



# Enhancing Entrepreneurship and Skills Development in Higher Education

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**Abstract.** Improving entrepreneurship has become a multi-level social and economic imperative, since it is an effective approach to inspire individuals to develop social and economic added value that benefits society as a whole. Entrepreneurial education has become the age's means of changing the culture of individuals and society, as well as their ways of thinking, to become entrepreneurs, who have the will and ability to transform new ideas or inventions into successful commercial projects, opening up new horizons to consider knowledge management. The main question is therefore: What needs to happen in education in order to provide a good preparation for entrepreneurship? How will the university be able to adopt new techniques in order to put over an entrepreneurial culture in its students and assist them in translating academic knowledge into real results? Entrepreneurship is defined by the traits of persons who have been labelled as entrepreneurs. These people are distinguished by their capacity to innovate, take chances, be creative, identify possibilities, and benefit from them. Many economists believe that entrepreneurship plays an important role in generating competitive societal value. In this research we will discuss how effective entrepreneurship education is and what can we do to promote entrepreneurship in higher education and what skills do students need to be an entrepreneur, and presenting some recommendations and solutions to enhancing entrepreneurship education and skills development in higher education. Therefore, in this paper we give an overview of the current state of knowledge regarding the entrepreneur profile, as well as a set of activities that may be used in higher education to strengthen the entrepreneurship culture.

**Research Contribution:** It's time for entrepreneurial education through university as an entrepreneurial institution, not every undergraduate has to know to be an entrepreneur, but to be an intrapreneur with an entrepreneurial mindset. Higher education institutions have a role in promoting the culture of entrepreneurship and enhance students to create an entrepreneurial opportunity.

**Keywords:** Entrepreneur · Intrapreneur · Invention · entrepreneurial mindset · Innovative Education

## 1 Introduction

It became evident to decision-makers in industrialized nations that modest entrepreneurial initiatives play an essential role in the economic system, and

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<b>Barter system and entrepreneurship</b>	<b>Money and entrepreneurship</b>
Restriction within the trading vicinities	Ability to carry out long-distance trade
Inability to exchange for the exact value	Medium of value exchange
Value storage problem	Money value can be stored
Value is in the commodities	Only serves as a measurement of value

**Fig. 1.** Table demonstrating the distinction between the barter system and currency in the context of entrepreneurship history.

entrepreneurship programs were promoted and expanded in educational institutions. Let us start by briefly highlighting the history of entrepreneurship.

Entrepreneurship in human history began 20,000 years ago with trading by Barter as a method of exchange and has progressed to the current evolution of banknote and digital money. Around 17,000 BCE, the first trade occurred in New Guinea.

Entrepreneurship has gone through several stages throughout history. However, one crucial point to consider is the fascinating background of how entrepreneurship evolved from hunting through farming, industrialization, and finally into what we have today (online trading, e-Commerce, etc.) Surprisingly, farmers at this time period exchange their needs, such as shelter and equipment, for the crops they produce. Entrepreneurship has evolved from what it once was to the creation of technology, yet it has always served the same objective.

Moreover, as the world became more complex and innovators began to notice imbalances in measures of transaction between people, it became necessary to produce something more static and useful as units of measurement. This led us to the question of how money came to be relevant even now. The old merchants’ or entrepreneurs’ barter system had many flaws that led to the invention of money, such as the difficulty in the double coincidence of wants, the lack of standard units of measurement, the impossibility of goods subdivision, and the inability to balance trade exchange with expensive goods that have higher values. The aforesaid limitations were a dilemma for the Barter system, and individuals began to see the necessity for another form of trade. Money was incorporated into the system as a result of this requirement. Going back farther in time, the usage of money may be said to be nothing new, since history showed that certain ancient coins were discovered in ancient Iraq about 2000 BCE. Later, as trades advanced, transferring items based on currency grew common, and it completely transformed the face of entrepreneurship. What is the distinction between the barter system and currency in the context of entrepreneurship history? In the table below, you can learn about these four important roles: (Fig. 1).

## 2 Statement of the Research Problem

So, what messages has history always talked about entrepreneurship? Essentially, A rigorous examination of history reveals the same definition of an entrepreneur. As Per Bylund an Associate Professor of entrepreneurship said “entrepreneurs are portrayed as a risk-loving, hard-working, adventurous bunch” [1]. History has given us the same view of the French word called “entrepreneur”. Entrepreneurs constantly take us along the path of innovation, revolutionize the economy, and champion as creation heroes. Even

now, the entrepreneur's focus has shifted from what it formerly was to new and more dynamic approaches. In this paper we will examine the lessons we have obtained about entrepreneurship because of its steady evolution throughout history.

### **3 Research Questions**

We have some questions will be discussed in the research:

- We have a huge number of students. Is the Ministry of Higher Education responsible for graduating all those students as entrepreneurs? If not, how can we boost the student's mindset to catch up with technological development and entrepreneurial approach?
- Is every student an entrepreneur?
- How to enhance entrepreneurship and skills development in Higher Education?
- What is the role of the universities, the socio-economic world and the students in order to keep up with global issues and rapid technology progress?
- What are universities' current activities to encourage students to adopt an entrepreneurial mindset?
- What roles might players from the socio-economic world play for a university that encourages entrepreneurship and transfers research findings to the business sector?
- What method of action for a university that fosters entrepreneurship among students and university actors for a more active interaction between university and socio-economic world actors?

### **4 Study Significance**

After all these economic and medical disasters facing the world and the great development in technology, higher education must evolve to graduate a student capable of facing these challenges, the future is for innovation so the students, also the graduate must put in mind to innovate or to evaporate, so that the graduate, but rather the student, can create job opportunities.

### **5 Research Objectives**

The research aims to:

- Highlight the role of the university for enhancing entrepreneurship and skills development in higher education.
- Explore the role of the socio-economic world and companies to share responsibility with university for awareness for students.
- Explore solutions for higher education for the purpose of promoting student's entrepreneurship and skill development.
- Encourage universities to help staff to explore the entrepreneurial mindset of students through education.
- Encourage universities to benefit from Erasmus + programs for staff teaching mobility, staff training mobility, students mobility scholarship and the capacity building program.

## 6 Hypotheses of Research

Provide some suggestions for enhancing entrepreneurship and skills development in higher education. Higher education institutions are currently confronted with a significant challenge: fostering the professional integration of their alumni. The university's role must now extend beyond teaching and research. It must therefore investigate various options for training young people so that, upon graduation, they are immediately employable in the professional world, and this through a strong link with the socio-economic world, technology transfer, business partnerships, student employability, and, above all, innovation. This study will enable university executives and entrepreneurs to consider the university's future and its role in developing an entrepreneurial culture in its students and staff members.

## 7 Methodology

The study used the descriptive analytical approach to introduce innovation, creativity and entrepreneurship, and the efforts of international and Arab universities and higher education in promoting innovation and creativity through creativity and entrepreneurship initiatives and with a challenge to guide students to have an entrepreneurial mindset. The solutions suggested in the research through the case study experience of the researcher under his university activities, scholarship, and workshops. Nowadays because of all challenges we need more awareness about entrepreneurship and to involve it in higher education.

## 8 Keywords

### 8.1 Entrepreneurship

Entrepreneurship is the creation or extraction of economic value. With this definition, entrepreneurship is viewed as change, generally entailing risk beyond what is normally encountered in starting a business, which may include other values than simply economic ones.

### 8.2 Entrepreneur

Someone who makes money by starting their own business, especially when this involves seeing a new opportunity and taking risks. The entrepreneur is commonly seen as an innovator, a source of new ideas, goods, services, and business/or procedures.

### 8.3 Intrapreneur

An intrapreneur brings entrepreneurial thinking and skills to building a career path within the structure of an existing organization. [2].

Entrepreneurs have traditionally relied on history to build on where their forefathers left off. Great entrepreneurs in history have been those who have taken the time

to research people's concerns and come up with ideas that are still relevant today. Great entrepreneurs see beyond their immediate constraints and are determined to break free from their ideas. There are accounts throughout history of outstanding inventive entrepreneurs, such as:

- *Thomas Edison (1862)* was the first to commercialize a viable incandescent light bulb, phonograph, kinetograph, and kinoscope through the Menlo Park industrial research laboratory.
- *Walt Disney (1928)* Created the world's largest and most popular theme park, as well as the first animated feature-length film presented in Technicolor.
- *Henry Ford (1914)* the invention of the vehicle that can be purchased by everyone at a period when autos were just for the wealthy.
- *Opera Winfrey (1954)* She had significant success on a TV chat show and founded a successful magazine, becoming the wealthiest black American in the twentieth century.
- *Ray Kroc (1955)* Today's fast-food business leader and the first to form a cooperation with McDonald's.

The examples in this section clearly show that entrepreneurship remains in the capacity to understand and meet someone's requirements. Indeed, history teaches us, and how things transpired in the entrepreneurship arena from the past to today is a wonderful indicator that the methods to entrepreneurial success follow the same pattern.

Several studies have found that generic entrepreneurship education has a favorable influence on students' entrepreneurial curiosity and ambitions. To that aim, this study tried to construct a model that identifies entrepreneur profiles and suggests chances for universities to give training to strengthen students' entrepreneurship talents, as well as to embrace the entrepreneurial spirit as a fundamental value at university. The university may play an active role in easing students' fear of failure and instilling more confidence in their capacity to start their own enterprises by providing them with the required expertise, skills, and networks.

"Every problem is an opportunity" Winston Churchill. I believe, that entrepreneurship is not for everybody, not all students have to be entrepreneurs, but they must know how to be intrapreneur. After and during their study at the university they have to gain a multidisciplinary approach and a multidisciplinary mindset, they have to discover their innovation lens.

## **9 In What Follows, Some Useful Suggestions that can be Applied in Higher Education to Improve Entrepreneurship Education and Skills Development**

### **9.1 Encourage Global Exchange Programs with Other Organizations**

Global exchange programs are not new, but the concept has not been used as widely in business programs as it should. For example, in Europe, the Erasmus program permits students from Eurozone nations to begin a degree program in one country and complete

it in another, also exists in the United States and elsewhere. The concept is to expand the exchange program to additional universities by recruiting students from diverse cultural and professional backgrounds.

## **9.2 Create Opportunities for Students to Participate in Social and International Entrepreneurship Contest**

We have two experiences at our university Pharos University in Alexandria, Egypt, that I would like to share with you.

Within the framework of Pharos University's interest in motivating its students to enhance their experience and knowledge to increase their capabilities to engage more in Entrepreneurship challenges, the first one was:

### **9.2.1 Career Development and Entrepreneurship Center (CDEC)**

The center to offer students, graduates, and employees a firm foundation of career development principles, expert career coaching, and employment services through a consolidated, all-encompassing programme. CDEC has been established in Fall 2015, This is a place for students to create and innovate. The center offers courses, activities, and workshops for all the university members. The center offers free workshops in several discipline: CV writing, interview skills, Marketing tools, financial statements and decision making and other workshops.

Furthermore, more specific workshops with cooperation with the Agence universitaire de la Francophonie (AUF) with a foreign speaker and organize events like "Entrepreneurship innovation week" full of session, practices, activities and the know how to solve problems and innovate solutions, also as a guidance way for students to know about critical thinking.

### **9.2.2 Entrepreneurship Club We Called It "E-Club. PUA"**

We started the club activity during the pandemic COVID-19 in 2020, as well as that everything goes virtually and so do, we, it was such a challenged opportunity full of activities and virtual workshops like "Meet an Expert" also "Meet an entrepreneur", we had a virtual discussion panel we called it "Your coffee and Your Idea". In addition, we organized virtually a few numbers of competitions with other universities, all to encourage students and magnify their entrepreneurial mindset.

Moreover, on 2021 entitled Intra-Africa 2063 competition 2063" Design thinking and Ideation camp 1<sup>st</sup> edition, through Entrepreneurship Club PUA in cooperation with the Association of African Universities North Africa Regional Office (AAU-NARO) and the Egyptian Academy of Scientific Research and Technology, the camp targets students and graduates of PUA and African Union universities, it was such an exchanging knowledge and internationalization experience between graduated and undergraduate students from different countries and different background.

### 9.3 Entrepreneurship Activity Week

Every year, each university organizes an Entrepreneurship Week to encourage students to pursue entrepreneurial endeavors. During this week, many activities and events are organized, such as simulation exercises, internet games, business plan competitions, guest lecturer programs, various workshops, and local forums for entrepreneurship activities.

### 9.4 Establish in Every University a Network of Specialized Research and Industrial Offices that Work in the Direction of Technology Transfer and Marketing

Here in Egypt, we have an experience that I would like to share, we have TICO offices in Egypt and it has many activities and offices in the Egyptian Universities.

Within the framework of implementing the Egyptian government strategy (Egypt Vision 2030), establish a network of specialist research and industrial offices that work in the direction of technology transfer and marketing, follow up on research projects, promote funding opportunities and international cooperation, and promote intellectual property and patent culture.

A cooperation protocol has been implemented between the Egyptian University for Private E-Learning and the Academy of Scientific Research and Technology to create and support the university's Office of Innovation Support, Technology Transfer, and Marketing to take advantage of the university's e-learning services, including:

- Improving the percentage of the total enrollment of students in higher education in Egypt
- Enhancing the quality of higher education using modern technologies, establishing a wide base of information technology using modern e-learning methods, and managing the university in a modern technological way.
- Delivering high-quality education and training services provide the labor market with workers able to deal with advanced technologies and create a distinctive learning environment and continuously improve it.
- Granting distinguished education in modern and multidisciplinary educational fields to meet future needs in human resources at the local and regional levels.
- Providing its graduates with the knowledge and skills necessary for the industry, thus ensuring high employability, while continuing to provide opportunities for professionals to enhance their career.
- Offering alternative opportunities for working students to attend lectures as intensively as in traditional higher education universities.
- Establishing an advanced research base in the technological fields and link it to centers of excellence abroad TICO aims to achieve its vision and mission through its three offices:
  - Technology Transfer Office (TTO)
  - Technology Innovation Support Center (TISC)
  - Grant and International Cooperation Office (GICO) [3]

### **9.5 The Government Can Organize Large-Scale Media Campaigns**

Therefore, the government can also help to spread the culture of entrepreneurship by organizing large-scale media campaigns aimed at young people of various ages to encourage them to lead and freelance work in order to develop their readiness and entrepreneurial orientation, establish self-employment, and create job opportunities without relying on a job. The method for telling the genuine tales of well-known entrepreneurs and business owners. With high recommendation that governments form strategic alliances with one another, as well as with the business sector and administration, and give universities complete autonomy in order to improve technology and develop human resources, to close the gap between the university's scientific and research outputs and market needs, and to connect universities to the business sector in order to allow the establishment of new entrepreneurial business organizations for a generation of young people, while setting an example.

### **9.6 A Partnership Between Universities and Educational Companies**

A partnership between universities and educational companies responsible for developing student's entrepreneurship skills and developing the skills of faculty members to include entrepreneurial culture in all curricula.

### **9.7 Corporate Relations Department Working on Alumni**

Through international agreements between universities for students and staff members mobility for training in other foreign universities under the entrepreneurship programs and events and competition.

## **10 Conclusion**

In the past, a university education prepared students for occupations specified by others. Universities, more than ever in the unpredictable post-pandemic world, must educate students for vocations that they define for themselves. Universities must provide curriculum, facilities, and incentives to foster new generations of entrepreneurs, in addition to conventional avenues into professions, established businesses, and government. Entrepreneurship has emerged as a critical component of the academic experience. There are also pedagogical educational reasons to teach entrepreneurship, since it involves students with important real-world issues, fosters critical thinking, and broadens their life skills. By encouraging entrepreneurship, universities assist to fulfil their economic and social goals. If every student looks at all challenges as opportunities and then considers how to re-engineer a process, I believe he will discover opportunities and challenges everywhere.

Finally, we emphasize the relevance of entrepreneurship in national economies, since the majority of nations have begun to include entrepreneurship into national educational policies and initiatives, and as a result, they are transforming their educational systems.



Entrepreneurial education now has a prominent presence in both European and world-wide educational systems. Governmental and non-governmental organizations have recognized the need to develop the country's human resources through the entrepreneurial education system in order to create individuals capable of taking the lead in actions based on innovation and change, as they have stated that entrepreneurial education is an influential factor that leads to the strengthening of innovation systems in various countries.

To convince students and to prepare them for a successful launch of their own businesses, it's not only about academic programs, but universities, communities, and governments need to become entrepreneurial. An entrepreneurial university as compared to a traditional academic institution would emphasize economic development, innovation and creativity, and support of entrepreneurship. We need discussion panels between a group of young entrepreneurs and academic staff and the world of work and students to allow university leaders and entrepreneurs to consider the university's future role in developing an entrepreneurial culture in its students and teachers. The major subject to be addressed will be the modalities and innovative techniques for instilling an entrepreneurial mindset in students, as well as the assistance needed to turn academic knowledge into real results.

In my university we had a brilliant experience under the Erasmus + staff and students mobility scholarships, I was selected for Erasmus + staff teaching mobility, and I went for one week (five working days) to a foreign university in Europe, and I participated in some lectures, and I had a few lectures also, it was a unique opportunity for me to visit another country and immerse myself in a different culture and language. For me it had a positive impact on personal development, and on academic development too. For the two institutions, exchange expertise, experience new teaching environments, connect with the host institution to develop common activities. Moreover, such an opportunity was a very good occasion for exchanging good practices and enhancing cooperation between the two institutions. I was able to become aware and knowledgeable about how teaching is done in such a big university, to experiment and develop new learning practices and teaching methods, to gain practical skills relevant for my current job and professional development, to develop my own competences in my field and increase the relevance of my teaching. It was such an interesting opportunity.

On the other hand, we had two students selected under the Erasmus + students mobility scholarships, and they spent one semester (five months). It was such a skillful opportunity for exchange of knowledge and to immerse in another culture and way of teaching, for them it was a beneficial experience.

## **11 Results and Discussion**

The researcher requests an inclusion of a portion on entrepreneurship in the 'Higher education' curriculum including areas such as the history of entrepreneurship, snapshots of great entrepreneurs, and the failure of entrepreneurship. "This is not necessarily to produce entrepreneurship, but to introduce young people to ideas around entrepreneurship." In addition, providing opportunities within the university for students to engage in entrepreneurial experiences, by creating a 'software factory' that gets academics, students, and an external company to work on external projects.

Finally, I highly recommend university to include a ‘general education’ to university curricula component including entrepreneurship, for stronger partnerships between universities and local stakeholders to drive entrepreneurship activities, and for more opportunities within universities for students to engage in entrepreneurial activities, the responsible of the higher education and universities to be aware about opportunities offered by the Erasmus + which will enhance students and staff for exchange opportunities which will built an entrepreneurial students and staff mindset. Not everyone has to be an entrepreneur, but we must improve our entrepreneurial mind and innovation. The university must encourage students to participate in international entrepreneurship events such techne summit and international competition, it can help students to immerse themselves in an innovative vibe.

## 12 Recommendations

All universities have to promote and disseminate the culture of entrepreneurship, motivate researchers to benefit from their research commercially, and help them transform those ideas and research into sought-after products and services. The Curriculum and the way of teaching must help students to discover themselves and to teach them time management, communication skills, self-confidence, critical and design thinking and creativity, career planning and business context in an innovative way.

In the light of the results of the study, can be recommended:

- Exchange students’ and staff mobility between local universities and foreign universities funded by the Supreme Council of Universities under universities international relationship to share experience in the field of entrepreneurship, and create scientific entrepreneurial activities between institutions.
- Partnerships between practical research institutions specialized programs for scientific and technical research.
- Establishing a joint research center for studies that deepen the complementary experience in various fields.
- Exchange of experience in the field of business accelerators in innovation and entrepreneurship centers.
- Creating an excellence platform for universities in the field of entrepreneurship.
- Internal ship or job shadow under a cooperation between universities and socio-economic companies.
- Create incubators in universities to improve student’s creative ideas to become Investigated, because it’s not necessary that every student become an entrepreneur, but it’s a must to become an intrapreneur.
- Workshops for staff to highlight the role of universities and governments in supporting students pursuing entrepreneurship.
- Graduate workshops about Opportunities and Challenges in Entrepreneurship and How to be innovative in business

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