amalgamation of the two ecosystems of education and entrepreneurship at the committee level ensures that there is proper dissemination of the educative modules designed and greater mobilization of the faculty staff toward mentoring the students. The committee creates a better understanding of the value addition. This intervention contributes to the student population in terms of diverse exposure and character building.

SinnoLAB Head

The SinnoLAB head leads the Technology Business Incubator. He/she is instrumental in taking all strategic decisions and providing foresight and direction for the strategic growth of awareness regarding the facilities of the lab and the sustenance component of the unit.

SinnoLAB (Functional) Manager

The functional manager is responsible for curating all the programs that are being run under SILICE as well as management, monitoring and reviewing the students who are associated with the SinnoLAB through the various programs. The manager is also responsible for recruiting the relevant mentors and conducting regular Faculty Development Programs (FDP), which provide updated knowledge about the latest news in the social start-up sector.

SinnoLAB (Technical) Manager

The SinnoLAB technical manager is responsible for managing and monitoring of equipment procured as a part of the SILICE program, conducting regular check-ups and reviews of students' use of the equipment, ensuring correct use and maximum utilization. The technical manager also shares responsibility for the creation of the mentor profile.

Mentors

The mentors are veterans in their area of expertise or entrepreneurs who managed to overcome great challenges and have proven themselves to be successful. The mentors are all people who achieved something in life and want to give back to the community and help others reach what they have reached. They are market experts and practitioners, with rich experience in their respective fields, who come and talk to the aspiring entrepreneurs about contemporary social and environmental challenges and potential solutions. Mentors must have an empathetic view and a desire to solve problems, which will be transferred to and inspire the young minds in front of them.

Technical Facilitator

The technical facilitator is responsible for assisting the students in the creation of their prototypes and guiding them through the various phases of prototype until they are able to create an MVP (Minimum Viable Product). The facilitator helps the students to use the equipment; guides them regarding other requirements for the prototype design and gets them access to other labs in the incubator, like the PRAYAS lab or the Biotech LAB.

Brand Ambassadors

The SinnoLAB brand ambassadors are university students who were selected based on their attitude and aptitude to promote the community through the connections and

knowledge they have gained in the program. As brand ambassador, they encourage entrepreneurship among students and assist young entrepreneurs by providing them with necessary resources.

Brand ambassadors get out of the labs to be the feet on the street and reach out to the fellow students while inspiring future generations to become socially innovative entrepreneurs. The ambassadors, guided by SinnoLAB Managers, form relationships with existing socials enterprises, other educational institutions and stakeholders in the social domain. This way, they are able to provide in-depth understanding of the ecosystem to students who desire to venture onto this path. The brand ambassadors are able to offer guidance and wisdom through workshops or speed mentoring sessions.

Future funding

Funding of the project is essential to keep the program's momentum going, and a revenue model has been incorporated for that purpose. The accelerator programs are now being pitched to several foundations and large organizations for funding support. Access to the SinnoLAB facilities and the expert mentor pool will be monetized, albeit at a subsidized level. Collaboration with other universities and research institutes to support and promote viable ideas is another aspect that is being extensively explored. KIIT University maintains a symbiotic relationship with the industry with a vision of enhancing overall knowledge ecology and produce industry-ready professionals. The university has inducted representatives from various companies into the board of studies. Some of the participating companies are Godrej, Aries Agro Ltd., Wrig Nano systems, Hindalco Industries Ltd., BEMPU Health Pvt. Ltd, Mahanadi Coalfields Limited, Vedanta, etc.

Moreover, the university has also established academic initiatives with global leaders such as Microsoft IT Academy, Microsoft Ed-Vantage Platinum, Cisco Network Academy, D-Link Network Academy, Red Hat Academy, IBM Academic Initiative, VMware Academy, Oracle WDP, Adobe India academy, Microsoft Dynamic NAV Academy, Unisys Innovation Lab (UIL), Nokia Centre of Excellence, Siemens Center of Excellence, Dassault System Centre of Excellence, Ericsson Talent Building Program, Tech Mahindra IT IMS, IoT Centre of Excellence, etc. These connections will be used to encourage students' progress into the world of innovation.

To support such a knowledge center, various other international institutes and universities such as ETH, EAWAG, Heidelberg, Cleveland clinic, Universities of Florida and Pennsylvania of the US, NIFES and IMMT (formerly RRL, Bhubaneswar) are currently developing a network to create collaborative synergies of knowledge and co-creations. These collaborations will play key role in technology intervention, to create a product or service that can be marketable and scalable, leading to success stories that can serve as role models for generations to come.

Chapter 2: Social Innovation and Entrepreneurship Hub of LTJSS's PIET, Nagpur, India

Vivek Nanoti, Sadanand Deshpande, Rakesh Himte,

About LTJSS

Lokmanya Tilak Jankalyan Shikshan Sanstha (LTJSS) has been one of the most trusted and respected educational groups in central India for last 30 years. LTJSS runs six engineering colleges (Mumbai and Nagpur), one MBA college (Nagpur), two architecture colleges (Mumbai and Nagpur), two pharmacy institutes (diploma and degree, Nagpur), one polytechnic (Nagpur) and 17 other institutes /schools.

Undergraduate programs offered by LTJSS Society through our six engineering colleges include Civil Engineering, Mechanical Engineering, Electronics Engineering, Electronics & Telecommunication Engineering, Electronics & Communication Engineering, Electrical Engineering, Computer Technology, Computer Science & Engineering, Computer Engineering, Information Technology, Chemical Engineering, Biotechnology Engineering and Aeronautical Engineering.

Our post-graduate programs offer the following degrees: M.Tech. in Computer Science & Engineering; M.Tech. in Chemical Engineering; M.Tech. in Mechanical Engineering Design M.Tech in Industrial Drives & Control; M.Tech in VLSI, M.Tech in Communication Engineering, M.Tech in Wireless Communication & Computing, M.E. by Research in BioTechnology; M.E. by research in Computer Technology, M.E. by Research in Mechanical Engineering, M.E. by research in Electronics Engineering, M.E. by research in Electronics & Telecommunication Engineering; and M.E. by research in Electrical Engineering.

The Doctoral Programs offered by Sanstha: Ph.D. in Chemical Engineering, Ph.D. in Computer Science & Engineering, Ph.D. in Electronics Engineering; Ph.D. in Mechanical Engineering; Ph.D. in Electrical Engineering; Ph.D. in Mathematics, Ph.D. in Chemistry and Ph.D. in Physics.

LTJSS Society is still growing by leaps and bounds, striving to achieve further excellence in the field of education and research.

Vision of the Social Innovation Hub

To create a center for revolutionizing social services through social innovation and entrepreneurship among the local Indian community.

Our mission: We are committed to improving social programs and the processes promoted by passionate individuals.

Our objectives: The Social Innovation Lab (SinnoLAB) was set up to provide training, mentoring, guidance and facilities to novice entrepreneurs, where they can hone their ideas and combine humanistic knowledge with sustainable business practices.

The team at LTJSS' Priyadarshini Institute of Engineering and Technology, Nagpur, brings together an exceptionally talented group of interdisciplinary professionals – all dedicated to further the cause of social justice through social innovation. We also work closely with international organizations on research and consultancy projects in this sector.

At the SINNIOLAB, we promote new ideas, design prototypes, learn and share the techniques of solving complex social problems. The center is operated as a knowledge and experimentation hub and has been continuously supporting students who attempt to deal with tomorrow's challenges.

The goal of the SinnoLAB is to tackle complex societal challenges that require systematic changes. This new league of labs provides a structured process for approaching complicated challenges and a safe and creative environment, where entrepreneurs can experiment and prepare prototypes of radical innovations. The SinnoLAB further enables collaboration among multi-disciplinary teams and diverse stakeholders through a user-centered approach.

While the social issues may vary from project to project, the intention is always the same: to improve social programs and create a model for other non-profits organizations to follow. The SinnoLAB functions both as a tool for combating serious social issues and as an example of evidence-based community efforts.

Learning and Expected Outcome

- Creating and maintaining an accurate documentation of best practices, results, learning and impact of programs.
- Documenting strategic thinking, dashboard reports, status of innovation implementation and matters of partnership, leadership or management concerning the Iraq Lab.
- Enhancing students' ability to solve complex problems and exercise independent judgment.
- Improving students' ability to influence and liaise effectively with key stakeholders.
- Improving students' ability to work in a multi-cultural environment with a multi-national staff.
- Reinforcing students' commitment to principles and values.

Organizational Structure:

The role of the SinnoLAB is to define and implement innovation strategy, projects and methodologies that enable us to envision, develop and incubate innovative ideas. This includes collaborating on new product design, social business ideas and types of response programming, designing and leading research and other social innovative ideas.

The responsibility of the head of the SinnoLAB is to supervise the general activity of the team, arrange all documents and paperwork for the reports, manage the budget and prepare content for the entire project.

The responsibilities and roles of the managers are to form a 3-year work plan, prepare teachers for graduate studies abroad according to the program's timetable, organize intra-institutional seminars in order to disseminate knowledge to teachers and students, provide information to the college's management and work together to promote the SinnoLAB's goals, raise budgets for scholarships and maintain relationships with organizations outside the college, NGOs and others.

The physical infrastructure at the SinnoLAB includes a state-of-the-art equipment, including 3D printers and smartboards, which enable imaging and advanced experimentation of prototypes.

SinnoLAB Work Methods

Dr. Vivek Nanoti, as project manager, is responsible for the entire project. Dr. Sadanand Deshpande is responsible for knowledge transfer, as part of the Community Involvement Unit. Dr Rakesh Himte is responsible for the curricula of college courses and is involved in the curricula of the courses Change Policy and Community Work. Each of these courses includes a creative thinking training. Students are requested to offer innovative ideas for community activities or social initiatives both in the community and outside community, off campus. Each teacher selects four of the ideas to the SinnoLAB board. The SinnoLAB holds a competition and the winning projects are further developed to become successful projects.

Networking with Stakeholders

The basic objective of networking is to develop partnerships with a diverse range of stakeholders from various sectors, including technology, commerce, innovation, NGOs and government institutions. Networking also ensures effective partnerships, which bring in staff capacity and support from a range of public and private organizations to promote new types of thinking and implementation of quality programs. The SinnoLAB activity brings together internal and external stakeholders and experts in various fields for the shared effort of promoting innovation.

Events and Activities

1. National level Idea Contest, 08/02/2018, PIET: Ideas were invited about social innovation from the students (within and outside institution).
2. Training on ICT to local farmers, 27/03/2018, Kalmeshwar (50KM from Nagpur): Training was imparted to local farmers about ICT and innovative product related to agriculture. Local farmers learned how to use ICT.
3. Visit to Mahatma Gandhi Institute of Rural Industrialization (MGIRI) and Center of Science for Villages, 27/03/2018, Wardha (60KM from Nagpur): Interaction and collaboration with Mahatma Gandhi Institute of Rural Industrialization (MGIRI) and Center of Science for Villages in social innovation. PIET, MGIRI and CSV are ready to collaboratively work on some specific social innovations.
4. Agro Exhibition, 29/03/2018, Telkamthi, Saoner (65KM from Nagpur): Demonstration of multipurpose agriculture machine, designed and

developed by students of PIET for local farmers. The machine was appreciated by all. The machine is identified as useful product for farmers.

5. Infrastructure identification to setup SinnoLAB, 14-20/03/2018, PIET Campus: Space was identified.
6. SinnoLAB infrastructure setup, 21-31/03/2018, PIET Campus: Layout, furnishing and ambience of the SinnoLAB. Infrastructural requirement of the SinnoLAB were completed.
7. Procurement of SinnoLAB equipment, 02/04-15/05/2018, PIET Campus: Identification of equipment, quotations, seeking approval from coordinator.
8. Purchase and setup of SinnoLAB Equipment, 16/05-15/06/2018, PIET Campus: Preparation and issue of purchase orders for SinnoLAB equipment, Demonstration and installation of SinnoLAB equipment.
9. Training and mentoring activity: on creativity, ideation, social innovation, social entrepreneurship, business plan, idea to product, environment and sustainability, 02/07/2018-until the end of the project, PIET Campus: All participants go through different training modules in social innovation and social entrepreneurship.
10. Identification of sustainable products, until the end of project: Identification of products and their sustainability.
11. Project review, 15/10/2016-unil the end of project: Progress of the project was reviewed stage by stage.

Chapter 3: The Entrepreneurship Space: A pedagogical approach to Social Entrepreneurship

Oranim Academic College of Education's SinnoLAB model

Dr. Nirit Koren-Lawrence – community building consultant

Danny Aboody – Head, KAMA Entrepreneurship Space

Abstract

Oranim College's SinnoLAB is called "The Entrepreneurship Space". This name represents our perception and vision, which is to create a culture of entrepreneurship, in order to create a strong and resilient society. Being a college for education, we aim to promote social engagement, as we believe it contributes to the enhancement of values such as empathy, solidarity, entrepreneurship and social responsibility – all part of our contribution, as an academic institution, to the promotion of a strong and thriving society. We view social entrepreneurship as a pedagogical approach in the process of educating, training and preparing future generations for our fast-changing world.

The Entrepreneurship Space is part of CLI – Community, Leadership and Inspiration Center (KAMA in Hebrew). CLI is a non-academic unit at Oranim College, which seeks to connect people, organizations and projects both inside and outside the institution. CLI offers various programs, professional courses and centers, which combine academic and professional knowledge .

Our goals at the Entrepreneurship Space are: creating a community of entrepreneurs; developing partnerships; promoting an entrepreneurship culture within the college and outside (an ecosystem). To achieve these goals, we act in three main fields: academia, community and partnerships.

Introduction

Oranim College of Education is the largest and leading academic college of education in the North of Israel, catering to thousands of students enrolled in bachelor's and master's degree programs in education, teaching certification courses and advanced career training.

The college is located 20 minutes east of Haifa and is named after the pine trees that grow on the premises. Oranim College is committed to academic excellence, community involvement and the promotion of higher education. Oranim boasts a broad range of programs and degrees, as well as a diverse student body, with Jewish and Arab students of all ages, ethnicities, religions and socio-economic backgrounds.

Oranim Academic College of Education is home for people who see education as their mission. It is a community of thinkers and practitioners who work diligently in the field of education, building Israel as a fair, egalitarian and just society – in the spirit of Israel's Declaration of Independence .

Oranim's mission is to shape Israeli society and to improve the quality of life in Israel by training educators who are leaders in their communities. Oranim offers educators guidance and support through a wide network of connections between communities. Oranim strives to serve as a national and international center of knowledge, inquiry, and discussion, developing innovative educational ideas and methods. Through dialogue and ongoing mutual relationships, Oranim seeks to strengthen the sense of connection between the diverse cultures in Israel, and between Israel and the Jewish world, as well as the world at large.

Our SinnoLAB at Oranim College is called "The Entrepreneurship Space". This name represents our perception and vision, which is to create a culture of entrepreneurship, in order to create a strong and resilient society. We aim to promote social engagement, as we believe it contributes to the enhancement of values such as empathy, solidarity, entrepreneurship and social responsibility. All of which is part of our mission and responsibility in creating a strong and thriving society.

In a world of instability and uncertainty, one strives for a sense of security and stability in order to feel more confidence and self-efficacy. These things can be better achieved in a strong community, which gives the individual and society the ability to identify with and belong to a bigger entity. In order to do that, one has to have the ability to influence and shape his/her quality of life and well-being (Woodcraft et.al 2012; Ben-Yosef 2014) .

Oranim's vision and mission are aligned with the definition of Black & Hughes (2001) for a strong community. They state that a strong community is measured by "…The extent to which all resources and processes within a community maintain and enhance

both individual and collective wellbeing, in ways consistent with principles of equity, comprehensiveness, participation, self-reliance and social responsibility." (Black & Hughes 2001: 30). Thus, that in order for a community (or a wider society) to be strong and sustainable (for the long run), members need to be able to have access to the different resources and be active in achieving their well-being. All this, without preventing others in their community to do so. One of the best ways to do that is by Social Entrepreneurship (SE). Various researches have shown that social enterprises and initiatives can significantly contribute to community and society in many aspects – social, economic, environmental, educational etc. (Zahra et al. 2009; Howorth, Smith, & Parkinson 2012; Wallace 1999). This is mainly because social entrepreneurship enables individuals and groups to become socially engaged where they live. In doing so, they feel significant; they get the opportunity to take responsibility of their life and environment, shape it as they want and influence it. This ability is one of the most important characteristics and roles of an ideal society (Bar 2015; Nidal-Shimoni 2007, Shadmi-Wartman 2010).

Fundamentally, social entrepreneurship is an action meant to help people (Yunus, Moingeon & Lehmann-Ortega, 2010). It can be seen in social organizations, social innovation and social businesses (Gemak & Robinson 2014). It requires the identification of social challenges and the use of entrepreneurship principals in order to create, develop and manage actions, effectively creating a social change (Dees 1998).

For people and societies to be able to do that, it is necessary to train and educate people who will be able to promote, teach and execute social entrepreneurship. At the same time, it is equally important to design and create the proper environment, norms and atmosphere that can encourage people to do so. A place where people think and act with the will and aspiration to create a better society for themselves and their surroundings.

In light of the above, social entrepreneurship is a pedagogical approach used in the process of training and professional growth of teachers and educators of future generations. We believe that the skills, principals and approach of social entrepreneurship are key for everyone who is a part of modern society – in the present and in the future. Therefore, social entrepreneurship is a pedagogical tool or approach, as well as a way of educating, training and preparing young people for their adult life.

The Vision for the Entrepreneurship Space

The Entrepreneurship Space is part of CLI - Community, Leadership and Inspiration Center (KAMA in Hebrew). CLI is the extra-academic part of Oranim, which works to promote Oranim's mission. It is a non-academic unit, which seeks to connect people, organizations and projects both inside and outside the institution. CLI is a multi-dimensional space for social and educational entrepreneurship, which serves as a platform that encourages initiatives for social change, and is a source of inspiration, knowledge and infrastructure for social innovators and entrepreneurs who lead social changes among students, staff, community and Israeli society as a whole .

The CLI Center operates programs, professional courses and centers that were developed at Oranim using academic and professional knowledge in various fields: education and pedagogy, social challenges & community building, professional development for teachers and second careers, social entrepreneurship and many more .

Oranim College is located at the northern part of Israel, close to remote and peripheral areas (both geographically and socio-economically). Despite the desperate need of a local center that can encourage and guide social entrepreneurship, there was none in the region until about two years ago. The area also lacks a social entrepreneurship ecosystem, which might promote a joint agenda of all incubators, organizations and different centers engaged in this field of interest .

CLI at Oranim College is the ideal location for such an ecosystem to be established, as it has many opportunities and advantage, such as:

- A combination of academics and applied work.
- Peripheral location, but not too far from the center of Israel.
- Multiple interactions and relations with educational (formal and informal) and social stakeholders.
- Commitment to social change – in academic programs, research and professional actions.
- International academic joint projects in social entrepreneurship development (SILICE) .
- Multi-cultural institution: Jews-Arabs; seculars-ultra-orthodox.

At the Entrepreneurship Space, we believe that a culture of entrepreneurship requires a community of entrepreneurs, with strong connections, group empowerment and deep personal commitment. We emphasize the sense of belonging to the group and to the connections to other members, beyond the utilitarian networking. Hence, we focus on the entrepreneurs rather than the projects, trying to develop and advance each individual. We develop leadership skills, personal and professional identity and tools of understanding people, society and change. All of those will enable the creation of a culture and a joint language, which will enrich those who are a part of it .

The goals of the Entrepreneurship Space:

- To build a community of entrepreneurs: An active group of entrepreneurs who meet on regular basis for mutual learning, support and networking
- To develop partnerships: Creating sustainable connections with stakeholders in and outside of the institution, which can promote the ecosystem .
- To create a culture of entrepreneurship within and outside of the college: Social entrepreneurship as a pedagogical approach in the training of students, and a place for social entrepreneurship organizations and people.

The Organizational Structure and Model

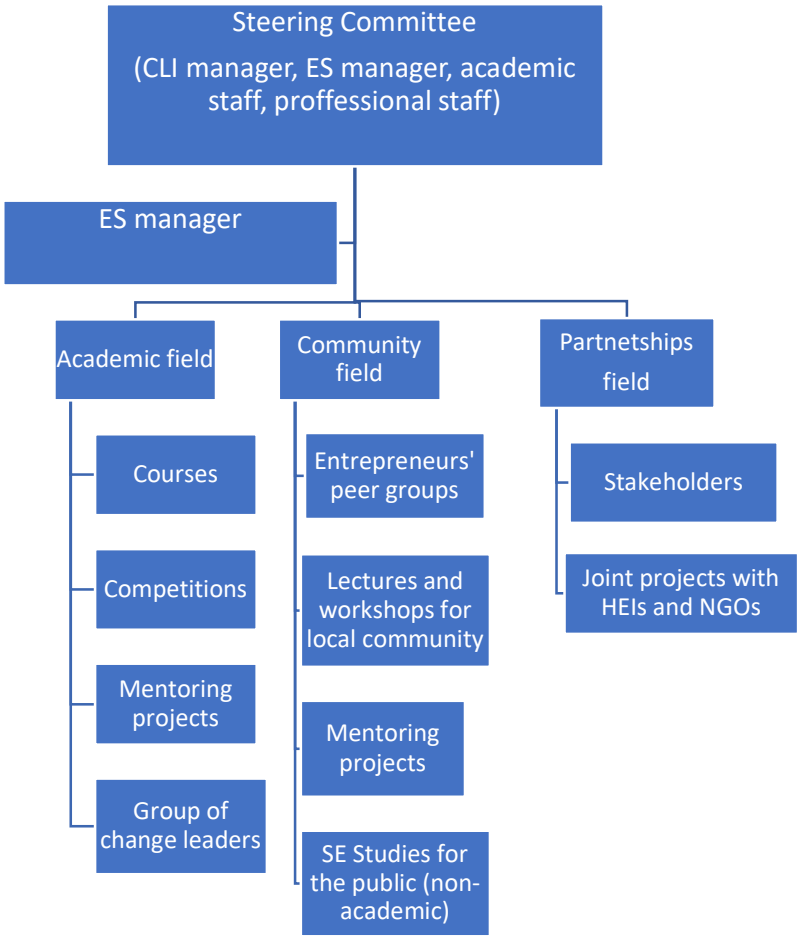
The Entrepreneurship Space is one of a number of CLI programs. It is physically located at one of the office spaces of CLI. The Entrepreneurship Space includes an open-space area with working stations, a large conference room for workshops and group meetings, and two small meeting rooms. It is also used by other CLI programs during the day, so the space is constantly buzzing with people and activity.

The organizational structure consists of a steering committee, which acts as a board of directors. The steering committee meets on a quarterly basis, gets a report about the activities of the Entrepreneurship Space and discusses future directions and current challenges facing the projects. The steering committee includes 4-6 people: CLI manager, Entrepreneurship Space manager, one or two faculty members, one or two administrative staff members, and a representative from the local community.

The Entrepreneurship Space is headed by the manager (80% position), who is the only payed role at the Entrepreneurship Space. Most of the activities (lectures, workshops, events, networking meetings) are either prepaid by participants, or offered voluntarily by Oranim staff or mentors and friends of the Entrepreneurship Space. The manager is

in charge of all activities of the Entrepreneurship Space, including follow-up with the entrepreneurs, mentors, assignment, stakeholders matching for partnerships or initiatives, resource recruitment, etc. Structure is presented in Figure 1.

Figure 1: Organizational structure of Oranim Entrepreneurship Space



The Entrepreneurship Space is active in three fields, all relevant to our goals: Academia, community and partnerships.

Connections with the College and with other Departments

Over the two years of the Entrepreneurs Space's activity, connections and relationship were formed with many academic and non-academic units at Oranim College.

Faculty members from the departments of Education, Social & Humanities, Science and Advanced Studies are part of our mentor pool. Many of them also use and teach social entrepreneurship skills and theory in various courses. We also have an academic representative at the steering committee of the Entrepreneurs Space.

CLI manager reports regularly to the Oranim board (president, academic rector and CEO), which enables us to inform and present our activities. Although the Entrepreneurship Space is considered a non-academic unit at Oranim, it is a significant part of the college, as it promotes some of the most important parts of Oranim's mission and vision.

As a non-academic unit that uses academic tools and knowledge, we are able to work alongside both academic and administrative staff, and thus connect people within the institution, who otherwise would not meet. We found that many people, although working at the same institution for many years, do not know each other. Through our activities, many new connections were made. The actions taken to promote social entrepreneurship culture in our college bring a spirit of change.

Cooperation with Stakeholders

As part of our effort to create a culture of social entrepreneurship and in order to achieve sustainability, we reached out to different stakeholders from the public, private and non-profit sectors. Some connections were made in order to build a wide forum for social entrepreneurship; others we made to try and promote a social entrepreneurship ecosystem, and some were approached in order to plan a joint initiative. Table 1 below summarizes the contacts made so far.

Table 1: Stakeholder relations at Oranim College

Sector	Name of Organization	
NGO	Shines	
Government/Local Authority	Tirat Karmel Youg-Adult Center	Forum for social entrepreneurship organizations
Business	Open valley	
NGO	Anu	
Government/Local Authority	Hubtipus (Hub for SE)	
NGO	Ashoka Isreal	Ecosystem of hubs
NGO	JDC Israel – The American Jewish Joint Distribution Committee	

NGO-Government	Zionut 2000	
NGO	World Zionist Organization – Dep. of Education	Social Entrepreneurship Training course
Government	Emek-Yizreel Regional Municipality – Dep. of Social Services	
Government	Zvulun Regional Municipality – Dep. of Volunteers	
NGO	HeHalutz	Joint initiative
NGO - Government	MindCet	

The Unique and Innovative Aspects of our Model

The uniqueness of our model is based on our vision and mission in striving for a fair, egalitarian, and just society, where values such as empathy, solidarity, entrepreneurship and social responsibility are implemented. From this vision, our focus is society and people rather than projects or ideas. We believe that social entrepreneurship is a crucial component in creating a strong and sustainable society. Yet, to maximize its effect, initiatives must be part of a whole social entrepreneurship culture, where people are not alone in their ideas and actions, but are part of a community and an ecosystem, which can support and promote them .

Another unique aspect of our model, which is also inspired by Oranim's mission, is our view of social entrepreneurship a pedagogical approach and a way to educate and shape current and future generations. Social entrepreneurship is not just a way of coping with social problems or challenges; it is a whole set of tools, skills and state of mind, which are crucial for our ability to face future challenges.

Innovative ideas and projects have been used in the educational system, but not from a social point of view, and not as a pedagogical approach. Our model brings a more holistic and wide approach to social entrepreneurship.

Reference List

Bar, R. (2015). Between theory and practice: multi-sectorial volunteering initiative for the promotion of volunteering and social participation in the collective-Impact approach. *Et HaSade 15*. Pp. 98 – 109 (Hebrew)

Dees, J. G. (1998). The meaning of social entrepreneurship.

Howorth, C., Smith, S. M., & Parkinson, C. (2012). Social learning and social entrepreneurship education. *Academy of Management Learning & Education*, *11*(3), 371-389.

Nidal-Shimoni, B. (2007). *Encouraging the involvement of citizens and volunteering. Volunteer management manual in NGOs and the voluntary frameworks in Israel*. Community Centers Association, community centers Israel Ltd. (Hebrew)

Shadmi-Wartman, S. (2010). Community Building process: description, principals and actions. In: Shdemot – Center for Community Building. *Together for a change: Community building – developing social capital as a base for renewed sense of community*. Pp. 42 – 52. Tel Aviv: Community Social Services

Wallace, S. L. (1999). Social entrepreneurship: The role of social purpose enterprises in facilitating community economic development. *Journal of developmental entrepreneurship*, *4*(2), 153.

Yunus, M., Moingeon, B., & Lehmann-Ortega, L. (2010). Building social business models: Lessons from the Grameen experience. *Long range planning*, *43*(2-3), 308-325.

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of business venturing*, *24*(5), 519-532.

Chapter 4: From Entrepreneurship Courses to a Regional Innovation and Entrepreneurship Center: A Model for Innovation and Entrepreneurship Center at Tel Hai Academic College

Tel Hai Innovation Center Team

Tel Hai Academic College

Religion, ethnicity, sector, and socio-economic class all affect the structure of Israeli society (Spilerman & Habib,1976; Ben-Ari & Bilu, 1987; Peled, 1990). During the early years of Israel, immigrants were sent to live in over 30 towns, most of them located away of the big cities, based on a population distribution policy. The small towns established in a haste, with no economic planning or suitable employment sources, created a reality of economic and social gaps between central Israel and its geographic periphery. While native Israelis tended to settle in the big cities, the small towns were settled mainly by immigrants (Barlow & Tietze, 2001; Yiftachel, 1997). These town, which were called "development towns", were geographically isolated, economically underdeveloped and characterized by low-level employment opportunities, with more low-tech production lines and less development and innovation. These employment patterns further added to the reality of socio-economic gaps, including lifestyle and accessibility of higher education.

Tel Hai Academic College was established during the 1980s as part of the Israeli reform in higher education. A large number of regional colleges were established as part of this reform, and their main focus was teacher training and BA studies, designed to increase the accessibility of higher education to populations that had been excluded until then. The new colleges were located in and around development towns, and budgets were allocated to allow youth, including locals from those towns, many of them first-generation in higher education, to fit into better jobs and improve their chances of economic and social mobility (Ayalon & Yogev, 2005; Katz-Gerro & Yaish, 2003). Beyond the students themselves, the colleges were also meant to develop and nurture the local populations in these peripheral regions. Staff and students' engagement in the

community and the incorporation of service-learning courses became a trademark of regional colleges. The colleges became anchors of employment, innovation and knowledge that are proactively diffused to the surrounding region, thus contributing to its development (Katz-Gerro & Yaish, 2003; Shavit et al, 2007). Many regional colleges established designated units for community engagement, volunteering projects and integration of students and staff in the college's surrounding neighborhoods, proactively increasing the local resources and social capital .

Tel Hai Academic College is located around three development towns (the largest of them is Kiryat Shemona), around Israel's northern border, which is under constant military threat from Lebanese and Syrian forces. This location and circumstances pose many challenges, such as the distance from central Israel, limited employment opportunities and low level of economic development, which is reflected in the socio-economic level of many of the local communities. Tel Hai College is also located between the Sea of Galilee, at -200 meters below sea level, and the Hermon Mountain, the highest mountain in Israel at more than 2,000 meters above sea level. This diversified environment offers a large variety of landscapes, habitats, land types, climates and agricultural styles. Those natural assets served as foundation for the development of many college departments, like agriculture, environmental studies, and food-tech, in addition to technological departments, like computer science. The school of social science includes departments of economy and management, education and human resources, psychology and social work. The engagement of the academic college in its surrounding neighborhood is reflected in the development of research labs in the city and around it, various community engagement projects, and the incorporation of training students in welfare and education departments as well as in schools and kindergartens across the region .

Over the years, we have come to the understanding that social projects are dependent on donors and NGOs, i.e., they are dependent on external funding resources (Payes, 2005). These dependency on external resources allowed some projects to be developed but was also the reason for the cancelation of successful projects, when funding was stopped (Steinberg, 2006). Philanthropic funds tend to change their focus and funding policies, and the ability of local officials to affect these policies is limited, turning the dependency on external funding into a major issue. This reality was the initial motivation for the college to enter the SILICE project. Our first objective was to learn

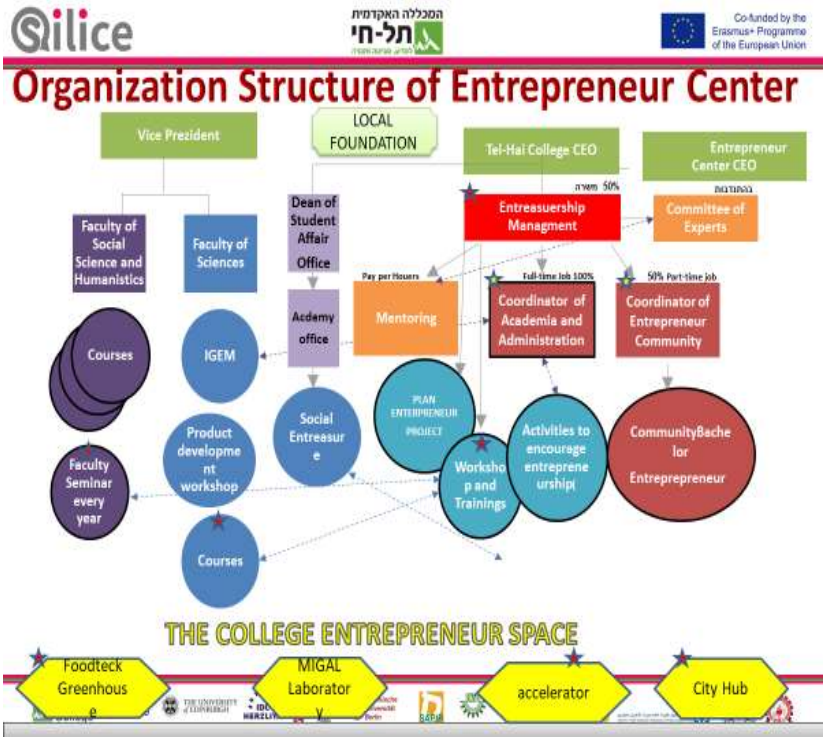
how to identify problems, develop various projects, and construct them in such a way that will allow them to operate independently based on long-term financial planning.

Additionally, higher education in Israel and around the globe must deal with the reality of capitalist-liberal economy. As part of this economy, the state takes less responsibility for employment and industrial facilities; accelerated privatization processes lead, among other things, to the development of small businesses and entrepreneurship. The share of small businesses in the national and global economy is constantly on the rise. Many studies suggest that academic institutions behave according to the patterns of liberal economy in terms of employment, external measures, marketing and adaptation of the departments and courses to this reality, which results in an intensive competition between the different institutions (Giroux, 2002; Kandiko, 2010). Hence, in recent years, there has been a discussion about the essence of higher education. Should academic studies be focused on knowledge and education, or rather on equipping graduates with the skills and tools that will allow them to successfully integrate into the labor market, develop a career and achieve financial success? Another question refers to the nature of skills and tools that must be given to graduates to improve their chances of successfully integrating into the future labor market. The discussion about the optimal "toolbox" for a future citizen is one of the key questions in academia today. This discussion refers both to the humanistic, ideological foundation of an educated citizens, and the practical tools in terms of financial management, creative thinking and problem-solving skills. Other discussions refer to teaching and learning practices and their adaptation to the life skills required of future graduates.

The Entrepreneurship and Innovation Development Center was born as a result of these discussions. The center is designed to help the students gain skills and tools of creative thinking, innovative and creative problem solving, innovative thinking and project management, and experiment with these tools throughout their studies, while getting one-on-one guidance and mentoring by expert teachers and staff. A steering committee for an innovation center was established around 18 months ago, and decided to join the SILICE ERASMUS + program, which was marked as an excellent opportunity to increase and intensify the training of staff members and develop pedagogic tools for the benefit of all stakeholders.

The Innovation Center strives to bring together the academic knowledge acquired during the school year and curricula of the different departments as well as the expertise and tools that can develop creative thinking and entrepreneurial spirit among students, teachers, staff and residents. The center strives to pool resources of knowledge, experience, funds and partners for the benefit of potential entrepreneurs. Hence, the center is part of the vision of Tel Hai Academic College as a center for the development of social and academic excellence, which can significantly contribute to the regional development. The center will contribute to the establishment of a significant entrepreneurial eco-system, combining technology, society, science and applied research according to the regional trends and needs. It aims to mobilize young, vibrant audience, inspire innovation and boldness, and affect the future of the region and the college in terms of survival, sustainability, cutting-edge science and demographic and economic growth. This eco-system will increase the accessibility of tools and services for the development of innovation in the geographic periphery, creating a diverse, valuable employment diversity.

Figure 1: Tel-Hai Innovation Center – Organizational Structure



Organizational Structure

The Innovation and Entrepreneurship Center is based three legs:

An academic leg: The center will offer entrepreneurship academic courses to be integrated in the curricula of the different departments: Food Science, Computer Science, Economy and Management, Education, Environmental Studies, and more. Additionally, the center will offer multidisciplinary courses, such as: entrepreneurship, creative thinking development, creative problem solving. These courses will focus on problem identification, creative problem solving, and project planning. Students will also be able to sign up for courses about budget management, team management, marketing, fundraising and more. These courses will be offered to 2nd and 3rd year undergraduate students. They will be incorporated into the curricula, and every student will get the option to sign up.

A business consulting leg – the accelerator: A business support system offered to students. This leg will be based on a pool of experts in fields like economic consulting, business consulting, stakeholder and investor relations, and experienced entrepreneurs. The business consulting leg will offer short-term professional trainings, one-day workshops and meetups with professionals. The accelerator services will be tailor-made according to the needs of students with a vision, including mentoring by college staff members and external experts, helping to promote their specific projects and ideas.

A financial leg: The center and accelerator will establish an investment fund based on donations in collaboration between the college and external entities. The fund will offer loans for the development of viable projects, in the form of long-term scholarships. The students will be required to pay back the scholarship plus a certain percentage of their profits for a number of years. This way, the fund will be able to operate independently and continue to invest in projects in the long run.

Roles, Departments and Responsibilities:

In the college's organizational scheme, the Innovation Center is located at the interface between the CEO, who is responsible for the administrative and semi-academic aspects, and the Vice President, who is in charge of academia issues. The center operates under the Dean of Students' office, the Career Development Center, and the Economy and Management Department. The center's position between the Dean of Students office and the Career Development Center makes it part of the sphere that is focused on the

student's future. The connection between the Dean of Students, the CEO and the Vice President points out to the Center's powerful position at the forefront of the college's future development, guaranteeing practical discussions and resource allocation that will allow its future development.

The Center's organizational structure is based on the three legs described here, which operate simultaneously, with internal coordination between them.

Board of Directors: Includes two of the college's senior management members – the CEO and the Vice President – each responsible for their respective fields, as well as representative of the scholarship fund, the center's director and the Dean of Students. The board of directors operates under the college's board of directors.

The College's CEO is in charge of the Scholarship Fund – together with the center director and an external donor. Their role is to raise funds and resources, spread the word about the fund and manage its operation through meetings, periodical reports, follow-up on loans and payments.

The Center's Chairman is in charge of connecting the intra-college structure to external facilities. The Chairmen works under and alongside the College's CEO. He/she is in charge of forming strategic connections and promoting regional collaborations with research institutions, independent experts and so on. The Chairman is the public's representative. He/she represents the center in the Board of Directors and the Board of Trustees.

The Center's Director is in charge of the administrative aspects. His/her job is to promote entrepreneurship and organize related events: Hackathons and competitions. The Director oversee three other positions:

Community coordinator: in charge of connecting the innovation center with the local community through various activities like courses and professional trainings, communal initiatives and various other forms of collaboration. He/she is also in charge of forming an active community of graduates in the region and beyond it, which supports further entrepreneurship.

Academic activity coordinator: in charge of the connections between the academic courses, teachers, staff and the center itself. He/she is in charge of organizing internal

competitions, diffusing knowledge and raising awareness to innovative, entrepreneurial thinking, thus mobilizing students and staff to operate as part of the center.

Mentor pool: a pool of professional mentors, some of them volunteers and others are freelancers. The mentors will oversee reviewing project proposals, providing professional help through the preparation for presentation in a competition or in front of the scholarship committee, and later offering professional mentoring in the preparation of a project file for potential investors.

Dean of Students office: in charge of organizing social-entrepreneurial activity, social projects and social-communal development initiatives. The Dean of Students' office operates alongside the business entrepreneurship branch. It will make use of the various resources offered by the entrepreneurship center and take an active part in spreading the word about innovative thinking and problem solving among students and stakeholders from the surrounding region. The Dean of Students' office will use resources from NGOs and social and communal funds to promote social entrepreneurship and projects in the nearby communities.

The academic leg is under the Vice President, which will head the efforts to promote entrepreneurial thinking among the students through academic courses.

Entrepreneurship courses are currently offered by several college departments; these courses are held at a small scale and offer fundamental concepts with the aim of promoting entrepreneurial thinking and know-how. The academic leg will initiate additional courses for entrepreneurship and innovation in each of the schools. Those courses will be advanced courses, offered to students who had already taken the basic courses. Hence, for example, at the Science School, the business entrepreneurship course will focus on new technologies, food-tech, future food, environmental and sustainability initiatives, as well as a product-development course. At the Social Science and Humanities School, the course will focus on social and financial entrepreneurship. The center will facilitate meetings among the entrepreneurship teachers from different schools, monitor contents, and promote a shared vision and its implementation as part of the general curriculum.

Courses by School Year

Second year – Entrepreneurship courses in each of the faculties: entrepreneurship and creative thinking, creativity. Innovation and entrepreneurship – 2 credits, all-college

course. The course will provide tools for the development of creativity, innovation and soft management skills that are required from a team leader.

A course about tracing needs and defining problems by the community will be taught by an expert from the Social Work School – 4 credits. The course will combine theoretical contents with various practical tools for tracing, defining and conceptualizing social issues as part of a community-involving process. This course offers a unique approach of incorporating community structure and community development methods in the center's activity. It will be offered to students and external stakeholders, with the hope of creating shared networks, mutual learning and joint ventures.

Third year – an array of project courses will be constructed for the different departments. The courses will be constructed based on the students' needs: The Science School will have a research project in biotechnology / agricultural biotechnology / IGEM, as well as in Environmental Studies; the Food-tech department will offer a product development workshop; the Computer Science Department will offer a cellular system programing workshop or a final project; the Social Science Department will offer a 6-credit course for the development of entrepreneurial projects for students from the different departments.

Third year students will also be offered an annual practical entrepreneurship workshop, during the evening. The workshop will include around 40 participants alongside the course/final project/final assignment as part of their degree. A student in the program will get academic guidance as well as practical mentoring.

Target population: entrepreneurship-focused students, students who are interested in presenting a proposal to the innovation center, local residents. Students who take the basic entrepreneurship course on their second year will be able to apply for the college's "entrepreneurship mentoring program" and win scholarships to develop their projects.

Additionally, the center will hold extra-academic training as part of its external training unit: An advanced entrepreneurship course that combines theories and practical tools for entrepreneurial development. The course will be taught by the extra-academic unit. It will include day trips, meetings with entrepreneurs, guest lectures and short-term trainings focused on various skills like marketing, digital marketing, budgets, networking, fundraising, team-work and soft management tools. These trainings will

be offered to students, staff, and local stakeholders. Interested parties will be able to sign up for a mailing list and get information about future events throughout the year.

Other on-campus activities: an annual college hackathon (in collaboration with MAOF, regional youth centers and regional municipalities), a regional academic entrepreneurship conference (in collaboration with MAOF, regional youth centers and regional municipalities) and competitions. Entrepreneurship month, and a mentoring program for young entrepreneurs. Short-term workshops for students and other stakeholders. Themed professional trainings, guest lectures: experts in various fields and inspirational speakers, up to 50,000 ILS per project. Assisting in connection to additional support services as part of the funding. Together with regional entrepreneurship agencies. Meetups, conferences and brainstorming sessions. These activities have been taking place for the last two years through the SILICE project, and they will continue to be organized via the new center, as part of the annual work plan.

The Student's Process through their Degree:

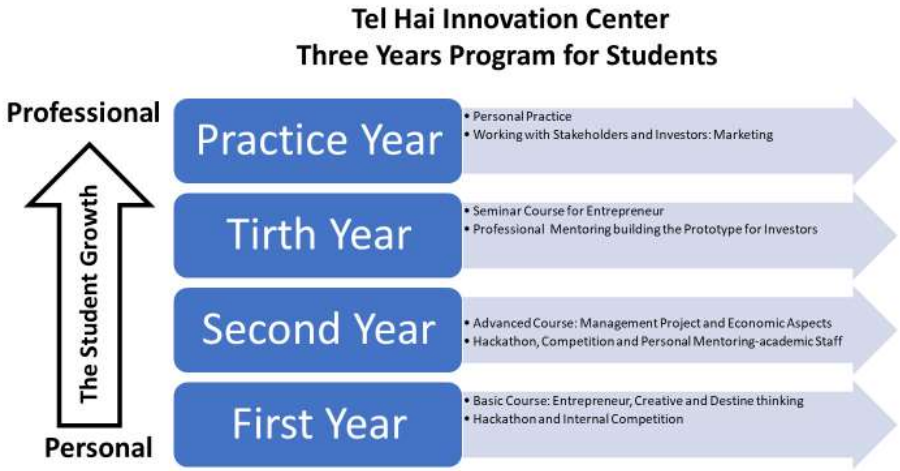
First year: Preliminary exposure – hackathons, competitions and exposure to the innovation and entrepreneurship-related concepts.

Second year: Basic entrepreneurship course. The students will experience problem tracing and defining, challenge conceptualization and creative problem solving.

Third year: In-depth learning. Designated project courses according to the different departments, which focus on product and solution development, with outside lecturers and content experts.

Graduates: Entrepreneurship club – a program offering mentoring and support for projects in collaboration with external entities and the alumni club. The entrepreneurship club will be offered to graduates who want to continue and develop their ideas and projects after their graduation.

Figure 2: A student's path



Connections with Extra-Collegial Institutions

The center strives to create connections with external entities, governmental as well as private, which are involved in technological development, applied research and local human resources development. These collaborations will help in instilling the entrepreneurial and innovative thinking in the academia and in the surrounding area, pooling expertise and knowledge resources, and raising other external funding. The entrepreneurship infrastructure in the surrounding area will be promoted through four entities: Kiryat Shemona Hub, which is currently under construction with the help of governmental grants; MIGAL – the center for applied research in the Galilee which focuses on agricultural, medicine and food studies, and promote new products in these industries. Both centers will collaborate with the center through connections with the staff and students that are employed in them. Kiryat Shemona Accelerator and MAOF – two entities that are in charge of raising and pooling human and financial resources. These agencies will keep in touch with the college and coordinate contents, courses and meetups, while also helping in resource pooling concerning mentoring, support and guidance and connections between entrepreneurs and content experts who can help them promote their projects. The connections with these agencies are crucial for the center's success, and connections will be fortified by incorporating representatives from the different agencies in the center's institutions – expert and mentor committee, scholarship committees and more.

Prerequisites for third-year courses and entrepreneurs club: Personal interview. Graduates of entrepreneurship courses. Graduates of practical entrepreneurship workshop. Students with a basic plan for a financially viable venture.

Services/benefits offered to members of the college's entrepreneurship club: Up to 50,000 ILS per project. Staff guidance. Mentoring. A pool of additional service providers at discount prices from the grant's funds. Lab services (coordinated in advance). A shared workspace at the club (eastern campus), other shared workspaces for free or for a discounted price .

Strengths and Anchors that can Ensure the Center's Success:

The anchors are organizations and activities that are already at work in the college and around it. Their activity can support the new center and stabilize its activity. We define "anchors" as organizations that strive to be part of the activity, promotion and spreading of ideas of the innovation center among their staff, and will be willing to absorb students and other entrepreneurs and support them through the center. These anchors are part of a shared regional partnership, which is part of the innovative structure of the center.

The center's directors must create contacts and collaborations with these organizations to promote the center's success. These collaborations can create a synergy between the college and the surrounding region, and create contacts and networks between the students, projects and major stakeholders to promote the entrepreneurship and turn them into businesses.

Among the many strong points of Tel-Hai Innovation Center:

- A technological entrepreneurship center – has been operated in the Science School for five years, with ten currently active projects. It will become part of the center and incorporated as part of its activity. The center's staff will offer professional support, counseling and guidance to students and staff alike.
- An international research institution – MIGAL – has been in operation for over two decades, specializing in applied research in agriculture and food-tech, extensive experience with patent registration. The institution includes different labs, as well as advanced imaging technologies and ways to create prototypes for technological entrepreneurship. The institution maintains a pool of experts in chemistry, physics, biology and food-tech .

- The north food-tech program – led by National Initiative 2020 – a program that aims to establish a food-tech center in the Upper Galilee, based on the applied research facilities of MIGAL as well as other institutions. Its role is to connect research institutions with planning institutions and food corporation and develop new food products.
- Food-tech labs with state-of-the-art equipment and connections to the national and global food industry.
- Physical location of the center (beyond the existing offices) – current program – The college allocated a space of over 450 sq. m. for the establishment of the innovation center. The center will be equipped according to its goals of developing creative thinking and entrepreneurship: team-work spaces, conference rooms, open spaces, internet connection to international information sources.
- Advance agriculture alongside cooperation with local farmers in development of new ideas – together with the Galilee development authority – the main agency for agricultural development in the region.
- Shared studies with Brauda, including an EU online entrepreneurship course. Erasmus IN2IT.
- Senior entrepreneurship scholar – Prof. Eli Gimon.
- Proactive entrepreneur community of graduates who hold monthly meetups and conferences.
- Extensive social entrepreneurship activity. SILICE projects – practice-incorporating courses, active ventures, hackathons, entrepreneurship workshop – experience in social and communal projects. Connections with social stakeholders and organizations, local municipalities.
- Professional entrepreneurship annual conferences have been held over the last decade.
- Genetic engineering course IGEM.
- Product development workshop for food products – taught by the college's staff. The course focuses on food-related experiments and the development of new consumable food products. The workshop will contribute to the professional process by adding contents of financial management, marketing, budgets and stakeholder mobilization.

- Strong connections to the local industry. Many specialized programs.
- Diversified geographic periphery.
- The Center for Peace, Democracy and Multi Culturalism supports the Arab sector and can help in developing entrepreneurship in the Arab sector and diversifying employment opportunities. The center supports Arab students and minorities in the college. The center employs a stable staff who provide educational and cultural support for students. The center will offer to students and other stakeholders to act in the Innovation Center, offer language support for those who need it and help in creating connections with Arab potential stakeholders from the business sector.
- Cooperation in the establishment and operation of Kiryat Shemona Hub and connections to the national initiative accelerator in Kiryat Shemona.
- Ongoing collaboration with the regional potential partners that are involved in development – entrepreneurship and employment. MAOF, regional municipalities, youth centers, industry zones, national initiative, etc.
- Possible connection to the Innovation Authority.

Weaknesses of the Center:

- Dependency on external funding resources for the support of projects.
- Low awareness of the academic staff – who can refer students to the center. The staff might be too focused on academic motivations and will not encourage the students to take part in the center activities due to lack of awareness and understanding of the center's importance. A proactive marketing process in the college is in need.
- Contacting external organizations and stakeholders.
- Collaboration with different local authorities – requires balance between them.
- State budgets – dependency on state budgets, limited control over allocation considerations.
- Connections with residents around the college – requires a massive marketing campaign for the center. We must find the right communication channels to spread the word about the center and its activities.
- Marketing to local youth.

Positions at the Center

As part of the center's organizational structure, the following positions were defined:

Entrepreneurship manager – a part time job (50%)

- Establishment and coordination of the entrepreneurship field at the college
- Managing the entrepreneurship center and coordinating the activities.
- Management and planning of entrepreneurship activities versus other staff members.
- Forming, managing and coordinating the activities of a committee of experts, mentors and content specialists.
- Coordinating activities with regional entrepreneurship agencies.

Requirements:

- Knowledge and experience in the field of technological entrepreneurship and innovation.
- Management experience.
- Experience in an initiative establishment and development.
- Experience in supporting technological projects/entrepreneurs.
- Experience in operating an academic entrepreneurship center – a plus.

Required skills and qualities:

Management skills, initiative and creativity, teamwork and mobilization, personal charm and public speaking, big-picture perspective, high level English, goal oriented, multitasking, perfect human relations, independent.

Field coordinator and leader of the entrepreneurship community – a part time job (50%)

- Managing the graduate community of the entrepreneurship center.
- Connecting active projects to service providers.
- Organizing and moderating meetups between local and external entrepreneurs.
- Offering additional contents to the members.
- Helping the center's director to spread the word and increase accessibility of the center's activities to students by marketing conferences, hackathons, etc.

Requirements:

- Knowledge and experience in the field of technological entrepreneurship and innovation.
- Management experience.
- Experience in an initiative establishment and development.
- Marketing experience.

Required skills and qualities:

Management skills, initiative and creativity, marketing abilities, teamwork and mobilization, personal charm and public speaking, high level English, goal oriented, multitasking, perfect human relations, independent.

Field coordinator – academia and administrative – a full time job

- Coordinating entrepreneurial activities between the two faculties.
- Leading the IGEM course (administration and budget).
- A leading team member at the college's entrepreneurs' community.
- Promoting entrepreneurship-encouraging activities among the students.
- Managing the center's budget.

Requirements:

- A graduate with a science degree. Master degree – a plus.
- Experience in the field of technological entrepreneurship and innovation.
- Science background
- Marketing skills.

Required skills and qualities:

Management skills, initiative and creativity, marketing abilities, teamwork and mobilization, high level English, goal oriented, multitasking, perfect human relations, independent.

Chairman of the entrepreneurship center – definition

- An academic scholar from a relevant field (head of the Economy and Management Department)
- Assisting the CEO in conceptualizing the college's entrepreneurial approach and coordinating the different activities.
- Coordinating and approving various activities.
- Head of the expert committee / board of directors.

Expert committee / board of directors

A leading group of stakeholders, who make significant decisions about the center's activity. Choosing the projects that will be supported by the center. Meeting every quarter for discussion and decision making. The committee is composed of academic scholars, entrepreneurs and professionals (in the college and beyond) who are also used as mentors for specific projects. The committee is composed of volunteers. Assisting in fund raising and donations.

Mentors

- Entrepreneurs / assistants of entrepreneurs
- People who have developed at least one venture.
- Diverse experience.
- People who can lead, guide, and support others.
- Physical location – flexible .
- An hourly pay of no more than 300 ILS.

Reference list

Ayalon, H., & Yogev, A. (2005). Field of study and students' stratification in an expanded system of higher education: The case of Israel. European *Sociological Review, 21*(3), 227-241.

Barlow, M., & Tietze, W. (2001). The consequences of planning control: Mizrahi Jews in Israel's 'Development Towns'. In: *The Power of Planning* (pp. 117-134). Springer, Dordrecht.

Ben-Ari, E., & Bilu, Y. (1987). Saints' sanctuaries in Israeli development towns: On a mechanism of urban transformation. *Urban Anthropology and Studies of Cultural Systems and World Economic Development*, 243-272.

Giroux, H. (2002). Neoliberalism, corporate culture, and the promise of higher education: The university as a democratic public sphere. *Harvard Educational Review, 72*(4), 425-464.

Kandiko, C. B. (2010). Neoliberalism in higher education: A comparative approach. *International Journal of Arts and Sciences, 3*(14), 153-175.

Katz-Gerro, T., & Yaish, M. (2003). Higher education: is more better? Gender differences in labour market returns to tertiary education in Israel. *Oxford Review of Education, 29*(4), 571-592.

Payes, S. (2005). *Palestinian NGOs in Israel: The politics of civil society* (Vol. 45). Ib tauri.

Peled, Y. (1990). Ethnic exclusionism in the periphery: The case of Oriental Jews in Israel's development towns. *Ethnic and Racial Studies, 13*(3), 345-367.

Spilerman, S., & Habib, J. (1976). Development towns in Israel: The role of community in creating ethnic disparities in labor force characteristics. American *Journal of Sociology, 81*(4), 781-812.

Steinberg, G. M. (2006). Soft powers play hardball: NGOs wage war against Israel. *Israel Affairs, 12*(4), 748-768.

Shavit, Y., Ayalon, H., Chachashvili-Bolotin, S., & Menahem, G. (2007). Israel: diversification, expansion, and inequality in higher education. *Stratification in Higher Education: A Comparative Study*, 39-62.

Yiftachel, O. (1997). The political geography of ethnic protest: nationalism, deprivation and regionalism among Arabs in Israel. *Transactions of the Institute of British Geographers*, 91-110.

Chapter 5: HIE program- Hub for Innovation & Entrepreneurship

Sagit Paltin-Yifrah, Head of Innovation, Sapir Academic College

Sapir Academic College was established in 1998. It is the largest Israeli public academic college, with approximately 7,500 students, 70% of them originally from the Negev – Israel's southern periphery. The College offers academic degrees, technical diplomas and adult education programs. Actively recruiting a diverse student body, the College offers a wide range of undergraduate programs as well as graduate degrees in public policy and administration, human resource management, social work and cinema. Sapir is among the largest employers in the region, attracting young people to study, live and work in the south. The College's key mission is to provide equitable access and opportunities for academic education and research. In addition, Sapir encourages the development of students, faculty and staff's cultural and creative life, as well as communal and social engagement in the surrounding area. Sapir hosts numerous local and national conferences, which offer varied and rich programming, including the internationally recognized South Film Festival, and one of Israel's most prestigious conferences, The Sapir-Sderot Conference on Israeli Society.

Sapir College is an academic institution with a social orientation; communicating with the local community is one of the cornerstones of the College's vision. The College currently operates multiple programs for social and technological entrepreneurship, including a Hub for Entrepreneurship & Innovation, also known as Sapir HIE Center – a natural place to host the European Union SILICE project within the framework of the SINOLAB.

The Sapir HIE Center is dedicated to social entrepreneurship, offering opportunities to create and initiate projects. The goal is to grow and promote initiatives of students, staff and residents from the surrounding neighborhoods, who are in need of tools and guidance required for success.

At first, the HIE will serve as a training center for social entrepreneurship and innovation, catering to students and residents. We created a pool of professionals and

faculty members, who are willing to serve as mentors for budding projects and initiatives, as well as a technologically advanced eXlab, which is the main physical infrastructure of the Center.

Structure and goals

The program was created with the aim of attracting all academic disciplines, students and staff, as well as the surrounding communities, into the cycle of innovation and entrepreneurship. We believe that the organizational change will help us realize the main goal of our program: Promote the entrepreneurial and innovative (E&I) spirit in the campus and the region as a whole.

To do so, we created a hybrid structure: On one hand, each academic department runs an innovation lab and/or clinic in its own field, thus providing an incentive for all departments to promote E&I in their respective fields. On the other hand, all labs and clinics will be run by a single managing body (the Sapir HIE Center board); they will all work in the same space (the eXlab); and have at least one joint weekly meeting. This way, we can guarantee cooperation between the different labs and clinics. The innovative organizational structure is the following:

Sapir HIE Center board

The Center works under the Vice President for Academic Affairs and the College's CEO.

1. **Mr. Nissim Bar-El**, Champion, is in charge of ensuring that the Center functions according to the College's E&I vision; finding (institutional and private) investors for ventures; and raising funds that can ensure the Center's sustainability. Mr. Bar-El is a College board member, and he took on this mission voluntarily.
2. **Dr. Dan Kaufman** – Academic director of Sapir HIE Center: in charge of the "entrepreneurship happening" before the opening of the school year; all academic courses; academic collaborations with Israeli and global institutions; labs, clinics, etc. Mr. Nir Reuven will assist Dr. Kaufman in development and implementation of methodologies aimed to promote entrepreneurship in the College. This is a part-time job (50%).
3. **Mr. Dan Freifeld** – Head of the eXlab and in charge of the relations with the College's IT department and external relations (including SouthUp); mentors and

pitch events; and a series of other events held by the center. This is a part-time job (50%).

4. **Mrs. Sagit Paltin-Yifrah** – Head of innovation, in charge of the HIE board (four members); HIE operation; incorporation of the program in various departments; incorporation of administrative and college staff in the center's activity; relations with neighboring communities, industry, national and regional government agencies, NGOs, residents and the peripheral hub network with all the stakeholders from the rural are, regional municipalities and the development cities around the college to raising funds for the various center's activities; commercialization of projects, fund raising for the Center itself and for the projects created in the HIE Center; branding and marketing of the HIE Center, internally and externally (together with the College's marketing department); and relationship between the HIE Center and the College board. This is a full-time job.
5. **Mr. Nir Reuven** – Academic assistant manager – will help Dr. Kaufman in developing the academic aspect and moderate the entrepreneurship courses.

This is a part-time job (50%), and partiality is expected to decrease over the next three years, along with the implementation of the program in the various departments.

6. **Mrs. Orit Laniado** – eXlab Coordinator: Administration, coordination, daily operation of physical space and coordination of various classes and events with lectures. This is a full-time job.

HIE Center Board – Responsibilities:

- Leading innovation and entrepreneurship in the College;
- Promoting I&E curriculum;
- Managing the labs and clinics;
    - Mentoring the directors of the labs/clinics; a special emphasis will be given to the implementation of tools and techniques for innovation managing and entrepreneurship encouragement;
    - Creating a work methodology for labs/clinics;
    - Supporting coordination and cooperation between different labs and clinics;
    - Helping in creating multi-disciplinary development teams of staff and students;

    - Tracing local residents with specific expertise from outside the campus and incorporating them in the labs;
    - Forming and supporting relationships between labs/clinics and external partners;
    - Managing Sapir HIE publications for ventures and small businesses that might be interested in the HIE's support.
- Managing the eXlab's activity program and budget allocation;
- Managing and supporting the accelerator program:
    - Selecting suitable ventures;
    - Managing connections with SouthUp about the accelerator;
- Promoting an entrepreneurial culture on campus:
    - Creating a website and application for the center;
    - Implementing a designated software for idea management, which can serve everyone on campus;
    - Marketing the Center's activity plan and making it more accessible to teachers, students and staff, as well as residents and communities around campus;
    - Managing a system of challenges from the campus and its surrounding;
    - Managing the use of the campus and its surroundings as a beta site.
    - Managing events for the College and each of the labs (hackathons, meetups, conferences, etc.).
    - Managing professional training courses in entrepreneurship and in each specific discipline. These training courses will be open to everyone on campus and in the surrounding communities, as well as for distant users (particularly in the periphery) through the national hub system.
- Raising funds for these activities.

The HIE labs

The Sapir HIE Center will operate I&E labs, each of them with its own main theme, and each headed by a different college department.

Sapir's Entrepreneurship Labs will foster student, staff and resident led initiatives to tackle global issues. Third year Sapir students from all academic departments can choose one out of 10 labs to develop their ideas for academic credit. Registration is open to students and staff (at no charge) and local residents (for a reduced fee of 350 ILS). The labs will operate throughout the academic year, meeting weekly on Monday afternoons, for 4-hour sessions. Each lab has a director and industry mentor.

Examples of entrepreneurship labs (3 out of 10 overall):

1. **Smart Communities in the Periphery Lab:** Operated by Sapir's Communications, Technological Marketing and Public Administration and Policy departments. This lab will promote cross-disciplinary innovation and entrepreneurship for 'Smart Communities' in the periphery. Lab participants will conduct research in the city of Netivot, to understand the unique needs of this community and find solutions for these needs.

   Lab Directors: Dr. Regev Nathanson (Communication Department) Dr. Villy Avraham (Technological Marketing Department), and Dr. Lihi Lahat (Public Administration & Policy Department).

   Mentors: Dr. Omer Keinan, CityZoom, Industry Partners and the Western Negev Cluster

2. **Digital Health Lab:** Operated by Sapir's Technological Marketing Department and School of Social Work. This Lab aims to develop digital health projects that promote physical and mental health and lifestyle, with a special emphasis on the human behavior and compliance. This year, the lab will work together with ex-soldiers suffering from PTSD and students from Sapir's School of Social Work and Technological Marketing Department to develop projects that recruit and promote treatment options for people with PTSD. A MOU has been signed with Sheba Medical Center for this lab.

   Lab Director: Dr. Shay Faitelzon (Technological Marketing Department).

   Mentor: Shira Lev-Ami (Former Director IT, Ministry of Health).

3. **Enterprises for the Betterment of Youth (at risk young adults) Lab:** Operating in partnership with Sapir's Rotem Center for At Risk Emerging Adults in the Negev. Sapir students, at-risk young women, professional social workers and youth work

experts will create innovative, evidenced-based and sensitive solutions for at risk young adults.

Lab Director: Dr. Michal Komem (School of Social Work; Director, Rotem Center)

Mentors: 8200 Women's Alumni Association (IDF's 8200 Intelligence Unit Alumni Association, which operates social action programs throughout Israel).

Labs will work based on the following protocol:

- Each lab will be headed by director – a leading researcher from the relevant department (equivalent of teaching an 8-unit course). Alongside the director, each lab will have a "head mentor" – a person who is experienced in promoting entrepreneurships in the specific field of each lab. Together, they will be in charge of training and guiding the lab managers in their roles.
- Each lab will include staff members and students from across campus, who are interested in developing initiatives in the relevant field. The labs will also invite residents from the surrounding communities with similar or relevant fields of interest.
- Each lab will maintain relationships with external stakeholders – industry, software companies, TV channels, hospitals, municipalities, NGOs, etc. These external stakeholders can present new challenges, as well as offer mentors who can help in finding the solutions. Labs will prioritize challenges from within the campus and its immediate surrounding.
- During the week before the academic year begins, the HIE Center will hold a "happening" event and invite everyone who might be interested in joining the development teams in the labs or support teams in the clinics. During the event, which will take place over the course of three days, each lab or clinic will present its main challenges, screen candidates and offer initial ideas for new ventures.
- Each lab will hold a practical workshop throughout the academic year, which will form a key part in the practical experience of participants. The workshop will be opened to students after a screening process. It will be operated based on a model that was developed by Dr. Dan Kaufman, which will be adapted to the specific need of each lab. The workshop will be offered to all relevant stakeholders, including academic staff, students and residents, who will together develop relevant research and ventures.

- The workshop's activity will start with the above-mentioned event. During the first semester, the teams and their main challenges will be defined and organized.
- Teams are expected to develop their own original venture. Yet, development teams will be able to develop their ventures in cooperation with external stakeholders and/or help in the development of ventures initiated by an external stakeholder, who is willing to work according to the terms and conditions of Sapir HIE Center.
- The teams will use the campus and the surrounding areas as a beta site for implementation and examination of their projects.
- Sapir HIE Center will encourage all participants to strive and commercialize their ventures, while demanding options for 10% equity, veto right in cases of a deadlock between team members, and a right to use the venture around the campus and the Western Negev region.
- At the end of each academic year, the teams will present their ventures to a panel of judges, which will select the best ventures to be transferred to the accelerator, in the nearby SouthUp incubator. According to our agreement with SouthUp, the incubator will host the selected ventures and strive to absorb the best of them, providing the entire host of services offered to start-ups: legal services, accounting, raising funds and support, etc.

The main theme of each lab was defined by the relevant department together with the HIE Center board.

Entrepreneurship Clinics:

Alongside the labs, Sapir will run four student operated entrepreneurship clinics, staffed by students, supervised by faculty members and supported by professional mentors. The clinics were launched on October 4, 2019; they are expected to operate for 26 weeks over 2 semesters, throughout the academic year, meeting every Monday from 4:00-7:30 pm.

The following clinics were launched:

1. **Economic Clinic:** offering lab teams assistance in building business plans.
2. **Marketing Clinic:** offering lab teams assistance in recruiting and marketing initiatives.
3. **Legal Clinic**: offering lab teams legal assistance, copyright, patent and IP issues.

4. **Software Clinic:** offering lab teams the digital solutions and platforms for their initiatives.

The clinics' activity will be dedicated to locally developed ventures, on campus and in its surrounding communities, including high-tech companies in the SouthUp incubator, small businesses and more. Their activity will be funded by external sources.

Additionally, the clinics will offer professional training sessions for a fee to participants in and outside the campus. Using the national hub network, these trainings will be accessible online across Israel.

All clinics will be based on a similar operation model:

- Each clinic will be headed by a leading researcher. A mentor and/or partner from the relevant sector or specialty will work with the clinic leader.
- Each clinic will hold a practical workshop throughout the academic year, which will be offered to students after a screening process (see explanation above). The workshop will be offered to all clinic stakeholders and will include lectures on relevant subjects and discussions about the professional challenges of the different ventures.
- Each participant will team up with (at least) one development team from one of the labs.
- The clinic participants will be divided by the Center's board and the clinic leaders into "A teams" of 2-4 members (one of each clinic), according to the needs, and these teams will support ventures or small businesses in and around campus. This service (which is similar to the "service contracts" offered by universities) will be provided for a fee, which will, in turn, guarantee the sustainability of the clinics over time, without having to rely on external funding.
- The clinics will also hold professional trainings for extra-campus entrepreneurs and organizations for a fee.

Existing and Future Physical Infrastructure

The beating heart of Sapir HIE Center will be the eXlab space, which was constructed over half of the library ground floor in the College and was officially opened in February 2019. This is a workspace spreading for about 7,500 sq. ft., which will host the Center's board offices, labs and clinics.

The eXlab will also serve as a main hub, disseminating courses/trainings/lectures and more to the national hub network. Furthermore, when the space is available, it will be rented out for conferences or trainings held by the Center together with the relevant lab/clinic and offered to partners from outside campus.

I&E in Sapir from a student's point of view: Education for creativity, innovation and entrepreneurship

The Sapir HIE Center will offer courses, lectures and conferences to students and residents, aiming to develop their creativity and provide them a with a useful toolbox for every social, business or technological entrepreneurship.

1. The academic courses offered to college students aim to provide the students with the necessary tools to establish and manage an innovative, effective venture.
2. The professional training courses are offered by the Sapir College Department for Extra-Campus activities and external stakeholders.

Incubation

A pitch event will be held at the end of every academic year, where development teams will present their ventures to the board as well as an external panel of judges. Selected ventures will continue to be developed during the summer in the SouthUp incubator, which was established by the College in collaboration with external partners. The incubator will assist the teams in developing their ventures, match service providers (legal advisors, patent registration, accountants and others), help them find potential investors and in some cases also help in applying for support of the AIA.

Entrepreneurial Culture on Campus

Sapir HIE Center promotes the entrepreneurial spirit on campus in various ways: From a student's point of view (even if they do not actively participate in the labs/clinics), this change carries a number of implications:

1. A significant rise in the number of courses, lectures and events focused on creativity, entrepreneurship and innovation.
2. Improving the college's teaching staff by training professors for innovation courses and developing innovative pedagogies.
3. Turning the campus and the surrounding area into a beta site for new developments.

4. Shifting the College's research focus by turning applied research and innovation to be key criteria in promoting faculty members and offer incentives to teachers who include students in their studies.

A plan for creating an entrepreneurial culture on campus

The entrepreneurial culture at Sapir HIE Center is designed to bring the entrepreneurial spirit to everyone on campus and in the Negev as a whole. The plan will include various events and contents, aimed to demonstrate to everyone on campus that entrepreneurship is not a distant concept relevant only to central Israel; it is a realistic, achievable goal for peripheral students, which opens new opportunities for self-fulfillment, professional and financial development. The events and activities will be offered to students, teachers and other stakeholders on campus like elementary schools, the high school, the psychological service, the elderly club, the resilience center, the youth center, the local municipality and residents from neighboring communities.

These are the main blocks in the plan for developing an entrepreneurial culture on campus:

Events

1. **Entrepreneurship happening** – a three-days happening held at the beginning of every academic year, where the labs and clinics start constructing their activity. During this event, the participants will get familiarized with the various labs and clinics, participate in creative workshops, listen to challenges of public, business and social organizations, and mainly get to know each other and create their teams and ideas.
2. **Open days** – during the academic year, the Center will hold "open days", where the activities will be presented to candidates, freshmen students and residents. The open days will be creative and include a wide variety of activities, innovative productions, lectures and technological presentations to inspire and create motivation to join the Center's activities.
3. **Hackathons** – will be held by the Center during the academic year. Each hackathon will be led by one of the labs together with stakeholders from relevant industries, which will also fund the activity. The hackathons will be offered to teachers, students and residents, and they will be mentored by specialists and professionals.

Leading ventures will get the chance to be further developed in the eXlab, with the help of its technological infrastructure, mentors and more.

4. **Meetups** – During the school year, the Center will hold on-campus meetups for the entrepreneurial community on various issues such as entrepreneurship, technology, innovation and more. a meetup is a face-to-face meeting hosted by key professors and held for a few hours as a panel or an open discussion. The subjects of meetups will be pedagogically derived from labs, clinics and social issues. This year, for example, we will hold meetups in collaboration with the Labs for Enterprises for the Betterment of At-Risk Youth, Women's Entrepreneurship and Accessibility for People with Disabilities.
5. **Conferences** – the conferences will bring together academia and industry, theory and practice. They will be co-hosted by Sapir HIE Center and one of the academic departments, in collaboration with industry partners. This year, we will host an international conference about the impact of innovation centers on the academic sphere.
6. **Pitch events** – where students present their projects to an audience of venture capitalists, potential investors, NGOs and key industry figures. The main goal is to raise funds that will allow the venture to be further developed.
7. **Guest lectures** – Lectures by various guest speakers about entrepreneurship, offered to everyone in and around campus. The talks will take place in the eXlab and broadcasted online to the hub network.

Professional Trainings

Various trainings about sustainable entrepreneurship, innovation and more will be offered to students and residents. Participants will get the opportunity to gain practical knowledge and tools for their careers, learn how to develop an independent business, wherever they are (including peripheral locations), and promote it nationally and globally. Trainings will take place in the eXlab and will be available online around campus and the hub network through Sisco network.

Teaching and Learning Innovation Forum

At the beginning of the previous school year (2018-19), we established a forum for teaching and learning innovation, uniting college teachers and students. The forum's goals are: (1) to create curricula for academic/diploma studies in development of

innovative teaching (pedagogy, technology, etc.); and (2) to promote a teaching program in college that is focused on self-learning capabilities.

The forum works in collaboration with one of the college labs to supported to support the students in their projects and idea and they work with the out stakeholders and investors.

Sustainable model

The sustainable model of Sapir HIE Center is based on a number of fundamental principles:

Integration in Departments

The labs and clinics will be partially funded by the HIE Center for the first four years, and the Center's share will be gradually reduced over time. Until 2022, all labs and clinics are expected be officially absorbed by the different departments, including operational costs.

Revenue

The Sapir HIE Center is able to generate profits that can fund a large share of its activities:

1. **Entrepreneurship events**

A large part of the I&E events, and particularly hackathons, will be held in collaboration with external stakeholders, which will fund these activities and add some overhead fee to the College.

2. **Workshops, trainings and lectures for external stakeholders**

The Center will hold paid-for trainings, workshops and lectures for various organizations. These events can take place in the College itself (particularly in the eXlab), but also through distance learning (using the hub network).

3. **Support of external ventures**

The clinics will offer support to external ventures for a fee.

4. **Research funds**

One of the goals of Sapir HIE Center is to shift the College's research focus from theoretical to implementational studies, which can later serve the Center. This shift will allow researchers to rely on research funds to promote the Center's activity.

Fund Raising

The Sapir HIE Center will operate 15 sub-units (labs and clinics). Each of them can attract donors to offer support in return for a commemoration of their name.

Shutting down activities that do not meet their performance or budget goals.

Goals were defined to each of the labs/clinics, including the number of development teams, number of students, costs and so on. Any lab or clinic that would fail to meet these goals, would be shut down.

Raising the number of students

In the long run, the main budget resource for the HIE Center is the College itself. We hope that the Sapir HIE Center will make the college more attractive for students, raising the number of overall students and thus increasing the income through tuition fees and the Council for Higher Education budgets.

Chapter 6: Entrepreneur and Innovation in Academic Courses

Abu-Karat Yitah, Liron Kedem and Zeevik Greenberg

This chapter presents the concept of courses in social innovation and entrepreneurship as defined by teachers who offer I&E courses as part of the SILICE project. The aim of the project was to promote social innovative activity through the establishment of innovation centers (SinnoLABs) in nine campuses in India and Israel. The European partners guided the establishment of these centers by offering lectures, models, exercises and training workshops in each HEI, including courses, syllabi and pedagogic tools. Some were incorporated in existing courses, while other served as foundation for new innovation courses, which were offered to students and the local population. The courses were adapted to the local context, the nature of each specific HEI and the social challenges in its immediate surrounding.

Toward the end of the project, we held a final workshop and examined the relevance of the courses and contents. Additionally, we conducted in-depth interviews with ten teachers from India, Israel and Europe who taught these courses. The teachers were asked about the significance of the course, the tools, subjects and methods that seem suitable and promoting creative thinking and entrepreneurship among undergraduate students. In the interviews, we tried to pinpoint the significance of these courses, the differences between them and "traditional" courses and the characteristics that make them significant for students.

This chapter presents the main findings concerning contents, methodologies and unique characteristics that promote social I&E studies in HEIs. The insights presented in this chapter can help anyone who attempts to create a social innovation course. We will present contents, methodologies, contacts with partners and stakeholders and the significance of these contacts during the course and beyond, when projects progress toward marketing and finding external stakeholders.

I&E courses in the academia is a fairly new phenomenon, which reflects the progress of HEIs and their efforts to adapt their curricula to 21st century students and their

environment. These courses, alongside other unique programs that incorporate new populations into academia (Greenberg & Shanaar Golan, 2017), are transforming the nature of HEIs, providing the students with a toolbox that prepares them for the work and labor market of the future. Some of these courses go beyond the personal angle of the individual student and aim to engage students in financial and social problems, encouraging them to find solutions (Roach, 2017; Kuratko, 2005).

What is Innovation?

Innovation reflects the notion of constantly adopting plans, ideas and behaviors that are aimed at changing reality and finding solutions to social, technological and organizational challenges of the organization or its surroundings. Organizational innovation refers to all parts of the organization, but innovation can also refer specifically to technological or organizational forms. Literature differentiates between types of organizations according to their level of innovation. Some organizations are not innovative at all; some carry out innovative projects; while others are characterized by a consistent and ongoing innovative spirit (2015, Le Bas, Mothe, & Nguyen-Thi). Organizations employ a wide variety of innovative methodologies, like teams dedicated to the improvement of productivity and quality, as well as external relations with other industrial or public organizations through alliances, partnerships, outsourcing or sub-contracting. Some initiate vertical collaborations with clients and suppliers. Industrial companies, for instance, can cooperate with universities and research institutions, which help them gain new knowledge (Le Bas, Mothe, Nguyen-Thi, 2015). The organizational innovation approach, which is gaining popularity, involves the creation of a supportive space, encouraging employees and managers to initiate and present new ideas and innovations, creating an infrastructure for the adoption of new technologies and a clear definition of the role and importance of these technologies (Aljanabi et al., 2014). Innovation level can be measured through different types of indices, like the number of patents, main innovations or level of R&D investments (Scott, 2014). Innovative processes require different types of organizational resources:

1. Time – employees must have some free time to think about new ideas and promote them.

2. A flexible organizational structure, which allows the employees some autonomy and space to develop innovative ideas.

3. Performance-based rewards: Various rewards can encourage employees to gain new knowledge and innovative methodologies, thus promoting their skills and the organization as a whole.

4. Willingness to take risks: To improve the organizational ability to absorb and nurture innovative processes, the organization must be tolerant toward risk taking, and allow risky decisions and acts.

5. Absorption: The organization must have the ability to absorb new knowledge, ideas and suggestions from within or outside of the organizational structure.

6. An ability to process, analyze, explain and understand the information, knowledge and skills absorbed from external sources. The new knowledge should be implemented and integrated with existing knowledge.

7. Budget allocation: to allow the acquisition of new knowledge and skills from the outside, organizations must allocate funds. Budgets can help facilitate an accelerated rate of knowledge and skills. An acquisition of knowledge and capabilities can help the organization in collaborations with companies that use the same knowledge. By acquiring new knowledge, organizations can increase their competitive edge and improve their innovation level through new strategic capabilities and performances (Aljanabi et al., 2014; Austin et al., 2010).

Best Practices of I&E Courses in HEIs

While the concept of innovation has been part of academic practices for a few decades now, many HEIs still struggle with the combination between traditional research and innovative practices. In our interviews with teachers in the SILICE project, we tried to identify patterns and best practices that may serve as foundation for similar attempts.

The interviewees highlighted four different aspects that are key to innovation courses in HEIs:

Space: Time and Place.

The teachers were asked about the ideal timeframe for innovation courses – number of academic hours and semesters. In innovation courses, the teachers guide students through the process of creating a new initiative, from the idea stage to the creation of a portfolio. In some HEIs, particularly those that are technology-oriented, the students create a prototype, which they can then present to stakeholders and potential investors, in an attempt to continue developing their project.

In the interviews, the teachers pointed out the fact that these processes take time, and thus should extend over a whole academic year, or two full semesters. According to the teachers, a timeframe of 24-28 sessions allows the students to go through a significant process that includes thinking, development, feedback, consultation with experts and refinement of the project, and preparing themselves for presentation in front of external stakeholders.

A half-year courses (one semester) only allows students to go through the initial stages of thinking and idea forming. In such cases, most projects are not ready for presentation by the end of the course, and they are often abandoned. One of the teachers said:

> *Often, students come with an idea that seems amazing. They start working, invest 4-5 weeks, until they realize this is not a good fit, and they have to find a new direction. They start a process of reconsideration. Very often, it takes time for them to accept the fact that their ideas were wrong... they need time to process, form insights, adjust their emotion and find new motivation. These processes take time. We call it the "incubation" stage. These processes are important. In a one-semester course, they cannot go through these processes, because the semester ends before the students achieve the expected products. It is disappointing, and it carries implications over the project, of course, but also over the students, who are in the midst of a process of personal development and growth. A whole-year course allows us to better guide them through these processes.*

Alongside academic courses for students, some HEIs offered shorter courses for locals or off-campus populations. As for the timeframe for such short courses, we identified different approaches: One approach argues that short-term courses of 3-4 months promote adults' employment. Teachers who supported this approach argued that since the participants have families and jobs, they cannot commit to long-term courses, and if they do, they often miss out on sessions. Additionally, it was argued that some of the adult participants come with more mature ideas for projects. Hence, while younger students may need a whole-year academic course to develop their projects, older participants can often promote their ideas through shorter courses.

As for the length of sessions, most teachers said that a timeframe of 3-4 academic hours for each session are better than two different two-hour sessions, as sessions often start with a presentation or a demonstration before moving on to individual or group work. Students need time to organize themselves, work and then sum up their work. A 4-hour timeframe allows flexibility and can be divided into units of teaching and experimenting, as described by one of the teachers: "We are trying to promote processes. This is not a normal lesson. Students need time to get into the subject, understand the requirements and fulfill their task". Another teacher said:

> *The group discussions are very important, and they take time. They are very useful; they drive the students forward and allow them to understand the complexities of the project. These learning processes are long. The sessions include four stages: Presentation of a model or a tool; asking a question; a discussion between students in groups of two, three or more; and often the most significant part is summarizing the discussion – peer learning, organization of the knowledge and insights. A reflection that promotes the students through the next stage of their project. We can't stop this process in the middle. It takes at least 3-4 hours.*

Place: As part of the SILICE project, the EU funded the establishment of innovation spaces in the participating HEIs. Nine HEIs received funding for the purchase of technological equipment, laser printers and other types of equipment that can promote creative thinking. The interviewees pointed out a number of important aspects concerning the place and work environment:

First, an I&E space must be an open space. In many of the SinnoLABs, we have a variety of studying and gathering spaces, like computer stations, group session tables, sitting areas with couches and low tables, separate conference rooms, personal workstations and classrooms for groups of up to 15-20 students. This variety offers divers opportunities for learning and movement between different stations and positions. Each student can choose their preferred location and company, which affects their progress in thinking and planning the project. Students can move around during classes according to their changing needs, the different people they want to talk to or the different tasks on which they are working. The interviewees said that the varied sitting options enhance the dynamic nature of the sessions. The different spaces allow students to find the one best suited for their specific stage of the project. The movement between spaces allows a sense of progress and change throughout the class. The sitting arrangement affects the nature of the work and the students' products.

Second, the innovation spaces are characterized by a modern, untraditional design, with multiple spaces, colorful furniture and other elements. Many teachers said that this non-class design creates a more inviting space, which attracts students to the center. Inside the innovation space, there is a sense of freedom and movement, lack of hierarchy between students and staff, and a sense of collaboration. The kitchenette, for example, is considered a less-than-formal mingling space between students and teachers. These varied spaces motivate students to come to the center during breaks or when they have an hour off. The pleasant environment makes the center a fun place in which students can hang out, in addition to its function as a learning and workspace.

Contents: Innovation courses offer different types of contents. We asked the teacher to specify the contents of the different courses, and created a list of relevant fields and subjects for innovation courses. I&E courses expose students to types of entrepreneurship (out of opportunity and out of necessity; business, technological and social), effectuation entrepreneurship ,social values and responsibility as drivers of social innovation and entrepreneurship, understanding the nature of creativity and out-of-the-box-thinking processes related to innovation, ideation, inspiration, design, multi-sectoral and interdisciplinary communication and cooperation. The courses offer methods for defining problems, finding solutions (after proper definition of problems), creating a stimulating environment, nurturing talent and leadership skills, solving

problems as challenges, market analysis including strategy and marketing tools, financial analysis and fund raising methods, leadership and stakeholder communications and developing connections with governmental, business and third sector organizations. They also teach basic principals in preparing a business plan for social enterprises, marketing components and marketing strategy within the business plan, basic financial analysis, risk management and building consultant skills

Many teachers mentioned the key importance of the financial aspects of project management – budget and resource management, as well as risk management. These topics were marked as particularly important for two main reasons: (a) They support and promote proper project management in face of challenges; and (b) These aspects are particularly important to external stakeholders and potential investors.

Methodologies: The unique design of innovation spaces seems to carry implications over the methodologies used by the teachers in their courses. While traditional classroom spaces usually host lectures, innovative spaces encourage the use of varied methodologies. Many of the teachers said that their lessons are a combination of traditional teaching methods with workshop methodologies, in which each student progresses according to their stage in the project. One of the teachers said:

> *When leading innovation, the students' knowledge is significant. They live in today's world and are versed in social media and trends much more than me. They know where and how to get the information they need. Teamwork surprises me every time. The amount of information they can get/find/trace during a discussion, and how they weave it into the discussion, it is all happening online.*

The interviewees mentioned the importance of organizing the lesson – presenting the process on the board, the timeframe, the goals and the expected products. These initial definitions support the process of learning and progress. The teachers also said that it is important to summarize the lesson as a group. A number of teachers said they sit in a circle, and each student tells what they have done during class – a methodology studied as part of their training in the project. One of the teachers said:

> *I end the session in a circle. all the students gather around, summarize what they have done, the process – they sum up what they*

did and pack it as a product. The summary is a method of reflective learning, both collectively and student's aspect – it is a way to reinforce, to offer positive feedback and encouragement, which are required for students who feel they are at a dead end or who did not manage to achieve progress.

Another mentioned that "often, the end of one session is the beginning of the next one – it allows me to understand the current needs and prepare for the next lesson".

The **workshop methodology** was found to be useful by many teachers. A workshop is a session based on a group work. One of the students presents an issue or a problem they encountered as part of their project, and the rest of the group, 3-4 other students, try to come up with new ideas to solve the problem. Before such a session, a teacher can give a presentation about different types of innovations, and ask the students to offer innovative solutions to the problem at hand (https://www.silice.org/wp-content/uploads/Unit-1-creative-disign-thinking.pdf).

The workshop methodology allows open discussions; it encourages students to listen to each other and promote creative and complex solutions, which are formed through a brainstorming session. Many teachers mentioned the canvas model as significant. According to this model, a student with an idea forms a group of interested students, and together they answer questions about the project's unique value and its significance, based on some leading questions. The questions help the students plan the project and identity its complexities. The following construct was found to be particularly useful:

Stage 1: Presenting a concept – a problem or general knowledge.

Stage 2: Asking a question.

Stage 3: Dividing the class into groups and giving assignments.

Stage 4: Group or class summary.

If we take the issue of risk management, for instance, the workshop would look like that:

Stage 1: Presenting five slides from the risk management presentation – explaining the concept, its significance and the method.

Stage 2: How would we create a risk management board? What are the risks in the project?

Stage 3: Dividing the class into groups. Each group gets an assignment concerning the project's risks: social environment, financial environment, raising external resources, problematic players, motivation inhibiting factors, marketing issues, etc.

Stage 4: One of the students presents their project through a short presentation - 5-6 slides, 7-10 minutes.

Stage 5: The students are divided into groups based on subjects, and each group defines the risks based on the fields that were defined in stage 3. The groups work for 15-20 minutes, trying to identify risks. Each risk is rated on a scale of 1 to 10.

Stage 6: A class session. Each group presents the risks they identified. All risks are written on the board. Each risk is rated according to its potential implication on the project.

Stage 7: The class looks for ways to handle the risks by order – from the heaviest to the simplest risk.

Stage 8: Solutions are summarized. The students are encouraged to examine which of these solutions is relevant to other projects.

Between individual invention and communal needs: How can we encourage students to come up with an innovative project? The findings reveal two main methodologies. The first methodology focuses on invention. The students come from their own environment, they recognize needs and look for solutions. The second methodology is more community-oriented, based on a process for mapping communities and their needs. In the latter, the students map the surrounding community and identify its needs, characteristics, key players, stakeholders and more. This method was described by the teachers as less innovative and more time-consuming. Yet, its supporters say that the mapping process help the students to come up with a real socially significant project. They also mentioned the fact that identifying key players and stakeholders at the initial stages of the project can promote future success, thus enhancing the project's feasibility. As part of the SILICE project, we have created a community mapping tool (https://www.silice.org/wp-content/uploads/Unit-4-How-to-Mapping-Community-Needs-4.pdf).

Mentoring: Many teachers emphasized the importance of personal guidance and mentoring of students in developing their projects. The mentoring allows students to benefit from the mentors' personal experience, responses and ideas along the different stages of development. The personal guidance is key to handling the various challenges and difficulties before presenting the project to external stakeholders. In some HEIs, the mentors are faculty staff members. Each team gets a personal mentor, who guide the team according to need. Others recruit external mentors.

Conclusion

Social entrepreneurship and business innovation courses are different from the traditional courses offered by HEIs. As such, they challenge the institutions, the teachers and mentors. As part of these courses, students go through extended thinking process. Thus, we recommend offering a two-semester course. The findings from the interviews suggest that the contents combine professional models with experiential learning of students who try to implement the studies models. The courses must be flexible and adapted to the students' creative ideas. Creative and out-of-the-box thinking is key methodology for social and business entrepreneurship. The lessons are constructed as workshops, which take the students through the different stages of project development. The recommended structure includes presenting a tool, training and experimenting, group work and then a class summary that highlights the accumulated knowledge and allows each student to adapt it to their own needs. Mentoring is critical. It can be done by teachers, but the students benefit more from mentoring by entrepreneurs and businesspeople, who are perceived by the students as having hands-on experience. Yet, external mentors sometimes challenge the students with difficult questions, which might undermine their confidence.

Reference List

Aljanabi, A. Q. R. A., Noor, N. A. M. & Kumar, D. M. (2014). The Mediating Role of Absorptive Capacity in Its Effect on Organizational Support Factors and Technological Innovation, *Information Management and Business Review*, *6*(1), 25-41.

Hudson, E. (2013). Educating for Community Change: Higher Education's Proposed Role in Community Transformation through the Federal Promise Neighborhood Policy. *Journal of Higher Education Outreach and Engagement. 17*(3), 109.

Greenberg, Z., & Shenaar-Golan, V. (2017). Overcoming multidimensional marginality: the significance of higher education for traditionally reared single mothers living in the outer periphery. *International Journal of Inclusive Education, 21*(8), 833-848.

Kuratko, D.F. (2005). The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory & Practice, 29*, 577-598.

Le Bas, C., Mothe, C., & Nguyen-Thi, T. U. (2015). The differentiated impacts of organizational innovation practices on technological innovation persistence. *European Journal of Innovation Management*.*18*(1), 127-110.

Roach, M. (2017). Encouraging entrepreneurship in university labs: Research activities, research outputs, and early doctorate careers. *PloS one* ,*12*(2), e0170444.

Scott, R. W. (2014). Institutional Investors, R&D Policy and Firm Stock Liquidity *International Journal of Economics and Finance*. *6 (10),* 26-38.

Santandreu-Mascarell, C., Garzon, D., & Knorr, H. (2013). Entrepreneurial and innovative competences, are they the same? *Management Decision, 51*(5), 1084-1095.

Chapter 7: SIIICE project: explanation on the project and his outcomes to this day focused on innovation in higher education

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introduction

Institutions of higher education (universities and academic colleges) can be a major factor in the formation of social enterprises and in the creation of social changes that affect the welfare of the community in which they operate (for example, the role of these institutions in promoting a technological and scientific infrastructure that formed the basis for the establishment of successful start-up companies).

Entrepreneurship and social innovation require design thinking and paradigm shifting that combine achieving social goals using modules and tools adopted from the business and technological world. Therefore, the roles associated with the management and learning of entrepreneurial processes and social innovation become complex roles (such as the social manager, social counselor, etc., that require the use of a diverse toolbox that expresses the social mission (creating significant social values), and the adherence to the discipline, creativity and innovation that characterize the business world.

Higher Education meet many students who are part of communities therefore Formulation and formulation of principles and action plans for the establishment and operation of an entrepreneurship Community-based "activities on the basis of the departments of education, social work and human services at Tel Hai Academic College is in need.

Review

Entrepreneurship in higher Education

For entrepreneurship to thrive, it must operate in a well-functioning business and regulatory environment. Without the proper framework conditions, even potential entrepreneurs wanting to start companies will not do so.

In the United States, business innovation is fueled by highly competitive markets, advanced financial and university infrastructure, property rights, labour flexibility, and government support of R&D, directly and through procurement (Dennis, 2006).

Carl Schramm, President and CEO of the Kauffman Foundation, has written extensively about the unique multifaceted system for nurturing high-impact entrepreneurship in the United States and provides many valuable insights for other countries (Schramm, 2004).

Entrepreneurship is viewed as a major driver of innovation, competitiveness and growth. National governments and international Organizations such as the OECD, the European Commission and others have increased focus on entrepreneurship in higher education. The OECD recently conducted a major survey of entrepreneurship education, and the European Commission is about to embark on a major study as well. These initiatives bode well for ensuring sustained momentum to encourage universities to make commitments in this area and for policy makers to help facilitate the process.

Another key difference is the place of entrepreneurship within the university and academia more broadly. While entrepreneurship is still not fully accepted as an academic discipline, in the United States many business and technology schools have created a niche in this area and growing numbers of US schools are offering "concentrations" or "majors" in entrepreneurship (Twaalf, hoven and Prats, 2000). Many US universities have academic entrepreneurship departments and a large percentage of schools offer entrepreneurship courses. In Europe, entrepreneurship is still trying to find its home. Activities are in place across Europe, but efforts are fragmented and often driven by external actors instead of by the education system itself (European Commission, 2002). Faculty champions of entrepreneurship often have to fight internal battles for support and funding of their activities. Fewer universities in Europe have academic entrepreneurship departments. Professors often teach from traditional disciplines such as economics or business administration. Also, the majority of the entrepreneurship professors in Europe are traditional academics, reflecting long-standing policies and practices.

Institutional culture, practice and policies often get in the way of developing an entrepreneurial spirit and environment within universities. Entrepreneurship champions play critical roles within the universities but there must also be strong commitment from the university leadership (provosts, rectors and vice chancellors). This requires a complete paradigm shift for the entire university, including changing the fundamentals of how the university operates and its role in society.

Entrepreneurship in Israel higher Education

In Israel the term "Incubation" in higher education and the peripheral of Israel is used as an effective policy measure for incubating technological and business ideas Innovative. It is receiving great attention in the research and public discourse in the world and in Israel and is being implemented in fact, in the "Technological Incubators Program" managed by the Chief Scientist in the Ministry of Economics. Program The company, which operates since 1990, is considered one of the best programs in the world in the field of start-up companies (up-start) and played an important role in turning Israel into a high-tech center of the highest caliber the world.

The institutions of higher education in Israel (mainly in universities where scientific and technological research is conducted) Saw the potential of the incubators program as an opportunity for researchers from the faculty and students to be part of the process of applying innovative ideas to products with economic benefits and considerable funds.

In view of the centrality of entrepreneurial capital, the institutions have developed varied and varied curricula Support as an infrastructure for promoting ideas and firms from which the institution generates revenues and dividends (Technion - Israel Institute of Technology, Tel Aviv University, Hebrew University). In contrast to other policy measures that support the high-tech sector in Israel, the incubators plan was also implemented Spatial expression was reflected in the establishment of a relatively large number of centers in the periphery (Katzrin, Kiryat Eight, Misgav, the Jordan Valley, etc.) (Bahat,. & Davidovitch-Marton1994). The privatization process that these hothouses have undergone over the last few years has narrowed down. Their centrality is in the periphery, and a large part of them currently operate in the center of the country, including Yokne'am where five work

Greenhouses. Alongside the development of this broad trend, we have witnessed in recent years the acceleration of the public discourse, which must necessarily be promoted. (Bahat, 2009).

Entrepreneurship and new social initiatives as a basis for solving challenges / weighty social problems. The burden on society in Israel) inequality is widening, poverty cycles encompassing many layers. (In the population, problems of education, health, welfare, etc.). Unlike technological initiatives, entrepreneurship Social development at the

beginning of its development, and with the exception of a few small centers in Tel Aviv, the phenomenon is not winning It should be noted that neither the academic nor the academic establishment nor the policymakers responsible for development Social and welfare programs. (Avrutsky, G. & Ashkenazi, 2011)

Moreover, in areas with social challenges such as regional ones. The periphery in the north and in the south, the inventory of programs and assistance to establish an infrastructure for low-level social entrepreneurship. (Bahat, 2013).
And academic institutions (colleges) rarely deal with the subject systematically in terms of research and the application.

Social Initiatives: Definitions and Principles

Social entrepreneurship, by definition, is a process designed to generate value or social values Using techniques and modules borrowed from the technological and business world. In this sense, there is no Significant differences, except in the nature of value / output, between entrepreneurship of this type and types of entrepreneurship Mentioned above. In order to realize social entrepreneurship, the entrepreneur / organization needs creative and entrepreneurial thinking the use of advanced management tools and the production of measurable social benefits.
The potential - the academic-social base of the Tel Hai Academic College
At the Tel Hai Academic College, he studied in the Department of Education and Social Work To be seen as having a strong social and community orientation. Other epartments, such as the Department of Human Services the Department, should also be added
Psychology and the Department of Sociology and Anthropology, which will open in the near future. Needless to say That this human capital has high social and community awareness) in accordance with the vision of the college and its location In development in the region (and it is possible, on the basis of this capital, to develop a pool of innovative social ideas that accompany it And with proper support, some of them can be implemented in the field, thereby contributing to the social and communal system Regional) A partial expression of this goal can be seen in the ideas and works presented by the students for a master's degree in social work in the course "Entrepreneurship and Social Innovation" held this year the third.

2. Who are the target population and required areas of knowledge

In order to support and concreate the entrepreneurship for long term and for future student

The idea was to train manager, teacher and lectures who would continuously develop and lead the growth of entrepreneurships and leading students.

One to two managers in each institution will be responsible for operating the training and the projects. The management of social projects requires acquiring knowledge regarding recruitment and management of teachers, negotiating with colleagues and others at various levels, building a development plan (a business plan for operating SinnoLab), building the consulting and accompaniment system, fundraising and budget management.

Teachers and lecturers will be Training a group of 10-15 teachers and lecturers from the academic staff of each institution. This group needs diagnostic tools for social needs or social situations that require change, knowledge of entrepreneurship and innovation, and the expansion of skills and ability to distinguish between traditional social activity and advanced social entrepreneurship. In addition, teachers will lead the development of counseling and support capabilities for students involved in social entrepreneurship processes and in building partnerships between sectors. "The Campus for Social Entrepreneurship" in the College - Objectives 8 Structure and operating principles.

The main goal of the incubator for social entrepreneurship is to create suitable conditions for the creation Projects and social projects based on ideas raised by students and lecturers. Education, social work, human services and other departments that will join the program. As opposed to a greenhouse Technology / business, no investment is required in physical infrastructure and much of the activity related to operation The incubator can be carried out in the spaces of existing classes and outside the school hours, while receiving assistance .The Professional and academic lecturers in the faculty.

The incubator for social entrepreneurship, similar to other types of greenhouses, relies on two main components: A. Formation of a professional team to identify and classify social and community ideas with feasibility In which there is a high social-communal

value. B. Providing professional and (to some extent financial) support and support for selected projects over a period is given until they mature in the application aspect.

SILICE Project

The project SILICE is financed and authorized by the European Union that is engaged in the project of building capacity of higher education institutions within the European Union, Erasmos+ program.

The project is seeking to promote the development of greenhouse for creative thinking, entrepreneurship, and to establish the development of entrepreneurship and social innovation in academic institutions.

the rationale behind the program is that it sees in the institution as a great repository of knowledge, methodology and a place with great tools that with the academic institutions can become very significant in the process of developing of creative thinking, and one of the social and economic development by creating collaborations between students and lectors, and in advanced stages it will be between stakeholders that will be interested to take part in some of the developing projects and to advance them further.

fourteen academic establishments are taking a part in this project. five of those establishments are in Israel, five in India and four more are in Europe.

in the first two years, we were engaged in the process of training managers and teachers. as well we were building the base for the establishment of the SinoLABs in the Israeli and Indian institutions.

this is the third year of the project and nine SinoLABs had built, five in Israel and four in India. the SinoLABs are carrying out activities of training, students' courses, and courses that are appointed to the residents of the area that are interested in learning about entrepreneurship and making essential tools for the making of entrepreneurship. in addition to the courses, the mentors are arranging guidance meetings, and they mentor students every in SinoLABs that are building projects. Distribution of the substance is carried out by the courses in the institutions and distribution the knowledge

in newsletters to stakeholders in the area of the academic institution. HTTPS://WWW.SILICE.EU/NEWSLETTER/

until this day, twenty hackathons were carried out by the SinoLABs.

as a part of those hackathons, more than fifty new projects had built from all different kinds. part of those projects gives the answer to unique populations in the cases of soil pollutions. in India, there are many projects that are engaging in advancing of the agricultural machinery in poor sectors and moving to agricultural without toxins and fertility.

In Israel, there are projects who are engaging in new food developing from new materials and technology for food processing, and new social and business projects. In the part of the project, we had contacted with external stakeholders, More over we had embedded the knowledge and whole process as an innovation in higher education.

The academic program includes a three-year curriculum. A student will be able to combine the studies of innovation and entrepreneurship within his studies at three different levels. At the first year included a general course for the development of innovative, creative and entrepreneurial thinking. In the second year we will establish a course to develop entrepreneurship and projects. The course will include tools and a method for developing a project of entrepreneurship: project building tools, project management, economic analysis, fundraising and external stakeholders, budget management, economic management and marketing. The course are and will be taught by experts from academia, people with experience in projects, tours of projects and meetings with protestors from various fields, In the third year, an entrepreneurship development workshop will be given, which will provide six academic points. The workshop are and continue to be conducted by experts and will give the student time and resources for professional development of the business initiative. Each student will be accompanied by a personal mentor who will spend the entire year thinking about how to advance the project and take it out of the center's hothouse towards the business and economic space in which the project will become profitable.

Tel Hai College in the northern of Israel are a coordinator of the SILICE Project funded by Erasmus progamme of European union. Four project assimilations were developed in higher education **1). Training of Advisors for Projects and Social Businesses,** 2.). **Research Seminar in Entrepreneurship and Social Innovation, 3) Savtipus, 4)**

“development of learners in the 21st century”, 5) Youth leadership development – "social activism in a multi-cultural human mosaic". Following a description of each innovation

1) **From Idea to Project" - Training Advisors for Managing Projects and Social Businesses by** Dr. Sammy Bahat

Social businesses have become a common phenomenon in social and community activity and are in constant expansion. This phenomenon is also known as "hybrid entrepreneurship" that combines the business sector with the social organizations sector. In contrast to the existing situation, in which many frameworks have been developed that support small and medium-sized businesses (assistance centers, financing funds, counseling and training, etc.), there is a lack of institutional attention and a lack of specialists trained in mentoring and counseling of social enterprises and social businesses.

The main objectives of the course is to train consultants in the field of social entrepreneurship and social business, and to provide professional tools for managing ideas and social initiatives from the conceptual stage to the implementation of the project. The course's topics include a short theoretical part, practical steps in formulating an idea, writing a social-business plan for the project, marketing social ventures, raising funding sources and practical experience in promoting a social initiative

Target Population: 15 students and representatives of social organizations from the region.

Integrating topics into a course program from the SILICE project training:

- Social Entrepreneurship Definitions (Conference definition in Berlin, July 2017)
- Indicators for Social Entrepreneurial Activities
- Basic principals in preparing a business plan for social enterprises canvas model
- Marketing of social ventures
- Basic financial analysis

2) Research Seminar in Entrepreneurship and Social Innovation by Dr Sammy Bahat

The phenomenon of social entrepreneurship and social business is a relatively new phenomenon in academic research and the field of activity in the public and private sectors. The practical translation of entrepreneurship and social innovation is reflected in the initiation of programs that change the existing social situation or provide solutions to major social problems such as poverty, equality and social justice, environmental issues, treatment of excluded populations, etc.

The main objective of the course is to provide the students with a suitable environment for conducting research on issues related to social entrepreneurship and innovation, in all their aspects, while providing basic expertise in this field and conducting academic research on a variety of topics such as: social entrepreneurship in a multicultural perspective (Israel and India), social and gender issues and more.

In the first part of the seminar (first semester), the theoretical sections related to the phenomenon of social entrepreneurship and social business and business models for the implementation of social projects will be highlighted alongside study of the methods for conducting academic research. In the second part of the course, the students will prepare the research according to the selected subjects.

Target population: Third-year students in education and human services departments

Integrating topics into a course program from the SILICE project training:

Social Entrepreneurship Definitions (Berlin Definition, July 2017).

- Indicators for Social Entrepreneurial Activities

3) Name of the project: Savtipus Entrepreneurs: in collaboration with Education and Human Services Department and Social Work Department

Project Description: The Savtiapus project is designed to connect the student community with the pensioners community in order to generate active and knowledgeable citizens who will focus on activities for the community and society. The project will create an educational meeting between the communities and will combine theoretical and practical knowledge in order to instill practical tools for the participants. In our view, the practical knowledge of the pensioners and the theoretical knowledge

acquired by the students may lead to a variety of solutions to various issues at the local, regional and national levels, and in various aspects of life, such as economics, education and technology. The project will make a significant contribution to understanding the existing community responsibility of each citizen and will provide life skills to implement the aspirations of the participants.

The Vision: The project will serve as an intergenerational bridge between the student community and the pensioners' community and will encourage social involvement in community development in their living space. The project will deal with the development of human and social capital and will encourage civic activism.

4) "development of learners in the 21st century"

The educational system in Israel and around the world is at a turning point, turning from modernity to postmodernism, which again raises questions about the nature of education, its aims, teaching methods, curriculum, evaluation methods, organizational structure, and the ethical and political aspects of the education system. A new educational paradigm is needed that will enable the education system to cope with new ways of thinking and behavior. A yearly course was lunched for the students at Tel Hai academic college as a part of Tel-Hais' sinolab for entrepreneurship and innovation in education.

The cores is based on three parts: The first part (theory) discusses the essence of the modern era and its implications for the education system. The second part (from theory to practice) discusses the expression of the various educational views in educational practice, as it is expressed in practice.

The third part deals with the challenges that the education system must face and the changes it can make to meet the demands of the new situation, develop an initiative for innovation in education.

Course Objectives: To expose students to innovative pedagogy and active learning concepts that involve the learner as an active part of the learning process.

To learn from" Innovative Schools" and analysis of innovative models that opened in the Golan Heights and the North.

To initiate and develop an innovative learning teaching model for a group of dedicated students.

Target Population: 45-50 students from education department.

Integrating topics into a course program from the SILICE project training:

•Social/ educational Entrepreneurship in the education filed. (Conference definition in Berlin, July 2017)

•Indicators for Social/ educational Entrepreneurial Activities

•Basic principals in preparing Social/ educational enterprises canvas model

•Marketing of Social/ educational.

5) **Youth leadership development – "social activism in a multi-cultural human mosaic".**

By Dr. Anat Raviv

The project is the result of cooperation between the Ministry of Education and the Tel Hai Academic College as part of the development of social activism activities for youth as part of Tel-Hai Sinolab.

The project includes 10 youth identified as social leaders in their schools from 3 communities in the northern part of Israel - Shlomi - students from the Jewish sector, Yarka - students from the Druze sector, Shfaram students from the Arab sector.

The program is based on developing youth leadership to lead social activism in their community and school, In the program, the students are exposed by tutors from Tel Hai academic college to main topics of development social initiatives at their school.

Following the training and development, the students will return to their schools and community and build school-based projects on social activism and inter-school activities.

The expected product is about 30 projects that will be opened within the communities and between the schools.

The program is recognized as part of the Ministry of Education's social matriculation program.

Target Population: 30 pupils 10th grade from 3 settlements in northern part of Israel.

Integrating topics into a course program from the SILICE project training:

•Social Entrepreneurship Definitions (Conference definition in Berlin, July 2017)

•Indicators for Social Entrepreneurial Activities

•Basic principals in preparing a social enterprises canvas model

•Marketing of social ventures

Finally establishing a significant eco-system that integrates technology, society, science and applied research into regional trends and needs. A vibrant and young target audience for innovation and daring that will affect the future of the region and the college in terms of survivability, sustainability, ground-breaking science and economic and demographic growth. An eco-system that uses tools and services in higher education to develop innovation while providing equal opportunity to the geographic periphery to create a wide and valuable employment range".

Bibliography

1. Abraham, M. and Bahat, S. (1985). Their resources are: A new look at the economic investments required in the development areas in Israel. Jerusalem: The Jewish Agency for Israel. Department of Neighborhood Renewal, Planning Division: Rehabilitation and Neighborhood Renewal Program.
2. A. Avrutsky, G. and Ashkenazi, A. (2011). Social Entrepreneurship in Israel - Mapping and directions for the future. Tel Aviv: The Nova Association: Management Academy in community service.
3. Bahat, S. (2009). Graduate companies in greenhouses for technological entrepreneurship in Israel: considerations of location, factors of survival and contribution to development Economic development of peripheral regions. Thesis for the degree of Doctor of Philosophy. Haifa: University of Haifa.
4. Bahat, S. and Czemansky, D. (1992). Factors that encourage or delay local entrepreneurship in the development towns in Israel, Haifa: Technion - Israel Institute of Technology, Center for Urban and Regional Studies.

5. Bahat, S. (2013). The patterns of spatial distribution of start-up companies are mature in incubators for technological initiatives and their contribution to the economic development of the periphery regions of Israel. In: N. Calliot V. (Research Papers in Honor of Prof. Baruch Kipnis), Haifa: University of Haifa, Center for the Study of Haifa and the North, pp. 40-17.
6. Bahat, S. and Davidovitch-Marton, R. (1994). Karmiel-Misgav: A Framework Program. Jerusalem: Jewish Agency for Israel, Development and Settlement Department, Galilee Region.
7. Brinckerhoff, P. C. (2000). Social Entrepreneurship: The Art of Mission-Based Venture Development. N.Y: John Wiley & Sons.
8. Dennis, W. Jr., (2006), "Innovation – Its Creation in American Small Business", presented at IPREG meeting in Brussels, Belgium, May
9. European Commission (2002), Final Report of the Expert Group "Best Procedure", Project on Education and Training for Entrepreneurship, European Commission, Brussels, November.
10. Schramm, C.J. (2004), "Building Entrepreneurial Economies", Foreign Affairs, July/August, Council of Foreign Relations, pp. 104-115.
11. Twaalfhoven, B., and Prats, J., (2000), "Entrepreneurship Education and its Funding", EFER, June
12. The State of Israel, the Ministry of Economy, and the Directorate of Incubators for Technological Entrepreneurship in Israel. http://www.incubators.www: // http /