Democratic And Popular Republic Of Algeria Ministry Of Higher Education And Scientific Research

Ecole Superieure de Commerce

A Dissertation Submitted in Partial Fulfilment of the Requirements for Master's Degree in Management Sciences

Specialty: Organization and Management of Enterprise

Impact of university entrepreneurship programs in Algeria on students' attitudes towards establishing their own companies

Case study: University Campus -Kolea-

Submitted by:

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Dedication:

I would dedicate my work to:

My parents, the power of my life.

My sister Sabrina, my supporting person in all the strong situations.

My sister Naziha and my brother Riad.

These special persons who were always with me in the stressful moments:

Amina, Chahinez, Samir, Feriel, Nora, Djoudi, Houda, Yakoub, Amina

And to the most powerful girl, to myself ...

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Table of abbreviations

OECD	Organisation For Economic Co-Operation And Development		
CE	Corporate Entrepreneurship		
ICT	Information And Communication Technology		
ISO	International Organization For Standardization		
USA	United States OfAmerica		
EE	Entrepreneurial Ecosystem		
NGO	Nongovernmental Organization		
UC	University Of California		
UCSF	University Of California, San Francisco		
IPOO	Inputs, Process, Outputs, Outcomes		
UBI	University Business Incubators		
UI	University Incubator		
ANADE	Agence Nationale D'appui Et De Development De L'entrepreneuriat		
ANADE	(National Agency For The Development Of Entrepreneurship)		
ASF	Algerian Startup Fund		
ANCEM	Agence Nationale De Gestion Du Micro-Crédit En Algerie		
ANGEM	(National Micro-Credit Management Agency InAlgeria)		
CATI	Centre D'appui À La Technologie Et L'innovation (Technology and		
CAII	Innovation Support Centre)		
INAPI	Institute National Algerien De La Propriété Industruielle		
INAPI	(Algerian National Institute OfIndustrial Property)		
ESC	Ecole Superieure De Commere (Higher School Of Commerce)		
EHEC	Ecole Des Hautes Etudes De Commerce (School Of Commercial High Studies)		
ITC	Institution De Technologie Commerce (Institute Of Technology Commerce)		
INC	Institute Nationnal De Commerce (National Institute Of Commerce)		
ENSC	Ecole Nationale Superieure De Commerce (National School Of Commerce)		
LMD	License. Master. Doctorat (Bachelor. Master. Doctorate)		
ESGEN	Ecole Superieure De Gestion Et EconomicNumiruque		
ESGEI ((Higher School OfManagement And Digital Economy)		
ENSM	Ecole NationnaleSuperieure De Management (Higher National School Of		
	Management)		
ENSSEA	Ecole NationnaleSuperieure Des Statistiques Economiques Appliqués		
T1 (D	(National School OfStatistics And Applied Economics		
EMP	Entrepreneurship And Management Of Projects		
FC	Finance Et Comptabilité (Finance And Accounting)		
FE	Finance D'entreprise(Finance Of Enterprise)		
M	Management		
MQ	Management Of Quality		
MFB	Money And Banking Finance		
QM	Quality Management		
SPSS	Statistical Package for the Social Sciences		

Abstract

Entrepreneurship is one of the interesting fields to study and investigate about it; many scholars talked and wrote about this concept. According to them entrepreneurship is a one of the elements that help in developing the economic growth of countries, and entrepreneurs are persons with specific features and characteristics. During these years, the concept of entrepreneurship is trendy in the universities of Algeria. The government is working on creating a new generation of entrepreneurial students by setting up incubators is multiple universities. The incubators will help in this project by accompanying and guiding students to create their new ventures. These movements gave universities new mission which is promoting entrepreneurship among its students, and we can call them entrepreneurial universities. Moreover, the changes also help in developing new entrepreneurial ecosystem for students.

Business schools in Algeria have programs and courses that help a student to be familiar with entrepreneurship and train him to be an entrepreneur. One of the aims of these programs is increasing the interest of students towards entrepreneurship and establishing their enterprises. Therefore, our objective is investigating on the impact of university entrepreneurship programs on students and their interest in starting their companies. To reach this aim we used two types of approaches. The first is quantitative, where we distributed a questionnaire between students. The second is a desk research; in this type we collected under the different programs of entrepreneurship. As a result of our study, we found out that there are multiple differences between the programs of entrepreneurship. These programs have an impact on students and their inclination towards entrepreneurship.

Keywords

Entrepreneurship, entrepreneur, entrepreneurial ecosystem, university incubators, university entrepreneurship programs.

ملخص

تنظيم المشاريع هو أحد المجالات المثيرة للاهتمام لدراستها والتحقيق فيها ؛ تحدث العديد من العلماء وكتبوا عن هذا المفهوم. وتعتبر مباشرة الأعمال الحرة أحد العناصر التي تساعد في تنمية النمو الاقتصادي للدول. ويعتبر منظمو المشاريع أشخاصا ذوي سمات وصفات محددة و خاصة. في هذه السنوات، أصبح مفهوم ريادة الأعمال عصريًا في جامعات الجزائر. تعمل الحكومة على إنشاء جيل جديد من طلاب رواد للأعمال من خلال إنشاء حاضنات اعمال في جامعات متعددة. دور الحاضنات في هذا المشروع يتجسد من خلال مرافقة الطلاب وتوجيههم الى غاية إنشاء مشاريعهم الخاصة. أعطت هذه التغيرات و القرارات المتخضة الجامعات مهمة جديدة و التي تتمثل في تعزيز ريادة الأعمال بين طلابها. علاوة على ذلك، هذه التغيرات تساعد ايضا في تطوير نظام بيئي جديد لريادة الأعمال للطلاب.

كليات إدارة الأعمال في الجزائر لديها برامج ودورات تساعد الطالب على التعرف على ريادة الأعمال وتدريبه على أن يصبح رائد أعمال. ويتمثل أحد أهداف هذه البرامج في زيادة اهتمام الطلاب بتنظيم المشاريع وإنشاء مشاريعهم. لذلك، فإن هدفنا هو التحقيق في تأثير برامج ريادة الأعمال الجامعية على الطلاب واهتمامهم ببدء شركاتهم. للوصول إلى هذا الهدف، استخدمنا نوعين من المناهج. الأول كمي، حيث وزعنا استبيانًا بين الطلاب. والثاني هو عبارة عن بحث وثائقي؛ في هذا النوع جمعنا البرامج المختلفة لريادة الأعمال. كنتيجة لدراستنا، اكتشفنا أن هناك اختلافات متعددة بين برامج ريادة الأعمال. وهذه البرامج لها تأثير على الطلاب وميلهم نحو ريادة الأعمال.

الكلمات الرئيسية

ريادة الأعمال، رائد الأعمال، النظام البيئي لريادة الأعمال، حاضنات الجامعات، برامج ريادة الأعمال الجامعية



Nowadays, entrepreneurship is one of the most modern concepts. Every country is working on developing this field. Moreover, entrepreneurship has been recognized as one of the tools that drives the economy of a country.

In Algeria, entrepreneurship is a very new concept. It is not yet fully developed, but it is gradually evolving. The government of Algeria tries to help entrepreneurs by providing them with the necessary tools to start their business. Furthermore, it provides training workshops in order to provide the entrepreneurs with the knowledge they need to be successful in their industry.

One of the strategies of this country is to encourage and motivate students to choose entrepreneurship, and think about creating their own firms because the characteristics of young people, including students, are very suitable for entrepreneurship.

We know that the connection between students and the government is the university. At this moment, we are witnessing a transition from a traditional university to an entrepreneurial university, and its role is changing from simply transforming knowledge in classrooms and scholarly publications to promoting entrepreneurship as well.

In order to promote entrepreneurship, universities or higher schools offer special programs or modules designed to capture the attention of their students and encourage them to start businesses.

In this context, this research will focus on studying the impact of university entrepreneurship programs on students' attitudes towards establishing their own companies.

The main question of the Study

This research is concerned with the investigation of "is there any influence of university entrepreneurship programs on students' interest to set up their own businesses?"

This main question opens the doors to raise other questions such as:

- Does the university have a role in promoting entrepreneurship?
- Do university entrepreneurship programs in Algerian business schools influence students to belong to this field?
- What is the level of students' inclination towards entrepreneurship?
- Does university incubators are efficient?

Hypothesises

Principal hypothesis

Yes, there is an influence of university entrepreneurship programs on students' interest to set up their own businesses

Secondary hypothesis

- \mathbf{H}_{1} yes, university have a role in promoting entrepreneurship.
- **H**₂- yes, entrepreneurship programs in Algerian business schools influence students to choose this field.
- **H**₃- there is a high level of students' inclination towards entrepreneurship.
- **H**₄ no, university incubators are not efficient yet.

The reasons that made us choose this subject

They are: the importance of entrepreneurship for our country, the new mission of universities; from research and teaching to promoting entrepreneurship, attitudes and interest of students towards self employment and entrepreneurship.

Objective of the Study

This study will aim to demonstrate the influence of university entrepreneurship programs on the tendency of students to create their own business, especially in Algerian business schools, as well as to find out students' attitudes towards entrepreneurship.

Research Method

The method is based on the population census so that we can measure the attitude of the target population which is consisting of fifth year students.

We will verify the accuracy of what we have seen by means of a questionnaire. The processing of the questionnaire will be done using the software SPSS.

For the writing style of this thesis, we will adopt a multi-style approach (style: descriptive, analytical)

Working structure

our study will contain two chapters in the theoritical part and one in the practical part.

The first chapter will concentrate on entrepreneurship. The objectives of it are: giving a definition to entrepreneurship and to entrepreneur, identifying the role of this field on the economic growth of countries, and showing how entrepreneurs can manage the risks that they face.

The second chapter will describe the concept of entrepreneurship ecosystem and the role of universities in these ecosystems. We will talk about entrepreneurial universities and university incubators.

The last chapter is a practical one, where we confirm our hypothesis by analysing the collecting data.

Chapter one:

Entrepreneurship and starting a business

Introduction

According to the Algerian government's interest in entrepreneurship and starting businesses, several people and researchers tends to discover and study this field and provide statistics about it. In this chapter; We will identify the concept of entrepreneurship, which represents the first variable in our research. As well as, presenting the different types of entrepreneurship and its impact on economic growth and community, and finishing this chapter by talking about risk management.

In the first section, we will start by introducing different schools of thought on entrepreneurship, showing multiple opinions about this concept of each school. Then, we will conclude by giving a definition of entrepreneurship and the entrepreneur.

The second section will present the role of entrepreneurship on economic growth and cite the various types of entrepreneurship.

Finally, the third section will focus on risk management. It will begin by discussing the concept of risk and its various types, following that by a clear definition of risk management and the risk management paradigm. This section will then outline the steps involved in creating a risk management plan and finishing by the benefits of effective risk management.

Section one: the concept of Entrepreneurship

Entrepreneurship is one of the fields which contribute to the economic development of any country. This section discusses the schools of thought on entrepreneurship as well as the concepts of entrepreneurship.

1 Schools of thought on entrepreneurship

School of thought is the way of thinking about a concept, and for a certain subject, it can be found multiple schools of thought about it. There are six schools of thought on entrepreneurship and they gave an overview of entrepreneurial behaviour (Cunningham & Lischeron, 1991), these schools are:

- Great Person school
- Psychological characteristics school
- Classical school
- Management school
- Leadership school
- Intrapreneurship school

1.1 The Great Person School

The pioneers of this school believe that an entrepreneur was born with specific characteristics that make him/her perform extremely well in his/her business, and by these different features they are called « the great people » (Cunningham & Lischeron, 1991).

These great persons are characterized by a good level of charisma to lead people, a level of physical attraction (height and weight), they have to be highly motivated and should be able to act as an inspiration to others, and they have the courage to face the risks. These entrepreneurs are born with these features and they cannot be trained to have them (Towkam, 2021).

This school was criticized on many points (Towkam, 2021), such as:

- A person can be trained to be an entrepreneur and can learn about entrepreneurship
- Physical characteristics are not necessary to be a successful entrepreneur; in fact, there are many great entrepreneurs with less attractive physical appearance
- Entrepreneurs are not born with specific skills, but their environment can be a reason for them thoughts and values which makes them good entrepreneur

• The motive for community development is not essential for an entrepreneur. If he is interested in community development and the well-being of society, he can choose to start an organization focused on charitable endeavours rather than pursuing entrepreneurship

1.2 The Psychological Characteristics School

This school of thought concentrates on the psychological factors and characteristics of personality associated with entrepreneurial spirit. It considered entrepreneurs as people with the unique values, attitudes and needs that drive them. The three most popular personality characteristics are, first, personal values, such as honesty, duty and responsibility; second, risk-taking propensity; and third, a need for achievement (Cunningham & Lischeron, 1991, p. 48).

The followers of this school believe that these features are learned early in life which develops over time through family influence, educational influence, and work and life experience (Palmer, 2019, p. 29).

These individual traits cannot be developed in classroom or universities and they are the necessary preconditions for entrepreneurship (Cunningham & Lischeron, 1991, p. 49).

1.3 The Classical School

According to Schumpeter, The key element of entrepreneurial spirit is the creativity of the individual and does not necessarily imply ownership (Cunningham & Lischeron, 1991, p. 51). He defined entrepreneur as "the one who carries out *new combinations*" (Thomas, 2004, pp. 31-32), which also he calls them innovations. They are:

- The introduction of a new product or a new product quality
- The introduction of a new production method
- The opening of a new market
- The use of new raw materials or sources of semi manufactures
- The creation of a new industry organization

Entrepreneur is defined as: "the entrepreneur always searches for change, responds to it, and exploits it as an opportunity." (Drucker, 1985, p. 28). Innovation serves as the distinctive instrument of entrepreneurs, the means by which they exploit change as an opportunity for a different business or unique services (Drucker, 1985, p. 19).

The conditions of the classical school to consider any person as an entrepreneur are these characteristics: **innovation**, **creativity**, **or discovery**. Moreover, entrepreneurship in accordance with this school is the process of creating opportunities (Cunningham & Lischeron, 1991).

1.4 The Management School

Entrepreneurship takes great inspiration from management theory, where the original definitions were intuitively linked to management. The Management School believes that entrepreneurship can be taught and developed through classroom training. Planning, organizing, coordinating and budgeting functions are important for entrepreneurship management. Companies' high failure rate is due to low or limited training and decision-making, as well as lack of understanding of marketing and funding decisions (Cunningham & Lischeron, 1991).

1.5 The Leadership School

The entrepreneurial leadership approach suggests that entrepreneurs must be qualified in influencing people to involve in their cause. Entrepreneurs need to be leaders, able to communicate to others their vision of what is possible and to inspire others to bring their ideas to fruition (Kao cited in Cunningham & Lischeron, 1991).

In summary, this school believe that an entrepreneur must be a leader and his role shown in creating change, bring new values and competencies and the ability to set clear objectives while creating opportunities.

1.6 The Intrapreneurship School

The principal reason of developing this school was the lack of innovation and creativity within companies, intrapreneurship is the practice of developing a new venture within an existing organization, to exploit a new opportunity and create economic value (Pinchot cited in Parker, 2011, p. 2). Intrapreneurship can be important not only for large corporations but also for small and medium-sized enterprises (Carrier cited in Bostjan & Hisrich, 2001, p. 496).

In general, an intrapreneurial school assumes that innovation can take place in existing organisations, by encouraging people to become entrepreneurs in semi-autonomous units (Cunningham & Lischeron, 1991, p. 53).

In general, the different ideas and theories of entrepreneurship that have been made clear in the schools that we mentioned earlier do not mean that one of them is the best or correct then others, but the purpose is that the researcher is free to choose one of the schools that correspond to his research.

The summary of these different schools will be described in Table 1.

In the end, the various ideas and theories of entrepreneurship discussed in the aforementioned schools do not suggest that one is better or more accurate than others. Instead, their purpose is to provide researchers with the freedom to select the school that aligns with their research objectives and interests.

Table 1: summary of approaches for describing entrepreneurship

.	0		D.1	au -
Entrepreneurial model	Central focus or purpose	assumption	Behaviors and skills	Situation
Great Person school	The entrepreneur has an intuitive ability _ a sixth sense _ and traits and instincts he/she in born with	Without this « inborn » intuition, the individual would be like the rest of us mortals who « lack what it takes ».	Intuition, vigor, energy, persistence and self-esteem.	Start-up
Psychological characteristics school	Entrepreneurs have unique values, attitudes, and needs which drive them.	People behave in accordance with their values, behaviour results from attempts to satisfy needs.	Personnel values, risk taking, need for achievement, and others.	Start-up
Classical school	The central characteristic of entrepreneurial behavior is innovation	The critical aspect of entrepreneurship is in the process of doing rather than owning.	Innovation, creativity, and discovery.	Start-up and early growth
Management school	Entrepreneurs are organizers of an economic venture; they are people who organize, own, manage, and assume the risk.	Entrepreneurs can be developed or trained in the technical functions of management.	Production planning, people organizing, capitalization, and budgeting.	Early growth and maturity
Leadership school	Entrepreneurs are leaders of people; they have the ability to adapt their style to the needs of people.	An entrepreneur cannot accomplish her/his goals alone, but depends on others.	Motivating, directing, and leading.	Early growght and maturity
Intrapreneurship school	Entrepreneurial skills can be useful in complex organizations; intrapreneurship is the development of independent unites to create, market, and expans services.	Organizations need to adapt to survive; entrepreneurial activity leads to organizational building and entrepreneurs becoming Managers.	Alertness to opportunities, maximizing decisions.	Maturity and change

Source: (Cunningham & Lischeron, 1991, p. 47)

2 **Definition of Entrepreneurship**

One of the challenges facing entrepreneurial research is the difficulty of defining the concept of entrepreneurship. "Perhaps the largest obstacle in creating a conceptual framework for the entrepreneurship field has been its definition." (Shane & Venkataraman, 2000, p. 218). And from the various schools that we have shown before, we clearly can see different views and opinions on entrepreneurship.

Table 2 will contain some points of view from multiple authors in different periods on entrepreneurship and the features of an entrepreneur.

Table 2: Definitions of Entrepreneurship, entrepreneur

R. Cantillon(1755)	 entrepreneur is defined as "he is responsible for all the exchange and circulation in the economy" (Van Praag, 1999, p. 313) "someone buying goods or materials and labor resources to be sold as goods in the future for uncertain prices" (Thornton, 2019, p. 4)
J.B. Say (1803)	 entrepreneurship is: "the bringing together of factors of production" (Mokaya, Namusonge, & Damary, 2012, p. 133) "The entrepreneur plays a central coordinating role both in production and distribution. Also within the firm, he is the coordinator and moreover" (Van Praag, 1999, p. 313)
J.Schumpter (1934)	 entrepreneurship is: "the carrying out of new combinations" (Van Praag, 1999) "The function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on" (Śledzik, 2013, p. 92)
W.Gartner (1988)	• "creation of new organizations" (Per, Delmar, & Wiklund, 2017, p. 25)
P.Drucker (1995)	 "Entrepreneurship is thus a distinct feature whether of an individual or of an institution. It is not a personality trait" (Drucker, 1985, p. 25) "Entrepreneur always searches for change, responds to it, and exploits it as an opportunity." (Drucker, 1985, p. 28)
Shane, Scott et Venkataraman (2000)	"Entrepreneurship is a mechanism by which society converts technical information into these products and services." (Scott & Venkataraman Sankaran, 2000, p. 220)
Van Aardt et al., (2008)	 "entrepreneurship as the act of initiating, creating, building and expanding an enterprise or organisation, as well as building an entrepreneurial team and gathering other resources to exploit an opportunity in the marketplace for long term growth." (Chimuchek, 2014)
Chang and Wyszomirski (2015)	 entrepreneurship is a "management process through which cultural workers seek to support their creativity and autonomy, advance their capacity for adaptability, and create artistic as well as economic and social value" (Toscher & Morris, 2019, p. 3)

Source: created by myself.

As a result from these various opinions on entrepreneurship and entrepreneur, the definitions that will match the object of our study are:

- Entrepreneurship is the process of identifying, creating and looking for opportunities to create value by starting a new company.
- Entrepreneur is a challenging person who is ready to take risk to start and manage his own business and his principal object is the innovation of new product or services or the development of something existing.

Section two: Impact and types of Entrepreneurship

The significant impact of entrepreneurs and their innovations on the economics of advanced countries (USA, Japan...) attracts the developing and under developed countries to rethink about the importance of entrepreneurship in economic developed.

1 The Role of Entrepreneurship in Economic Development

Entrepreneurship plays a clear role in driving positive change in the economy, as entrepreneurs bring forth new ideas, establish new ventures, and provide employment opportunities. They are considered a catalyst for economic progress.

The significant role of entrepreneurship in driving economic development can be systematically presented as follows:

Table 3: entrepreneurship role in economic growth

Role	Description
Promotes Capital Formation	Entrepreneurs promote capital formation by
	mobilising the idle savings of public.
Creates Large-Scale Employment	Entrepreneurs provide immediate large-scale
Opportunities	employment to the unemployed which is a
	chronic problem of underdeveloped nations.
Reduces Concentration of Economic	Helping in developing a large number of
Power	entrepreneurs will reduce concentration of
	economic power amongst the population and
	minimize monopoly.
Promotes Balanced Regional	Entrepreneurs help to remove regional
Development	disparities through setting up of industries in
	less developed and backward areas.
Improvement in the Standard of Living	Entrepreneurs play a key role in increasing
	the standard of living of the people by
	adopting latest innovations in the production
	of wide variety of goods and services
Promotes Country's Export Trade	Entrepreneurs help in promoting a country's
	export-trade, which is an important
	ingredient of economic development.
Increasing Gross National Product and	Entrepreneurs are always on the lookout for
Per Capita Income	opportunities. They explore and exploit
	opportunities,, encourage effective resource
	mobilisation of capital and skill, bring in
	new products and services and develops
	markets for growth of the economy. In this
	way, they help increasing gross national
	product as well as per capita income of the
Source: (Dhaliwal 2016 pp. 4265 4268)	people in a country.

Source: (Dhaliwal, 2016, pp. 4265-4268)

In summary, entrepreneurs play a pivotal role in sparking economic development through the establishment of new businesses, job creation, and making impactful decisions that contribute to various goals. Recognizing and promoting the importance of entrepreneurs is crucial for driving sustained economic development.

2 Types of Entrepreneurship

There are different types of entrepreneurship including social entrepreneurship, small business entrepreneurship, corporate entrepreneurship and technological entrepreneurship.

2.1 Social entrepreneurship

Social entrepreneurship is defined as "the process through which specific types of actors – the "social entrepreneurs" – create and develop organisations that may be either social enterprises or other types of organisations." (OECD). It involves citizens actively building or transforming institutions to address social problems (Bornstein & Davis, 2010, p. 1). in summary, this type aims to solve a social problem.

2.1.1 Social Entrepreneurship elements

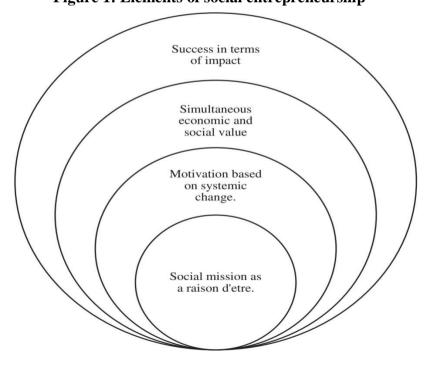


Figure 1: Elements of social entrepreneurship

Source: (Portales, 2019, p. 56)

According to figure 1, there are four elements of social entrepreneurship:

- Social mission as a raison d'étre: Social mission and the creation of social value as a central element.
- *Motivation based on systematic change*: Motivation focused on the change of the structural conditions that generate the problem that wishes to address—visualized by the entrepreneur as an opportunity for social change.
- Simultaneous economic and social value: Model for the generation of social and economic value.
- Success in terms of impact: Success based on indicators of social impact and not financial performance.

These elements operate in a concentric manner, with the social mission positioned at the core of entrepreneurship. The social mission serves as the foundation and driving force behind the existence of the venture, constantly evolving and shaping its trajectory towards the achievement of success indicators (Portales, 2019).

In this context, social entrepreneurship is a way of generating economic wealth and solving a social problem sustainably (Dees, 2007).

2.2 Small business entrepreneurship

The definition of this concept is differing between various countries, some provide definitions related to the degree of economic growth and others provide legal definitions, and there is a third type which is administrative definitions. All of this is due to economic, geographical organization and infrastructure differences between the countries (Kacemi & Gadi, 2022, p. 57).

2.2.1 The Algerian definition of Small Business Enterprise

According to the article 5 of the law No. 17-02 of 11 Rabi' al-Thani 1438 corresponding to January 10, 2017, small and medium-sized enterprises whatever their legal status is defined as:

- Enterprises that produce goods and services employing
- Enterprise employing 1 to 250 people
- Enterprises run with turnover not exceeding 4 billion Algerian dinars, or a total annual outcome not exceeding one billion Algerian dinars
- With a respect to the standards of independence

2.2.2 The role of small business

This small business has a significant role on the community; it is one of the primary drivers of job creation. It is known for its agility and ability to innovate, moreover, it is adaptable and responsive to changing market conditions. Small businesses can contribute to the overall resilience of the economy (Torrés, 1999).

2.3 Corporate entrepreneurship

Corporate entrepreneurship is held to foster entrepreneurial behaviours within an organization (Echols and Neck, 1998), it uses the fundamentals of management, while adopting a behavioural style that challenges bureaucracy and encourages innovation (Barringer and Bluedorn, 1999). Corporate entrepreneurship (CE) refers to the process of organizational renewal and relates to two distinct but related phenomena (Guth and Ginsberg, 1990).

Corporate entrepreneurship involves creating an environment that encourages employees to think and act like entrepreneurs within the boundaries of the organization.

2.3.1 The two types of corporate entrepreneurship

This part outlines conceptual model of corporate entrepreneurship as a result of Exopreneuship or Intrapreneurship or both phenomena.

2.3.1.1 Intrapreneurship

Intrapreneurship is one of the aims and outcomes of corporate entrepreneurship (Guth and Ginsberg, 1990). Intrapreneurial activities which are focused include internal corporate venturing also known as new venture division and formal research and development group. The dispersed intrapreneurial activities include idea creation centre and employee project model (Kanter and Richardson, 1991).

2.3.1.2 Exopreneuship

Exopreneuship typifies the use of outside entrepreneurs for new venture creation such as franchisees, subcontractors, strategic alliance partners and external corporate venturing (Chang, 2000).

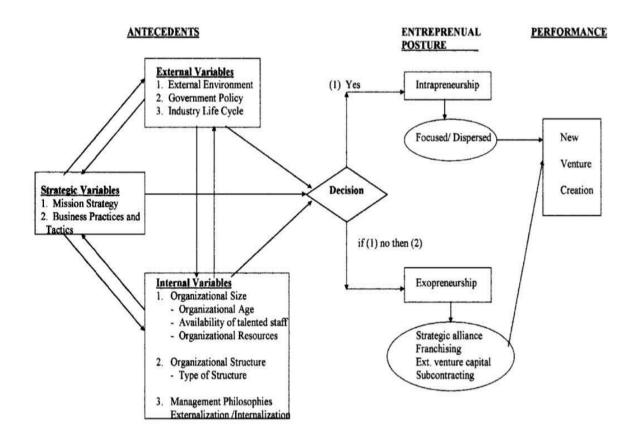


Figure 2: Intrapreneurship and Exopreneuship model

Source: (Chang, 2000)

We can demonstrate from this model that corporate companies can choose one of the two decisions: Intrapreneurship or Exopreneuship, in order to create new ventures.

2.4 Technology entrepreneurship

Technology entrepreneurship can be defined as organization, management, and risk bearing of a technology based business (Nicholas, Armstrong, 2003). It can be joint efforts to interpret ambiguous data, joint understanding to sustain technology efforts, and persistent, coordinated endeavour to accomplish technological change (Jelinek, 1996).

2.4.1 Types of technology entrepreneurship

Technology entrepreneurship can take three forms: technology entrepreneurship, digital technology entrepreneurship and digital entrepreneurship (Giones, Brem, 2017).

New products of technology entrepreneurship are based on breakthroughs in research,
 science-based advances through specific knowledge in an academic field.

- New products of digital technology entrepreneurship are based on ICT technologies only; making smart devices using the possibilities of Internet of Things.
- New products and services of digital entrepreneurship are based on the Internet.
 Services running only in the cloud; using big data or artificial intelligence.

In summary, Entrepreneurship can be in different shapes. Its types have dissimilar missions and concepts but they all seek to achieve the same aim which is new ventures creation and creating value. Entrepreneurship has a significant impact on economic developme

Section three: Entrepreneur facing risk

When starting a business or creating an organization, entrepreneurs face a multiple types of risk. Many sources can cause these risks including market conditions, regularity changes, economic trends, and internal factors such as cash flow and personal issues. This section will contain an

1 The concept of risk

One of the first economists who indentified the relationship between Entrepreneurship and risk was Richard Cantillon (Hisrich & Ramadani, 2017). There are several definitions and uses of the term risk; however, there is no universally accepted definition (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996, p. 20). According to Kirkpatrick, all the different definitions agree that risk has two principal characteristics: *uncertainty* and *loss* (Kirkpatrick, Walker, & Firth, 1992). Presented below are some definitions of risk.

- "Risk is a combination of five primitives: outcome, likelihood, significance, causal scenario and population affected." (Hisrich & Ramadani, 2017)
- According to ISO 31000 "Risk is now defined as the "effect of uncertainty on objectives" (complianceonline)
- "Risk is the possibility of suffering loss, injury, disadvantage, or destruction." (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996)

In general, the two key words in describing risk are the loss and the uncertainty as it is mentioned in different definitions of risk. This concept includes several types.

2 Types of risks

New entrepreneurs may face a variety of risks affecting their businesses. These risks can be categorized into strategic, financial, legal and other types of risks.

Some of the following are different types of risks:

2.1 Financial risk

Due to a particular investment, the entrepreneur puts at risk a significant portion of his capital, which usually comes from savings made as a result of any previous activity. This capital will be lost if the business fails (Hisrich & Ramadani, 2017).

2.2 Career risk

The decision to start a private business should be considered and analysed very seriously, especially by managers with a guaranteed organizational function, a high salary and a good range of benefits. The topic that is often discussed is how a failed entrepreneur will be able to find new job or return to his old job (Hisrich & Ramadani, 2017).

2.3 Social risk

The existence of different stakeholders also creates a social risk for the entrepreneur, with regard to "self-esteem and self-confidence. Those who are insecure and uncertain are most sensitive" (Power, Di Domenico, & Miller, 2020, p. 11). However, high self-esteem and self-efficacy among entrepreneurs may reduce their perception of social risk. (Power, Di Domenico, & Miller, 2020).

Moreover, according to the *Harvard business review*, business risks are bucketed into three categories (Kaplan & Mikes, 2012).

2.4 Preventable risks

An organization, no matter how large or small it is, can be a source of avoidable risks that can be fully controlled and must be avoided at all costs. Examples of these risks include engaging in illegal business activity, lying to potential investors, or disregarding environmental regulations (Braccialini, 2023).

2.5 Strategy risks

Entrepreneurship requires taking strategic risks that may be beneficial and essential. These risks arise from the identification of potential strategic opportunities that allow for returns on investment. These opportunities may involve introducing a new range of products, venturing into a foreign market or hiring a new investor (Braccialini, 2023).

2.6 External risks

They are factors that arise from sources outside business operations and are beyond the entrepreneur's control. These risks, as the name suggests, may negatively affect the outcome of projects. For example: current economic conditions (Braccialini, 2023).

After indentifying which type of risks an entrepreneur is or will be facing, he should manage this risk

3 Risk management:

Since the beginning of humanity, man has plan and choose the best decisions to face his daily problems and risks. And as a concept, Risk management start to be studied after the Second World War. And the origin date of the modern risk management is 1955-1964 (Dionne, 2013, p. 1). Kloman in 1974 suggested that risk management was "the art of making alternative choices, an art that properly should be concerned with anticipation of future events rather than reaction to past events." (Kloman, 1992, p. 302). Another definition was suggested by George Head in 1980, "risk management is simply good common sense in coping with the possible and actual daily mishaps, and occasional major disasters, that lead to financial losses and unfulfilled plans for individuals and organizations - indeed for our society as a whole" (Kloman, 1992).

For a new entrepreneur or a business owner it's important to manage and deal with risks. One of the tools that can help in minimizing the negative effects of risks on businesses is the paradigm of risk management.

3.1 Paradigm of risk management

Communicate

Risk

Management

Paradigm

Control

Plan

Figure 3: Risk management paradigm

Source: (Pankaj, 2019)

Management paradigm consists of several functions, which will be described and represented in Table 4.

Table 4: Description of the multiple functions of risk management paradigm

Function	Description	
Identify	Search for and locate risks before they become problems.	
Analyze	Transform risk data into decision-making information. Evaluate impact, probability, and timeframe, classify risks, and prioritize risks.	
Plan	Translate risk information into decisions and mitigating actions (both present and future) and implement those actions.	
Track	Monitor risk indicators and mitigation actions.	
Control	Correct for deviations from the risk mitigation plans.	
communicate	Provide information and feedback internal and external to the project on the risk activities, current risks, and emerging risks. Note: Communication happens throughout all the functions of risk management.	

Source: (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996)

3.2 Risk Management Plan:

A Risk Management Plan is a document that identifies how the team identifies, analyzes and reacts to risks that may impact the business (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996). "The risk management plan describes how each of the risk processes (Risk Identification, Qualitative Risk Analysis, Quantitative Risk Analysis, Risk Response Planning, and Risk Monitoring and Control) will be implemented, monitored, and controlled throughout the life of the project." (Kirkpatrick, Walker, & Firth, 1992).

3.2.1 Creation of risk management plan:

3.2.1.1 Setting objectives

In order to align risk management to current and future objectives, team members must review operational objectives. Whether the objective is to develop a new product or establish business partnerships. Fixing clear objectives is the first step towards ensuring that the risk management plan is aligned with the desired results (Hisrich & Ramadani, 2017).

3.2.1.2 Risk Identification

It entails identifying and documenting all potential risks that may affect the project. This involves reviewing project documents, categorizing risks, utilizing checklists, employing

techniques such as brainstorming to identify risks, and ultimately creating a comprehensive list of all project risk (Hisrich & Ramadani, 2017).

3.2.1.3 Risk assessment

It involves analysis of data collected to identify potential risks; this step consists of two types: qualitative risk assessment and qualitative risk assessment.

The Qualitative Risk Analysis process aims to evaluate the potential impact of the risks identified during the Risk Identification process on the project objectives. This involves assessing the likelihood of the risks occurring and prioritizing them based on their potential effect on the project objectives. The outcome of this process is a ranking of risks based on their probability of occurrence and the severity of their impact on the project objectives (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996).

The process of *Quantitative Risk* Analysis involves assessing the potential impacts of risks and measuring the overall risk exposure of a project by assigning numerical probabilities to each risk and its potential effects on project objectives. The result of this process is a prioritized list of quantified project risks (Dorofee, Walker, Alberts, Higuera, & Murphy, 1996).

3.2.1.4 Risk Response Planning

Risk response planning is the process of determining appropriate actions to minimize potential threats and maximize any opportunities identified during risk assessment (Hisrich & Ramadani, 2017).

3.2.1.5 Risk Monitoring and Control

objective is to promptly respond to any potential risks, constantly track and monitor identified risks, assess the effectiveness of risk response plans, identify emerging risks, and ensure that proper risk management procedures are being followed according to the guidelines set out in the risk management plan (Hisrich & Ramadani, 2017).

3.3 Benefits of risk management:

Effective risk management can help entrepreneurs predict and prepare for potential challenges, as well as creating opportunities for growth and success. Among its benefits we have the following:

- The company's risk management helps in decision-making by identifying areas with major risks and suggesting action plans to address them. (Mandzila, 2009)
- Risk management will help to build investor confidence through the updating of the company's business processes in order to identify any malfunctions or activities sensitive to the needs of key objectives of the company. (Mandzila, 2009)
- The company's risk management system helps entrepreneurs identify a strategy that is consistent with the business's willingness to take risks. (Mandzila, 2009)

In the end, Risk management is a process of identifying, assessing, and controlling potential risks that may affect an organization's ability to achieve its objectives. The aim is to minimize the negative impact of risks and take advantage of potential opportunities.

Conclusion

In the end, we can conclude by noting that defining entrepreneurship is a challenge for researchers. There are multiple definitions available according to the different schools of thought. The definition that matches the focus of this research is the one that is closely connected with innovation and creating new products or services.

Entrepreneurship plays a fundamental role in economic growth by promotes capital formation, creates large-scale employment opportunities, reduces concentration of economic power, promotes balanced regional development, improvement in the standard of living, promotes country's export trade and increasing gross national product and per capita income. Entrepreneurship has different types including social, small business, corporate and technology entrepreneurship , but even this diversity there is one goal which is creating new companies and creating value.

For an entrepreneur, risk management is an important element for achieving success in business. By developing a well-designed risk management plan, it will result a significant benefits for the project or company, and aid in making the perfect decisions to face the risks and challenges.

To Complete Our Study, we will discuss our second variable "university entrepreneurship" in our second chapter which called "entrepreneurship ecosystem".

Chapter two: entrepreneurship ecosystem.

Introduction

As a consequence of the significant role of entrepreneurship in driving economic development in different countries like USA, Singapore and others, the concept of entrepreneurial ecosystem is having a big attention from multiple scholars, practitioners and policymakers. Countries are working on creating the best EEs in order to receive important results on their economic development.

Firstly, the section will introduce the concept of entrepreneurial ecosystem. Moreover, it will present famous types of entrepreneurial ecosystem, and ending the section by the Silicon Valley example as a leader of EEs.

Secondly, we will speak about the second variable of our research "entrepreneurial university". The section will identify the term and describe three models of it, after that we will finish by talking about university incubators.

Finally, one of the objects of entrepreneurial universities is to train student to create a business canvas model. In this context, the third section will present the business model canvas and define the various elements of the model. Furthermore, we will give some examples about BCM; this will be followed by its advantages.

Section one: entrepreneurial ecosystem

As a result of the significant role of entrepreneurship in driving economic development in different countries like USA, Singapore and others, the concept of entrepreneurial ecosystem is having a big attention from multiple scholars, practitioners and policymakers. This section will introduce and identify this concept; moreover, it will describe the model of the EE and its various elements.

1 Definition of Entrepreneurial Ecosystem

In order to explain this concept, it is important to clarify the meaning of each word of the EE. Starting with "entrepreneurial" or *entrepreneurship*, this concept was described in the first chapter by "the process of identifying, creating and looking for opportunities to create value by starting a new company". For the second word "ecosystem", it is a combination between two Greek words "oi χ o ζ " - "eco", which means "home" and "συστημα" - "system", which means "complex". An ecosystem is, therefore, "a complex system hosting a number of entities" (Cavallo, Ghezzi, & Balocco, 2018, p. 10).

Based on several earlier studies, there is a clear diversity in the definition of entrepreneurial ecosystems. Some researchers tend to believe that these ecosystems and their interactions are geographically specific and regionally focused, for example:

"The entrepreneurial system consists of a complexity and diversity of actors, roles, and environmental factors that interact to determine the entrepreneurial performance of a region or locality" (Spilling, 1996, p. 1).

"Entrepreneurial ecosystems are defined as an interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures." (Cohen, 2006).

"Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative start-ups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures." (Spigel, 2017, p. 2).

Other researchers have expanded the reach of entrepreneurial ecosystems across geographic borders. They see entrepreneurial ecosystems as a network that doesn't have to be local (Isenberg, cited in: Wald, & Kansheba, 2020), One of these scholars was Isenberg and he

described it as "The entrepreneurship ecosystem consists of a set of individual elements—such as leadership, culture, capital markets, and open-minded customers—that combine in complex ways." Furthermore, he assumed that the sustainability of an entrepreneurial ecosystem should not be considered only from a geographical point of view, but rather from the point of view of an extensive network (Isenberg, cited in: Wald, & Kansheba, 2020).

2 The Entrepreneurial ecosystem models

In this study, three models of the EE will be described and they are:

- Ecosystem domains by (Isenberg & Onyemah, Fostering Scale Up Ecosystems for Regional Economic Growth, 2016)
- Six+Six entrepreneurship ecosystem model by (Koltai, 2016)
- Ecosystem attributes by (Spigel, 2017)

2.1 Ecosystem domains

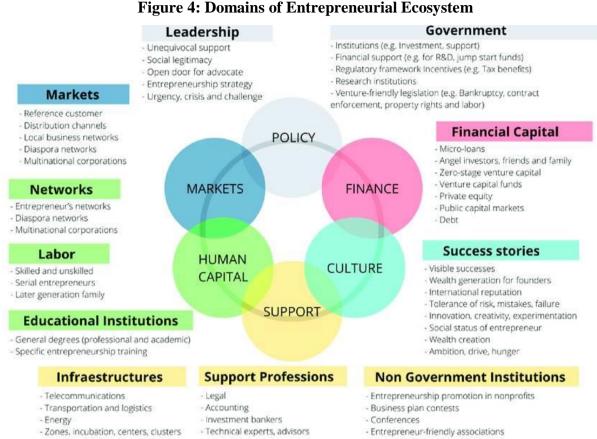
Isenberg was one of the pioneers to this field, according to him, the entrepreneurial ecosystem consists of six domains: policy, finance, culture, supports, human capital and markets (Isenberg & Onyemah, Fostering Scale Up Ecosystems for Regional Economic Growth , 2016). "Some of the elements shown in his model are similar to the biotic¹ factors in natural ecosystems — such as educators and bankers while other elements such as infrastructure or culture are abiotic² factors" (Jafarov & Szakos, 2022).

Isenberg mentioned some similar characteristics between his EE and natural ecosystem, and they are: elimination of central control, multiple sources of intention and multiple means of meeting participants' needs (Isenberg & Onyemah, Fostering Scale Up Ecosystems for Regional Economic Growth, 2016).

With regard to our study, we note that in this model educational institutions have been monioned as a component of human capital which is considered as a powerful factor in this ecosystem.

¹ Biotic factor is a living thing that has an impact on another population of living things or on the environment. (Biotic and Abiotic Factors, 2020)

² Abiotic factors do the same thing, but they are non-living. (Biotic and Abiotic Factors, 2020)



Source: (Isenberg & Onyemah, Fostering Scale Up Ecosystems for Regional Economic Growth , 2016)

2.2 Six+Six entrepreneurship ecosystem model

According to Steven Koltai, no single factor can advance entrepreneurship, but developing this field requires supporte from multiple sectors and actors towards entrepreneurs (Koltai, 2016).

This model contain six pillars (identify, train, connect & sustain, fund, enable, celebrate entrepreneurs) and six types of actors (NGOs, foundations, academia, investors, government, and corporations.

- The first pillar is identify, and the role of this actors (foundations and NGOS) is the discovering of new entrepreneurs and new ideas
- The second one is train, an entrepreneur must be trained before facing the market, foundations and academia are resources to knowledge transfer and training
- The third is connect and sustain, entrepreneurs need to be connected with other expert and successful business owners
- The fourth pillar is called fund, investors and governments will help entrepreneurs in funding

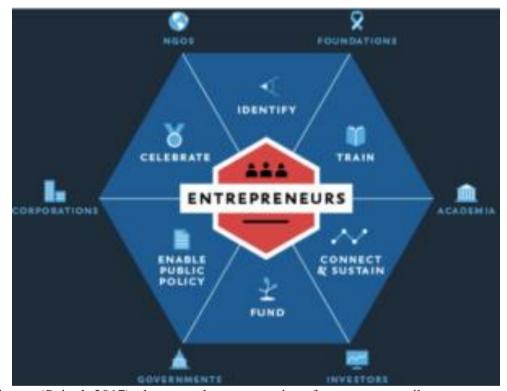
- The fifth one is public policy; entrepreneurs should receive support from governments and corporations according to legal, fiscal, and regulatory systems
- The last one is celebrate, the celebrating and promoting of the idea of entrepreneurship and self-employment in a country will affect the development of this concept positively

Also in this ecosystem model, academia and educational institutions are part and important factor in fostering entrepreneurship.

Figure 5: Six+Six entrepreneurial ecosystem model

Source: (Koltai, 2016)

2.3 Ecosystem attributes



According to (Spigel, 2017), there are three categories of ecosystem attributes:

- Culture: These attributes are the beliefs and perspectives behind entrepreneurship in a specific geography and are divided into two main attributes: cultural attitudes and entrepreneurial histories. (Jafarov & Szakos, 2022)
- Social: These attributes are resources that are accessible or integrated into networks and are divided into four main attributes: networks, investment capital, mentors and dealmakers, and worker talent (Jafarov & Szakos, 2022)

Material: These attributes are the ones with a tangible presence and are split into four.
 main attributes universities, support services and facilities, policy and governance, and open markets.

In this model, universities are a material attribute to entrepreneurship.

Supports Reinforces Policies Material Universities Attribute Infrastructure Open Markets Support services Networks Worker talent Social Attribute Mentors and Investment role models capital Cultural Histories of Supportive culture entrepreneurship Attribute

Figure 6: Spigel's model of Entrepreneurial Ecosystem

Source: (Spigel, 2017)

In summary, in the three different models, it is clear the role and the importance of universities and educational institutions in promoting entrepreneurship and they are a part of the entrepreneurial ecosystem.

3 Silicon Valley ecosystem

We cannot talk about entrepreneurial ecosystem without speaking on the leader ecosystem of the world "silicon valley ecosystem"

3.1 Localisation of Silicon Valley

Silicon Valley is a locale in north California, United States, recognized worldwide as an innovation center for high technology, media and communications technology, Internet and computer applications, social media services, and technology start-ups (Allgaier, 2018). "It is located in the southern San Francisco Bay Area and corresponds approximately to the geographical Santa Clara Valley. The Valley's largest city is San Jose, and other major Silicon

Valley cities include Palo Alto, Cupertino, Santa Clara, Mountain View, and Sunnyvale." (Allgaier, 2018).



Figure 7: Silicon Valley Ecosystem

Source: (Kushida, 2016)

3.2 Key characteristics of the Silicon Valley Ecosystem

This ecosystem has a number of features, which are the key to its success (Kushida, 2016), and they are:

- Dual ecosystem of large firms and startups
- High financial returns for successful entrepreneurs and startups' early employees
- Global top-level human resources for all stages of startups
- Business infrastructure (law firms, accounting firms, mentors, etc.)
- Venture capital most competitive market
- Globally top class universities (Stanford, UC Berkeley, UCSF)
- Human resource clusters anchored around top universities

- Extensive government role in shaping technological trajectories and basic science
- Highly competitive industries, balance between "open innovation" and secret protection
- Balance of "open innovation" and intellectual property protection
- "Technology Pump" of top human resources from all over the world
- High labor mobility at all levels of management and talent
- Culture of accepting failures (effective evaluation and monitoring)

3.3 The Role of Universities in the Success of Silicon Valley

The role of universities in Silicon Valley becomes evident as a facility for future entrepreneurs, where they train their students and provide them with the necessary skills to establish their own ventures and projects. Additionally, these universities provide their scholars with the necessary information on project financing methods and connect them with financial institutions.(218 صفحة 2022) صفحة

Stanford University had a big role in the creation of this ecosystem; Frederick Terman³ is called "the father of silicon valley". Terman was able to persuade two of his students "William Hewlett and David Packard" to stay in the area after graduating. The two set up their own company (hp) in a small garage, and becoming one of America's largest computer producers. (2015 وادي السيليكون.. قطب التكنولوجيا الأميركية،

In the end, universities are one of the strengths of Silicon Valley ecosystem, and are from the principal reasons to its success.

³ Professor Frederick Emmons Terman of Stanford University's Department of Electrical Engineering

Section two: entrepreneurial university

In the first section, universities and educational institutions were highlighted as a significant factor in the entrepreneurial ecosystem. this section will describe specifically the concept of entrepreneurial university, starting by showing the role of this institutions, identify this concept and ending by theoretical models of the entrepreneurial university.

1 The concept of Entrepreneurial University

there are multiple definitions of entrepreneurial universities, even that, there are some similar characteristics that are essential for these institutions. These include a strong interdependence with the government and industry firms, the utilization of various sources of income, the promotion of entrepreneurial activities among all community members (students, academics), the implimentation of multiple strategies to facilitate the creation of new ventures, and adjustments to the organizational structure of these universities (Guerrero, Urbano, & Kirby, 2006).

Table 5: Referential frame of Entrepreneurial University

Author/ year	Definition
Chrisman et al. (1995)	The Entrepreneurial University involves the creation of new enterprises by university professors, technicians or students.
Etzkowitz (2003)	The Entrepreneurial University is a natural incubator, providing support structures for professors and students to begin new intellectual and commercial enterprises.
Kirby, Guerrero- Cano, & Urbano (2011)	The Entrepreneurial University is a natural incubator that, by adopting a strategy, coordinated in critical activities (for example, teaching, research and entrepreneurship), tries to provide an adequate environment in which the university community (eg.: academics, students and employees) can investigate, evaluate and explore ideas that could be transformed into social and economic entrepreneurial initiatives.
Guerrero-Cano, & Urbano (2012)	An Entrepreneurial University can be defined as a survivor of competitive environments with a common strategy, oriented to be the best in all its activities (for example, having good finances, selecting good students and professors, producing quality research).
Melo (2014)	The concept of the Entrepreneurial University refers to a proactive position of institutions, in the sense of transforming the knowledge generated, aggregating economic and social value. Thus, the basis for a successful performance is the proactive action to adapt to internal and external changes in an evolving society.
Etzkowitz (2017)	The Entrepreneurial University integrates the economic development at the university as an academic function along with teaching and research. It is this "knowledge capitalization" that is the heart of a new mission for the university, connecting universities with knowledge users more strongly and establishing the university as an economic actor in itself.

Source: (Klein & Pereira, 2020)

In summary, entrepreneurial university is an institution that fosters entrepreneurial activity, innovation and creativity in its community. It often has strong relationships with government and industry partners and promotes the development of practical skills and knowledge.

2 Theoretical models of the Entrepreneurial University

In this research, three models will stand out; this include the model of (Guerrero, Urbano, & Kirby, 2006), the IPOO model by (Salarnzadehl, Salarnzadeh, & Daraei, 2011), and the last one is by (Sooreh, Salamzadeh, Safarzadeh, & Salamzadeh, 2011)

2.1 Guerrero model:

The authors of this model proposed a framework to analyze the factors that influence the establishment and growth of entrepreneurial university. This model includes two types of factors. The first one is: Formal factors (organization and governance structure, supported measures to create new business, and entrepreneurship education), and the other factor is: Informal factors (attitude of university community, entrepreneurship teaching methodologies, and role models and academic reward system). Moreover, they identified some macro and micro factors that can have a positive or negative impact during the process of creating and developing an entrepreneurial university (Guerrero, Urbano, & Kirby, 2006, p. 19).

Macroeconomics Organization and Formal Factors governance structure Supported measures to create new business Teach Entrepreneurship Education Research Entrepreneurial Universities Informal Factors Attitude of Entrepreneurial university community Entrepreneurship teaching methodologies Role models and academic reward system Microeconomics

Figure 8: Factors of creation and development Entrepreneurial Universities

Source: (Guerrero, Urbano, & Kirby, 2006)

2.2 The IPOO model

The authors of this model organized their results into four categories and defined them into: *inputs* as the elements and factors that are introduced into the entrepreneurial university. *Process* was described as a series of interconnected actions that convert these inputs into outputs. *Outputs* refer to the results of the transformation process. Lastly, *outcomes* were identified as the consequences of the entire model (Salarnzadehl, Salarnzadeh, & Daraei, 2011, p. 33). "The framework should be considered in its context and culture and we adhere to this belief that they can play a brilliant role, which might facilitate or even impede realization of its Third mission." (Salarnzadehl, Salarnzadeh, & Daraei, 2011, p. 34).

Figure 9: The IPOO model

Context						
Inputs Resources (Human, Financial, Informational, Physical) Rules and regulations Structure Mission Entrepreneurial capabilities Expectations of the society, industry, government and market Processes Teaching Research Managerial Logistical Commercialization Selection (for students, university professors and staff) Funding and financial Networking Multilateral interaction processes (between students university professors, staff, industrial researchers, entrepreneurial centers, industries, policy makers and society) Innovation, research and development activities (IR&D)	spin-offs, etc.)	Outcomes Third Mission	Context			

Context

Source: (Salarnzadehl, Salarnzadeh, & Daraei, 2011)

2.3 Sooreh model

The authors of this model proposed more comprehensive model that consists of nine blocks, namely formal, informal, and internal inputs; formal, informal, and internal processes; and formal, informal, and internal outputs. The "input" block includes the environmental factors identified in (Guerrero, Urbano, & Kirby, 2006) study, while the "outputs" refer to the elements specific to the Entrepreneurial University identified through the authors' research using focus groups with specialists. (Salarnzadehl, Salarnzadeh, & Daraei, 2011) Study contributed to the structure of the model and maintained the focus on the "input-processoutput" approach and the listed elements. This model accounts for both internal and external

issues within the institution and was developed based on the Iranian context. The authors highlight its suitability for that region.

Figure 10: Sooreh, Salamzadeh, Safarzadeh and Salamzadeh model

Environment	Internal factors					
Formal Informal						
 Entrepreneurial policies 						
and missions of the	 Potential student 	Existing students, academics and staff				
higher education system	intentions	Financial resources				
Characteristics of the	 Potential students desire 	Informative resources				
university manager	 Feasibility of potential 	Entrepreneurial skills				
 Communication channels 	students	Expectations of society, government of				
available	 Academic intentions 	industry and market				
Business courses available	 Academic feasibility 	University Entrepreneurial Mission				
Business programs available						
Organizational structuring Systems and procedures State Autonomy Determination of hierarchical levels Expenditure invested in support measures Expenditures invested in communication channels	Teaching resources Training teacher Rewarding environmental processes	Rules regulation Teaching methods Management methodologies Logistic methods Marketing processes Student selection methods Financing methods Networking Multilateral interaction processes (between students, university professors, employees, industrial researchers, business centers, industries, policy makers and society) Innovation, research and development activities (IR & D) Reward systems and compensation				
Entrepreneurial network systems Conglomerates and strategic alliances Marketing and convention systems	Custom templates Corporate culture	Processes Entrepreneur's human resources (including university professors, graduates, researchers and employees) Effective researchers in line with market needs Innovations and inventions Entrepreneurship centers (for example, incubators, science and				
	Formal • Entrepreneurial policies and missions of the higher education system • Characteristics of the university manager • Communication channels available • Business courses available • Business programs available • Organizational structuring • Systems and procedures • State Autonomy • Determination of hierarchical levels • Expenditure invested in support measures • Expenditures invested in communication channels • Entrepreneurial network systems • Conglomerates and strategic alliances • Marketing and	Entrepreneurial policies and missions of the higher education system Characteristics of the university manager Communication channels available Business courses available Business programs available Organizational structuring Systems and procedures State Autonomy Determination of hierarchical levels Expenditure invested in support measures Expenditures invested in communication channels Entrepreneurial network systems Conglomerates and strategic alliances Marketing and Potential students Preasibility of potential students Neademic intentions Academic feasibility Teaching resources Training teacher Rewarding environmental processes Custom templates Corporate culture				

Source: (Sooreh, Salamzadeh, Safarzadeh, & Salamzadeh, 2011)

In the end, the three models described utilize different theoretical perspectives, namely Institutional Theory and Systems Theory. This highlights the importance of studying the field of Entrepreneurial Universities from multiple perspectives (Klein & Pereira, 2020).

3 University incubator

University incubators are entities adopted by governments to promote the ecosystem by supporting spin-off companies and small and medium-sized businesses during the development and growth phase (Studdard cited in Farhan, Kamariah, & Nasir, 2015).

"The university business incubators are viewed as cooperation between the government, local business leaders and entrepreneurial universities in order to promote the development of research/technology based firms in their region" (Nikoloski, Kushi, Mancheski, & Angeleski, 2013).

Potential stakeholders Private business University Government University business incubator Review of Selection Tenancy graduation Number of companies Support system graduated Infrastructure/ Training/ Networking shared resources counseling

Figure 11: A model of University business incubator

Source: (Nikoloski, Kushi, Mancheski, & Angeleski, 2013, p. 4)

In this model, the potential stakeholders are: private business, university and Government

- Private business can benefit from UBI by developing opportunities for acquiring innovations, supply chain management, and helping them meet their social responsibilities.
- UBI would help strengthen university-industry interactions, promote the commercialization of research, and give academic staff and students the opportunity to better utilize their capabilities.
- The benefits of a well-managed UBI for the government can be viewed in the fact that incubators help overcome market failures, promote regional development, generate jobs, incomes and taxes, and demonstrate political commitment to small businesses.

Chapter two: Entrepreneurship ecosystem

The inputs in this model are the potential student business projects, with the support system of UBI these students will be trained to create a number of companies graduated. These companies are the outcomes of this process.

In conclusion, universities have an influence in promoting entrepreneurship and in developing the economy by helping students in creating their own companies.

Section three: business canvas model

Business canvas model is a significant step in creating a company or starting a project. One of the roles of university is training students to create their own BCM. It is a visual tool used to quickly and concisely outline the main elements of a business. This section will explain what is BCM, and what does it contain as well as its benefits.

1 Definition of Business Canvas Model

Osterwalder and Pigneur created The Business Model Canvas as a shared language for describing, visualising, assessing and changing business models (Robinson & Lock, 2016). "A business model describes the rationale of how an organization creates, delivers, and captures values." (Osterwalder & Pigneur, 2013, p. 14).

There are nine elements in this model that demonstrate the logic of how businesses intend to deliver value and make money.

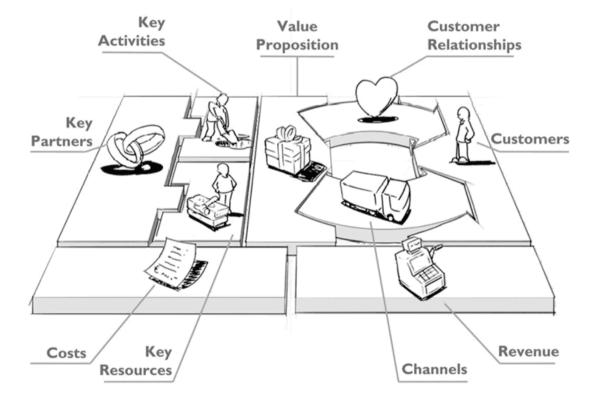


Figure 12: Business Model Diagram Overview

Source: (Osterwalder & Pigneur, 2013, pp. 14-15)

1.1 Description of Each Element of BCM

All this elements are crucial in effectively presenting the idea of a project, enabling future entrepreneurs to zoom into details and uncover both the strengths and weaknesses of their business.

These elements are: Customer segments, Value propositions, Channels, Customer relationships, Revenue streams, Key resources, Key activities, Key partnerships, Cost structure And they will be described in figure 12.

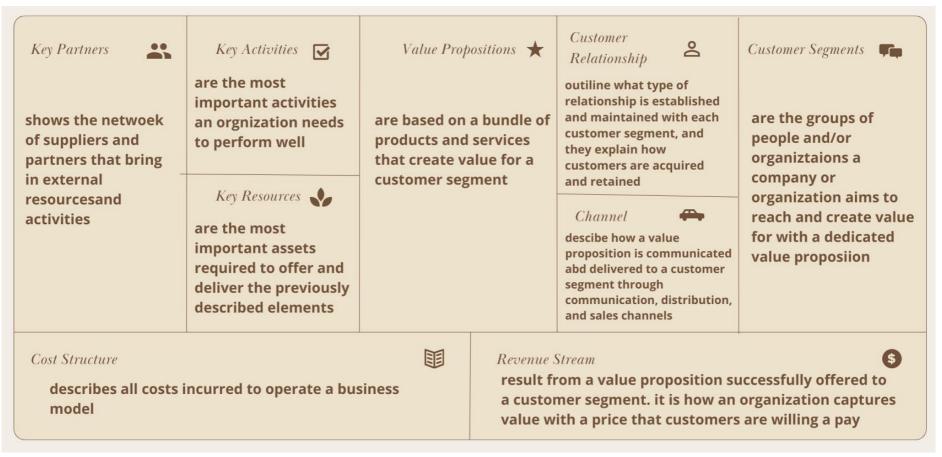
2 Value propositions

Value proposition is an important element in BCM for a new company; it is the step where an entrepreneur emphasizes the unique value of his product or service, highlighting the reasons why customers should choose him against his competitors.

2.1 Examples of value propositions

In this part, we will talk about three companies and demonstrate their value propositions. They are: Spotify, IKEA and L'Oreal.

Figure 13: Description of the nine elements of Business Canvas Model



Source: made by myself, (Osterwalder, Pigneur, & Bernarda, 2014)

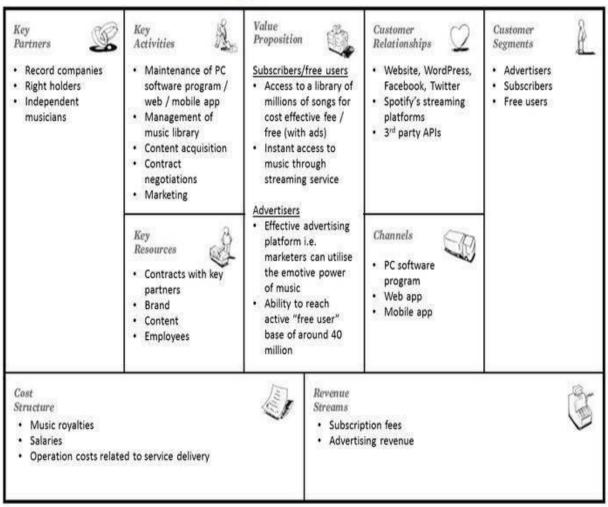
2.1.1 Spotify business canvas

Spotify is a digital music, podcast, and video service that gives its customers access to millions of songs and other content from creators all over the world (what is spotify, 2023).

Spotify offers the five key value propositions: accessibility, affordability, personalization, performance, and brand/status. The company enables musicians to earn a living through their music; expanding accessibility beyond revenue from downloads. It provides streaming services, granting customers easy access to music (Shastri, 2021).

Figure 14: Spotify's Businees Canvas Model





Source: (Riley, 2023)

2.1.2 IKEA business canvas

IKEA was founded by Ingvar Kamprad in 1943. It came to life as a mail order catalogue business in the forested town of Älmhult, Sweden. Today, it is a global home furnishing brand that brings affordability, design, and comfort to people all over the world (IKEA).

The IKEA brand is built on two important value propositions:

- Efficient packaging
- Distribution.

The company achieves this by using flat packs, which not only helps in minimizing transportation costs but also enables the brand to offer competitive prices to customers (IKEA, Breaking down the IKEA value chain).

Denis Oakley The Business Model Canvas IKEA R. Key Partners Key Activities Value Propositions Customer Relationships Customer Segments Production & OEM, Sturdy Special Offers Family lanufacturing Sales & Furnitures Functional & Promotions Self Service Home Owner Logistics Partners Distribution Sustainable. Food & Logistics Aesthetics Customer Franchisee Eco-Friendly Corporate Vendors & Beverage. Lifestyle Food Lovers Service & Community Restaurants Support R&D Affordable Pricing Key Resources Channels Intellectual Retail Stores F&B Factory & Property Restaurant Materials Website Staffing Physical Locations Cost Structure Revenue Streams Physical Marketing & Material F&B Advertising Employee **Furnitures** Rental/Leas Salary Logistics Franchise Fee R&D Design www.Denis-Oakley.com www.businessmodelgeneration.com - 00000 D

Figure 15: IKEA's Business Canvas Model

Source: (Denis)

2.1.3 L'Oreal business canvas

L'Oreal Paris is a renowned cosmetic brand; its mission is developing high-quality luxury products available for everyone, from makeup and skincare to hair care and hair colour. The company excels in innovation and scientific excellence. They have been committed to safety, efficacy and quality for more than 110 years (L'OREAL).

From this presentation, and the following business canvas model of L'OREAL we can mention five value propositions: innovation, quality and performance, diversity and inclusivity, sustainability and ethical practices and reputation.

Designed by Denis Oakley The Business Model Canvas Designed for L'ORÉAL Key Partners Key Activities Value Propositions Customer Relationships Customer Segments Capturing Personal. Sustainability Customer Training & Wide Variety Customize the One-to-One Preference Development Range of perfect Direct Sales Beauty Make Up Users Beauty Enthusiast combination of Consumers Products products for Natural -Self-& customers Logistics & Ordinary Automated Distributions Manufacturing Women rather Brand Services Professional. Luxe for High than **Product Brands** Recognition. MUA, Salons, Income, Brand Supermodel: Credibility Price Range Studios & Status Conscience Key Resources Channels Staff, Sales Retail Store Force, Social Media Recipes & IP Developers Online/ Customer Website R&D Cost Structure Revenue Streams Logistics. Staff - Salaries Distributions, & Training Store Rentals **Product Sales** Raw Materials www.Denis-Oakley.com www.businessmodelgeneration.com **■ 00000**

Figure 16: Business Canvas Model of L'OREAL

Source: (Denis)

3 Advantages of Business Canvas Model

There are many positive results of the good utilization of this tool; the following are some significant advantages of this model (Becker & Bröcker, 2021).

- Simple, quick and clear documentation of business models
- Promotes teamwork and collaboration
- Good basis for the preparation of a business plan
- Strong customer orientation and value proposition
- Can be used in the different phases of the product life cycle
- Promotes awareness of process dependencies and effects of change
- Thoughts can be documented directly and without formalization

As a conclusion, the BMC is a useful and simple, flexible tool for organizations and new entrepreneurs to understand the key components of their business and make the right strategic decisions.

Conclusion

Entrepreneurial ecosystem refers to an interconnected network of various actors and conditions that support and promote entrepreneurship.

There are two types of authors in defining_EE, the first believe that the definition of these ecosystems are connected with geographical limits and region focusing. Others think that EEs should not be limited geographically. There are many models of EE, according to our research and the importance of universities to it; we noticed that they are always presented as an important factor in those models. Silicon Valley is the perfect example that explains the big impact of educational institutions on entrepreneurship.

Entrepreneurial university is an institution that promotes entrepreneurial activities between academic, students in order to develop new business ventures. From the different theoretical models of entrepreneurial university, it is clear that the mission of these institutions has changed from only teaching to research and ending by the third mission; which is fostering entrepreneurship.

Additionally, the first step for new entrepreneurs after indentifying their business idea is the creation of a business canvas model. This model is one of the objects of entrepreneurial universities; they train the students to have the ability in creating BCM. It is a simple and useful tool to understand the key elements of a project or company. The BCM contain nine basic building blocks that demonstrate the logic of how business intends to provide value and generate revenue.

Chapter three: student entrepreneurship ecosystem in Algeria.

Introduction

The study improved the important role of universities and educational institutions towards entrepreneurship. This year in Algeria, there is a changing step according to the mission of universities and its role to help students achieve their entrepreneurial ideas. In this context, this chapter will focus on the student entrepreneurial ecosystem.

In the first section, we will discuss about the components of student entrepreneurial ecosystem. Starting by talking about the development of entrepreneurial activities, then schematising the student entrepreneurial ecosystem and explain its elements, and ending the section by describing the methodology of our research.

Section two will focus on the qualitative approach of our research. We will present the five schools of university campus-KOLEA- and their programs of entrepreneurship. After that, we will compare between these programs and in end we will analyse the data collection.

The last section will specialize in the quantitative approach of our study "the questionnaire", we will start by presenting the questions and their results. The last step will be the Synthetic analysis of the survey.

Section one: the components of student entrepreneurship ecosystem in business schools of the university campus –kolea-

1 Methodology of the research

This study will investigate on university entrepreneurship programs in Algeria and their impact on students' attitudes towards establishing their own companies. To realise this investigation we opt for a combination of quantitative and desk research methods.

1.1 Research objective

Our object is to investigate the influence of university entrepreneurship programs on students' tendency to set up their own business. As well as, defining the ecosystem promoting the success of entrepreneurial projects.

1.2 Quantitative approach

For a quantitative study we designed and administered an online questionnaire to gather data from students of schools of business in university campus –Kolea- in their last year who has participated in university entrepreneurship programs.

The questionnaire was written in both English and Arabic languages to reach a maximum number of students.

1.2.1 Sampling

For our research we did a census attempt, our intention was to reach the entire population with our questionnaire. We have assumed that since the number is reduced, the majority of students in the campus will answer our questionnaire but ultimately the number of responses is limited to 50.

1.2.2 The designed questionnaire

The questionnaire contains 25 questions. We used these types of question:

Multiple-choice questions: they present respondents with several options, and they
asked to select one or more answers. This question type allows for easy quantification
and analysis of response.

- Matrix questions: they present a series of related questions or statements with corresponding response options. Respondents provide their answers to each question or statement within the matrix structure.
- **Dichotomous questions:** they have two response options only, typically yes or no questions.
- **Identification questions:** questions used to identify the population (gender, option, school)

1.2.3 The used analysis

In order to analyze the results in this study, a computer program called SPSS (statistical package for the social science) software was used.

1.3 Desk research

For the desk study, we collected the programs of entrepreneurship from different students of all the five schools of university campus –Kolea-

1.3.1 Program comparison

We compared and evaluated the different entrepreneurship programs based on their features, curriculum, resources, and support.

2 Development of entrepreneurial activities in Algeria

We mentioned before that entrepreneurship is related to innovation and the creation of new ventures. Based on this context, we choose three variables from *The Global Competitiveness Report* to evaluate the development of entrepreneurship in Algeria and compare it with other countries. These variables are:

- Innovation capability
- Business sophistication
- Higher education training

Table 6: innovation capability of Algeria

year	2014	2015	2016	2017	2018
Score	2.3	2.7	3.3	2.9	3.6
Rank	147/148	143/144	126/140	112/138	111/137

Source: created by myself based on Global Competitiveness Reports (2014-2018)

Comment: from table 6, we notice that the score level of innovation capability of Algeria increases in the majority of years. For rank; Algeria was positioned very low relative to other countries in 2014 and 2015. From 2016 to 2018, Algeria's ranking improved.

Table 7: Business sophistication in Algeria

Year	2014	2015	2016	2017	2018
Score	2.9	3.2	3.3	3.3	3.3
Rank	144	131	128	121	122

Source: created by myself based on Global Competitiveness Reports (2014-2018)

Comment: Algeria's score and ranking according to business sophistication has improved over the years.

Tablea 8: Higher education training in Algeria

Year	2014	2015	2016	2017	2018
Score	3.5	3.7	3.7	3.9	4.0
Rank	101	98	99	96	92

Source: created by myself based on Global Competitiveness Reports (2014-2018)

Comment: the level of higher education training in Algeria is superior then the level of the other two variables. The level has increased each year.

2.1 Analyse of three variables:

Based on the previous comments, it is evident that the three variables are consistently increasing each year in both sides: rank or score. According to the significant role of these three pillars in the entrepreneurial ecosystem, the continuous growth observed in these aspects signifies the ongoing development of entrepreneurship in Algeria.

2.2 Ministry of higher education and entrepreneurship

During the past year, the Algerian Ministry of higher Education has implemented several new policies and initiatives aimed at promoting entrepreneurship among students. These decisions have had an important impact on the creation of a more developed student entrepreneurship ecosystem in the country.

2.3 Ministerial decision No. 1275

The ministerial decision No. 1275 created on September 27, 2022 aims to outline the process of preparing a graduation project for obtaining a university degree-startup venture- by higher education institutions, students.

According to article 2 of this decision, the graduation project for obtaining a university degree-startup venture- aims to form a new generation of entrepreneur students capable and wanting to establish new ventures in order to create wealth, job opportunities, and finding solutions to specific problems of the community.

According to article 4 of this decision, this project can be realised by students of the three levels: Bachelor, Master, and Doctorate. Moreover, it can be created by engineering and architecture students, veterinary science students.

Article 6 and 9 define the role of university incubators, which involves supporting students in realizing their startup projects. Additionally, these incubators will provide guidance and support to projects that hold the label of an innovative project, facilitating their transformation into successful startups.

2.3.1 Analyse of decision n°1275

Decision n°1275 has brought about a revolutionary change in the role of educational institutions in promoting entrepreneurship. It has played a pivotal role in creating a more conducive entrepreneurial ecosystem for students, enabling them to pursue their entrepreneurial ideas and establish new ventures.

3 Student entrepreneurial ecosystem

organizations of accompaniment

ANADE

ANADE

Student enrepreneurial ecosystem

IBTIKAR

Organizations of funding

Figure 17: Student entrepreneurial ecosystem

Source: created by myself. Based on information from ESC's incubator.

The student entrepreneurial ecosystem is composed of two types of organisations. The first one is organizations of accompaniment:

- University incubator
- Algeria Venture: is the initiative of the Algerian government through the coordination between the Ministry of Knowledge Economy des Startups and SONATRACH, the national Oil and Gas Company of Algeria, as a main sponsor and contributor to startups inclusion
- IBTIKAR: a platform on which you can find common services (17 services) offering nearly 193 services (prototyping) for project leaders who have to carry out tests on their prototypes
- Labelling organizations: the labelling committee offers project leaders who have developed their BMC a label "innovative project" then the label "label start up"
- CATI: are centres for registering patents at university level, these centres represent
 INAPI at university level

The second type is the organizations of funding:

- ANGEM: National Agency for Micro-Credit Management in Algeria
- ANADE: the national agency for the support and development of entrepreneurship
- ASF: Algeria Start up Fund (affiliated with the Ministry of Knowledge Economy and Start-ups)

Section two: entrepreneurship programs of the schools of business in university campus –kolea-

1 The schools of business in university campus -kolea-

1.1 The Higher School Of Commerce

The Higher School Of Commerce ESC - Mouloud Kacem Naît Belkacem - is a public Algerian school outside university (higher education institution) of training in commercial and financial sciences created in 1900 in Algiers and currently based in Kolea, in Algeria.

Admission to the ESC is open to bachelors in order to integrate the two-year preparatory cycle in the first place, then through a national entrance examination to the second cycle of three years in order to obtain a Master's degree.

ESC offers students a variety of basic formations in economics, business and financial sciences. The six options of this school are:

- Accounting and finance
- Corporate finance
- Marketing and communication
- Money, Finance and Banking
- Management control
- Organisation and management of enterprises

The school also provides specific training for company executives such as internal audit, accounting, general management, IFRS and SCF training. This training is provided according to the demand of the enterprises in the framework of the continuous training.

In addition, a specialized Post-graduation is open to persons specialized in the field of commercial and financial sciences. The specialties covered are: Internal audit and accounting and audit.

1.1.1 The programs of entrepreneurship in ESC

1.1.1.1 The theoretical program of entrepreneurship

The module of entrepreneurship of this school contains three chapters:

Chapter1: introduction to entrepreneurship

- Concept of entrepreneurship
- Importance of entrepreneurship
- Intrapreneurship and entrepreneurship

Chapter 2: the entrepreneur

- Schumpeterian entrepreneur
- Characteristics of the entrepreneur
- Entrepreneur vs. manager

Chapter 3: project of creation an enterprise

- Forms of entrepreneurship
- Entrepreneurial ecosystem
- Factors of success of entrepreneurship
- Business creation process
- Marketing plan
- Business model

This course is only for students in their last year and for all the options.

1.1.1.2 The practical program of entrepreneurship

The practical part is a module named "simulation", where students collaborate in groups of seven, ensuring a diverse mix of students from all the options. Together, they work on developing comprehensive business plans that reflect their innovative concepts and entrepreneurial aspirations.

At the end of the module, Student will have the opportunity to present their developed business plans, showcasing the depth of their ideas and their understanding of the entrepreneurial process. These presentations will be evaluated, and students will receive grades based on the quality of their business plans, as well as their ability to effectively communicate and articulate their ideas.

1.2 School of Commercial High Studies

School of commercial high studies (EHEC) is a public institution of a scientific, cultural and professional nature with legal personality and financial autonomy. The School has had four denominations:

- 21 April 1970: Institute of Trade Technology (ITC)
- 06 August 1983: National Institute of Commerce (INC Algiers)
- 14 July 2008: National School of Commerce (ENSC)
- 12 October 2009: School of Commercial High Studies (HEC Algiers)

From the 2011-2012 academic year, the School, with its status as a non-university school, provides only the training of master in commercial sciences. For this purpose, six choices of specialization are foreseen:

- Master in Marketing
- Master in supply chain, logistics and distribution
- Master in finance
- Master in International Affairs
- Master in Human Resources Management
- Master management and entrepreneurship

At the same time, the school provides high-level doctoral training in the L.M.D cycle in the fields of economics, management sciences and business sciences. The courses offered are updated each year through Authorisations issued by the Ministry of Higher Education and Scientific Research, in order to closely meet the country's needs in terms of scientific research and economic impact.

1.2.1 The programs of entrepreneurship in EHEC

In their fourth year of study, students at this school engage in a module called "Entrepreneurship". It begins with a crucial theoretical component, where students followed this plan:

- Entrepreneurship and entrepreneur
- Innovation and ideation
- Funding mechanisms

Business Model Canvas

• Business Plan

After completing the theoretical part, students transition into the practical phase of the module, where they have the opportunity to transform their ideas into tangible businesses. Working collaboratively in groups, embark on a comprehensive journey, starting from conceptualizing their business models and formulating detailed business plans.

Moreover, students actively engage in activities related to promotion, seeking out potential sponsors, and developing strategies for effectively selling their products or launching their services.

Following the realization of their businesses, students are requires to condense and present the entire process and essential details of their projects within a five-minute timeframe. This concise presentation serves as the final examination for the module.

1.3 Higher School of Management and Digital Economy

Higher School of Management and Digital Economy (ESGEN) is an Algerian public higher education school (higher education institution) for training in management sciences and digital economy created in 2019, based at the university center of the city of Koléa, Algeria.

ESGEN offers a two-year preparatory course, which after a national competition can lead to a second cycle in order to get a Master's degree in:

• Digital management banking (E-Banking)

• E-business

• Audit and management control

• IS Security Governance

1.3.1 Programs of entrepreneurship in ESGEN

Entrepreneurship in this school is also for students in their fourth year, and for all the options.

The program is composed of 12 chapters:

• Chapter 1: what is enterprise?

• Chapter 2: what is entrepreneurship?

• Chapter 3: to have a good self-awareness.

- Chapter 4: part of an idea
- Chapter 5: to gather information and seek help
- Chapter 6: protect
- Chapter 7: develop first draft of project
- Chapter 8: validate its concept
- Chapter 9: build its business model
- Chapter 10: estimated turnover
- Chapter 11: structure its project
- Chapter 12: start and envision the future

At this school, students engage in group collaboration to develop their business plans. They work together to create comprehensive and well-thought-out strategies for their future ventures. Once their business plans are complete, they have the opportunity to present them and receive evaluations and feedback.

1.4 National School of Management

ENSM was created in Algiers by executive decree no. 08-116 of 09 April 2008, in accordance with executive decree no. 05-500 of 27 Dhou El Kaada 1426 corresponding to 29 December 2005 laying down the specific tasks and rules for the organization and operation of non-university schools.

It is the first national public higher school specializing in management. It allows graduates (undergraduate) of higher education to have a second competence in their training curriculum.

Since July 2014, it is located in the university center of Kolea (Tipaza), It is equipped with a pleasant infrastructure and the pedagogical and administrative means necessary to carry out its missions of training and scientific research.

For teaching and training in Master (second cycle), the E.N.S.M currently provides eight (08) Master's specialties divided into 02 departments:

Department 1: management of organizations

- Management of organizations
- Human resources management
- Management marketing

Management quality

Department 2: management and entrepreneurship

- Entrepreneurship and management of projects
- Strategic management and information system
- logistics chain management
- electronic government

1.4.1 Entrepreneurship programs in ENSM

The students of this school have a module of entrepreneurship in their fourth year, which focuses on theoretical aspects. The plan of this module is:

- Fundamentals and paradigms of entrepreneurship
- Entrepreneur
- Intrapreneurship
- Social entrepreneurship
- Managerial logic vs. Entrepreneurial logic
- The procedures for business creation
- Business model vs. business plan

1.5 National School of Statistics and Applied Economics

ENSSEA is an Algerian public higher education institution based in the city of Koléa (Wilaya de Tipaza) in Algeria, Created in 26 December 1969.

Its mission is to train senior technicians, state engineers, lecturers and state doctors in planning and statistics.

The training takes place in two stages: a two-year preparatory cycle, followed by a national competition for access to the second cycle to obtain a Master's degree after three years of training.

Five specialties are available at the school: Market Finance and Actuarial, Applied Statistics and Econometrics, Applied Economics and Foresight, Statistics and Data Science, Statistics and Economic Foresight.

1.5.1 Program of entrepreneurship in ENSSEA

This school does not have a special module to promote entrepreneurship.

All the schools have incubators in their locals. And they have the same principles and values.

2 Comparing and analysing the programs

We can summary the differences between these programs in this table (Allgaier, 2018)

Table 9: Differences between entrepreneurship programs

Schools	ESC	EGSEN	ENSM	ENSSEA	EHEC
Academic	Fifth	fourth	fourth	-	fourth
year					
Theoretical	Yes	yes	yes	-	yes
part					
Realization	Yes	Yes	No	-	Yes
of business					
plan					
Realization	No	No	No	-	Yes
of the					
project					

Source: created by myself.

3 Analyse of the data collection

- ENSSEA School does not promote entrepreneurship by courses or programs.
- The students of ESC are the only ones who take courses in entrepreneurship in their fifth year.
- All the schools have a theoretical aspect in their entrepreneurship programs.
- Entrepreneurship programs in ENSM do not contain a realization of business plan.
- EHEC programs are the only ones who support students to turn their entrepreneurial aspirations into tangible projects.

• The majority of schools in university campus (4/5) promote entrepreneurship between their students by their programs. This confirms our first hypothesis 3 university have a role in promoting entrepreneurship"

Section three: business schools of university campus –Kolea- and entrepreneurship

In this section, we will analyse and interpret the results obtained from the distributed questionnaire; it aims to answer the questions of this study.

1 Frequency distribution:

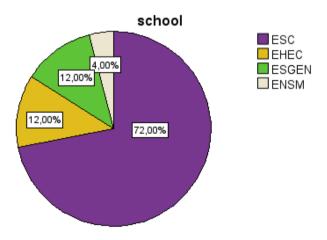
Question 01: in which school you belong?

Table 10: Schools of students

	School								
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé				
Valide	ESC	36	72,0	72,0	72,0				
	EHEC	6	12,0	12,0	84,0				
	ESGEN	6	12,0	12,0	96,0				
	ENSM	2	4,0	4,0	100,0				
	Total	50	100,0	100,0					

Source : SPSS

Figure 18: Schools of students



Source: SPSS

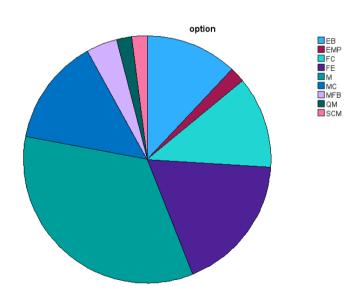
Comment: from the table above, we notice that the majority 72% of answers to the questionnaire were from the students of ESC, answers of students from EHEC and ESGEN had the same percentage 12%, the last 4% of answers was from ENSM's students.

Question 02: What is your option?

Table 11: Students' option

	Option								
		_	_						
		Frequence	Pourcentage	Pourcentage valide	Pourcentage cumulé				
Valide	EB	6	12,0	12,0	12,0				
	EMP	1	2,0	2,0	14,0				
	FC	6	12,0	12,0	26,0				
	FE	9	18,0	18,0	44,0				
	M	17	34,0	34,0	78,0				
	MC	7	14,0	14,0	92,0				
	MFB	2	4,0	4,0	96,0				
	QM	1	2,0	2,0	98,0				
	SCM	1	2,0	2,0	100,0				
	Total	50	100,0	100,0					

Figure 19: Students' option



Source: SPSS

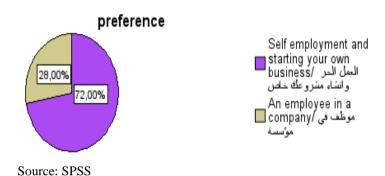
Comment: from the table and the figure, it is clear that this questionnaire was answered by students from different options. The majority were from the option "management and organisation of enterprise" with 34%.

Question 03: What is your preference after your graduation?

Table 12: Student's preference

	Preference								
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé				
Valide	Self employment and starting your own business	36		72,0	72,0				
	An employee in a company	14	28,0	28,0	100,0				
	Total	50	100,0	100,0					

Figure 20: The preference of student



Comment: from the figure, we can see that the majority 72% of student prefer to start their own business. 28% of students like to be employees in companies.

Question 04: What are the reasons that made you choose to be an employee and not having your own business?

Table 13: Reasons to choose employement

	Reasons to choose employment frequencies							
		Réj	oonses	Pourcentage				
		N	Pourcentage	d'observations				
Reasons to choose employement	i already got a job	1	5,6%	8,3%				
	I don't trust my ability to start a business	7	38,9%	58,3%				
	i don't have the capacities to manage a group of people	3	16,7%	25,0%				
	i was not trained to be an entrepreneur	5	27,8%	41,7%				
	i don't like to take risk	2	11,1%	16,7%				
Total		18	100,0%	150,0%				

Source: SPSS

Comment: The table reveals several reasons why students choose employment over entrepreneurship. Among the surveyed students, 38.9% expressed a lack of confidence in their ability to start a business. Additionally, 27.8% believed that they were not adequately trained to become entrepreneurs. Furthermore, 16.7% of the students felt that they lacked the necessary skills to manage a team of people. Finally, 11.1% of the students cited a reluctance to take risks as a factor influencing their choice of employment.

Question 05: If you choose self-employment, what qualities do you think you have among the following?

Table 14: Qualities of an entrepreneur student

Qualities							
Réponses Pourc							
		N	Pourcentage	d'observations			
Qualities	i like solving people's problems	16	15,1%	41,0%			
	i'm adaptable in different situations	22	20,8%	56,4%			
	i can take the initiative	24	22,6%	61,5%			
	i know about my strengths and	20	18,9%	51,3%			
	weaknesses						
	i can resilience in bad situations	24	22,6%	61,5%			
Total		106	100,0%	271,8%			

Source: SPSS

Comment: According to the table, the data indicates that 22.6% of the students who choose entrepreneurship possess two key qualities: the ability to take initiative and resilience in challenging situations. Furthermore, 20.8% of the students demonstrate adaptability in different scenarios, while 18.9% have a deep understanding of their own personalities, encompassing their strengths and weaknesses. Finally, 15.1% of the students exhibit a strong inclination towards solving people's problems.

Question 06: Did you know what entrepreneurship meant before you studied it?

Table 15: Knowing entrepreneurship

	Before studying entrepreneurship								
Pourcentage Pour					Pourcentage				
		Fréquence	Pourcentage	valide	cumulé				
Valide	OUI	30	60,0	60,0	60,0				
	NON	20	40,0	40,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Source: SPSS

Figure 21: Knowing entrepreneurship

Comment: Initially, 60% of the students were already acquainted with the concept of entrepreneurship, while the remaining 40% were unfamiliar with it until they underwent entrepreneurship courses.

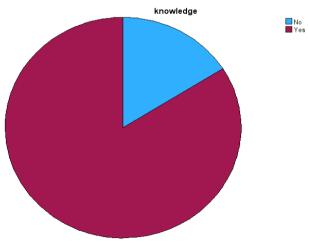
Question 07: Did the entrepreneurship program/course increase your knowledge about starting and managing a business?

Table 16: Students' knowledge on entrepreneurship

	knowledge								
Pourcentage Pourcentage									
		Fréquence	Pourcentage	valide	cumulé				
Valide	No	8	16,0	16,0	16,0				
	Yes	42	84,0	84,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Figure 22: Student's knowledge on entrepreneurship



Source: SPSS

Comment: 84% of students believe that the programs of entrepreneurship have increased their knowledge on starting and managing businesses. The rest disagree.

Question 08: Please choose how much you agree to these suggestions about entrepreneurship university programs.

Table 17: Students' interset in strating their businesses

	It increases your interest in starting your own company.							
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	agree	35	70,0	70,0	70,0			
	disagree	4	8,0	8,0	78,0			
	Tottaly disagree	2	4,0	4,0	82,0			
	Tottaly agree	9	18,0	18,0	100,0			
	Total	50	100,0	100,0				

Source: SPSS

Comment: 70% of students agree. And the rest disagree.

Table 18: Students' skills

	It provides you with the necessary skills to start and manage a business.						
				Pourcentage	Pourcentage		
		Fréquence	Pourcentage	valide	cumulé		
Valide	agree	31	62,0	62,0	62,0		
	disagree	9	18,0	18,0	80,0		
	Tottaly disagree	4	8,0	8,0	88,0		
	Tottaly agree	6	12,0	12,0	100,0		
	Total	50	100,0	100,0			

Source: SPSS

Comment: the majority of students agree or totally agree.

Table 19: Students' perciption on entrepreneurship

it o	it changes your perception on entrepreneurship and starting a business in Algeria							
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé			
Valide	agree	28	56,0	56,0	56,0			
	disagree	11	22,0	22,0	78,0			
	Tottaly disagree	3	6,0	6,0	84,0			
	Tottaly agree	8	16,0	16,0	100,0			
	Total	50	100,0	100,0				

Source: SPSS

Comment: the majority agree or totally agree.

Table 20: Developing of business plan

	Helped you in developing a business plan							
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	agree	39	78,0	78,0	78,0			
	disagree	1	2,0	2,0	80,0			
	Tottaly disagree	1	2,0	2,0	82,0			
	Tottaly agree	9	18,0	18,0	100,0			
	Total	50	100,0	100,0				

Comment: 96% of students were helped in developing a business plan by entrepreneurship programs.

Table 21: Conducting market research

	Helped you in conducting a market research.								
!				Pourcentage	Pourcentage				
		Fréquence	Pourcentage	valide	cumulé				
Valide	agree	24	48,0	48,0	48,0				
	disagree	17	34,0	34,0	82,0				
	Tottaly disagree	3	6,0	6,0	88,0				
	Tottaly agree	6	12,0	12,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Comment: 60% of students agree and the rest disagree.

Table 22: Prototyping a product or service

	Heleped you in prototyping a product or service								
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé				
Valide	agree	25	50,0	50,0	50,0				
	disagree	15	30,0	30,0	80,0				
	Tottaly disagree	5	10,0	10,0	90,0				
	Tottaly agree	5	10,0	10,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Comment: 60% agree and 40% disagree

Question 9: What factors do you think hinder the establishment of new businesses in Algeria?

Table 23: Factors hinder the establishement of new business

Factors							
			Réponses	Pourcentage			
		N	Pourcentage	d'observations			
Factors	Lack of funding	36	30,3%	72,0%			
	the procedures are difficult	38	31,9%	76,0%			
	Lack of access to markets	21	17,6%	42,0%			
	Inadequate information on this field	24	20,2%	48,0%			
Total		119	100,0%	238,0%			

Comment: lack of funding and the difficult procedures was the high selected factors from students. And the other factors was also selected from an important number of student, that mean that all this factors are hindering the establishment of new businesses according to students.

Question 10: What types of resources or support do you think would be most helpful for students who want to start their own businesses in Algeria?

Table 24: Resources that help student in starting business

Resources							
		Ré	ponses	Pourcentage			
		N	Pourcentage	d'observations			
Resources	Funding opportunities	40	30,5%	83,3%			
	Access to mentorship or	30	22,9%	62,5%			
	coaching						
	Legal or regulatory guidance	34	26,0%	70,8%			
	Networking opportunities	27	20,6%	56,3%			
Total		131	100,0%	272,9%			

Source: SPSS

Comment: for students, all this resources can be a helpful support from government.

Question 11: have you heard of university incubators before?

Table 25: University incubator

Heard about UI								
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	no	9	18,0	18,0	18,0			
	yes	41	82,0	82,0	100,0			
	Total	50	100,0	100,0				

Source: SPSS

Comment: the majority 82% of student are familiar with university incubators.

Question 12: Have you visit the entrepreneurship house or incubator?

Table 26: University incubators visits

	UI visit								
				Pourcentage	Pourcentage				
		Fréquence	Pourcentage	valide	cumulé				
Valide	no	29	58,0	58,0	58,0				
	yes	21	42,0	42,0	100,0				
	Total	50	100,0	100,0					

Comment: 58% of students did not visit university incubator

Question 13: if yes, how many times?

Table 27: Number of visits

	Visits times								
				Pourcentage	Pourcentage				
		Fréquence	Pourcentage	valide	cumulé				
Valide	0	29	58,0	58,0	58,0				
	1-3 times	14	28,0	28,0	84,0				
	4-6 times	5	10,0	10,0	94,0				
	7-9 times	2	4,0	4,0	96,0				
	more	1	2,0	2,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Comment: the popular number of visits times of students to university incubator is from 1 to 3.

Question 14: have you ever participated in university incubator program?

Table 28: Participation in UI programs

Participation in UI								
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	no	39	78,0	78,0	78,0			
	Yes	11	22,0	22,0	100,0			
	Total	50	100,0	100,0				

Source: SPSS

Comment: a small part of students who participated in university incubators.

Question 15: what is the type of your project?

Table 29: Project type

	Project type								
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé				
Valide	Did not participate in UI	39	78,0	78,0	78,0				
	non innovant small business	2	4,0	4,0	82,0				
	innovant project	8	16,0	16,0	98,0				
	technologic startup	1	2,0	2,0	100,0				
	Total	50	100,0	100,0					

Comment: big part of participants to this program is characterized by students who have an innovative type of projects.

Question 16: please indicate the duration of your participation in this program

Table 30: The duration of participation in UI program

	UI.duration								
Pourcentage Pource									
		Fréquence	Pourcentage	valide	cumulé				
Valide	Did not participate in UI	39	78,0	78,0	78,0				
	Less than 3 months	3	6,0	6,0	84,0				
	3-6 months	8	16,0	16,0	100,0				
	Total	50	100,0	100,0					

Source: SPSS

Comment: the populair answer was from 3 to 6 months.

Question 17: how would you rate your overall experience in the university incubator program?

Table 31: UI program's rating

Rate of experience								
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	2	4	8,0	36,4	36,4			
	3	5	10,0	45,5	81,8			
	4	2	4,0	18,2	100,0			
	Total	11	22,0	100,0				
Manquant	Système	39	78,0					
Total		50	100,0					

Source: SPSS

Comment: the students rate the program by a medium or intermediate rating.

Question 18: How satisfied were you with the following aspects of the university incubator program?

Table 32: Monitoring and guidance

Mentorship and guidance								
				Pourcentage	Pourcentage			
		Fréquence	Pourcentage	valide	cumulé			
Valide	1	2	4,0	18,2	18,2			
	2	5	10,0	45,5	63,6			
	3	1	2,0	9,1	72,7			
	4	3	6,0	27,3	100,0			
	Total	11	22,0	100,0				
Manquant	Système	39	78,0					
Total		50	100,0					

Table 33: Access to resources

	Access to resources						
				Pourcentage	Pourcentage		
		Fréquence	Pourcentage	valide	cumulé		
Valide	1	2	4,0	18,2	18,2		
	2	4	8,0	36,4	54,5		
	3	3	6,0	27,3	81,8		
	4	2	4,0	18,2	100,0		
	Total	11	22,0	100,0			
Manquant	Système	39	78,0				
Total		50	100,0				

Source: SPSS

Table 34: Networking opportunities

	Networking opportunities						
				Pourcentage	Pourcentage		
		Fréquence	Pourcentage	valide	cumulé		
Valide	1	1	2,0	9,1	9,1		
	2	2	4,0	18,2	27,3		
	3	4	8,0	36,4	63,6		
	4	2	4,0	18,2	81,8		
	5	2	4,0	18,2	100,0		
	Total	11	22,0	100,0			
Manquant	Système	39	78,0				
Total		50	100,0				

Source: SPSS

Table 35: Networking opportunities

	Networking opportunities					
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	1	2,0	9,1	9,1	
	2	2	4,0	18,2	27,3	
	3	4	8,0	36,4	63,6	
	4	2	4,0	18,2	81,8	
	5	2	4,0	18,2	100,0	
	Total	11	22,0	100,0		
Manquant	Système	39	78,0			
Total		50	100,0			

Table 36: Training and workshops

	training and workshops					
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	2	4,0	18,2	18,2	
	2	1	2,0	9,1	27,3	
	3	4	8,0	36,4	63,6	
	4	3	6,0	27,3	90,9	
	5	1	2,0	9,1	100,0	
	Total	11	22,0	100,0		
Manquant	Système	39	78,0			
Total		50	100,0			

Source: SPSS

Table 37: Facilities and workspace

facilities and workspace						
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	1	2,0	9,1	9,1	
	2	3	6,0	27,3	36,4	
	3	4	8,0	36,4	72,7	
	4	3	6,0	27,3	100,0	
	Total	11	22,0	100,0		
Manquant	Système	39	78,0			
Total		50	100,0			

Source: SPSS

Comment: the results of these tables indicate a mixed level of satisfaction among the respondents regarding various aspects of the university incubators programs.

• Monitoring and guidance: while a significant number of respondents (5 out of 11) rated their satisfaction as 2, indicating a moderate level of satisfaction, there were also respondents who expressed lower levels of satisfaction (2 out of 11 rating 1). However, there were also respondents who rated their satisfaction as 4 out of 5, suggesting a relatively higher level of satisfaction.

- Access to Resources: The ratings for access to resources indicate a similar mixed level of satisfaction. While some respondents expressed dissatisfaction (2 out of 11 rating 1), there were also respondents who rated their satisfaction as 4 out of 5. However, a significant portion of respondents rated their satisfaction as 2 out of 5, suggesting that there may be room for improvement in providing adequate resources to the participants.
- Networking Opportunities: The ratings for networking opportunities also reflect a mixed level of satisfaction. While the majority of respondents rated their satisfaction as 3 out of 5, indicating moderate satisfaction, there were also respondents who expressed lower levels of satisfaction (1 out of 11 rating 1, and 2 out of 11 rating 2). On the positive side, some respondents rated their satisfaction as 5 out of 5, suggesting high satisfaction with the networking opportunities provided.
- Training and Workshops: The ratings for training and workshops show a similar pattern. While the majority of respondents (4 out of 11) rated their satisfaction as 3 out of 5, indicating moderate satisfaction, there were also respondents who expressed lower levels of satisfaction (2 out of 11 rating 1). However, there were also respondents who rated their satisfaction as 4 out of 5, suggesting a relatively higher level of satisfaction.
- Facilities and Workspace: The ratings for facilities and workspace indicate a relatively higher level of satisfaction compared to other variables. The majority of respondents rated their satisfaction as 3 out of 5, indicating moderate satisfaction. While there were a few respondents who expressed lower levels of satisfaction (1 out of 11 rating 1), overall, the satisfaction levels were.

Question 19: Please choose how much you agree to these suggestions

Table 38: Recommendation of UIP to other students

	You recommend the university incubator program to other students					
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	39	78,0	78,0	78,0	
	agree	6	12,0	12,0	90,0	
	disagree	1	2,0	2,0	92,0	
	tottalyagree	2	4,0	4,0	96,0	
	tottalydisagree	2	4,0	4,0	100,0	
	Total	50	100,0	100,0		

Table 39: Starting business

You	will start your own		he future as a ro y incubator prog	-	ience with the
				Pourcentage	Pourcentage
		Fréquence	Pourcentage	valide	cumulé
Valide	1	39	78,0	78,0	78,0
	agree	7	14,0	14,0	92,0
	disagree	1	2,0	2,0	94,0
	tottalyagree	1	2,0	2,0	96,0
	tottalydisagree	2	4,0	4,0	100,0
	Total	50	100,0	100,0	

Table 40: participation in networking events

throu	through this program you participated in many networking events or opportunities					
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	39	78,0	78,0	78,0	
	agree	8	16,0	16,0	94,0	
	disagree	1	2,0	2,0	96,0	
	tottalyagree	2	4,0	4,0	100,0	
	Total	50	100,0	100,0		

Source: SPSS

Table 41: Attending workshops and training sessions

	Through this program you attented many workshops or training sessions					
				Pourcentage	Pourcentage	
		Fréquence	Pourcentage	valide	cumulé	
Valide	1	39	78,0	78,0	78,0	
	agree	6	12,0	12,0	90,0	
	disagree	2	4,0	4,0	94,0	
	Tottaly agree	3	6,0	6,0	100,0	
	Total	50	100,0	100,0		

Source: SPSS

Comment: the majority of students agreed on all the suggestions.

Question 20: you feel confident in your entrepreneurial and business skills after participating in the university incubator program

Table 42: stundents' confidence in their entrepreneurial skills

	confidence						
		Fréquence	Pourcentage	Pourcentage valide	Pourcentage cumulé		
Valide	1	2	4,0	18,2	18,2		
	2	2	4,0	18,2	36,4		
	3	5	10,0	45,5	81,8		
	4	1	2,0	9,1	90,9		
	5	1	2,0	9,1	100,0		
	Total	11	22,0	100,0			
Manquant	Système	39	78,0				
Total		50	100,0				

Source: SPSS

Comment: The majority of respondents (5 out of 11) rated their confidence as 3 out of 5. This suggests a neutral stance, where they neither strongly feel confident nor lack confidence in their entrepreneurial and business skills after participating in the program.

Question 22: what is your gender?

Table 43: the gender of students

Gender							
				Pourcentage	Pourcentage		
		Fréquence	Pourcentage	valide	cumulé		
Valide	Female	43	86,0	86,0	86,0		
	Male	7	14,0	14,0	100,0		
	Total	50	100,0	100,0			

Source: SPSS

Comment: The gender distribution in our population shows a majority of females, with 43 respondents, compared to a smaller number of males, with 7 respondents. This indicates a significant gender imbalance within our sample.

2 Synthetic analysis of the survey

After analyzing the results, we arrived at the following synthesis:

- Female represent 86% of the studied sample.
- 72% of respondents are students in ESC.
- 72% of students prefer self employment and starting their own businesses, this result validates our third hypothesis. It is true that there is a high level of students' inclination towards entrepreneurship.
- The reasons that made a student prefer to be an employee rather than to have his own business are the following:

Firstly, 38.9% of students do not trust their ability to start a business. We can conclude from this statistic that one of the principals reasons to choose entrepreneurship is the believing of person in his abilities to establish his own company, and we can relate this with one of the theories of psychological characteristics school of thought on entrepreneurship which believe that a person will be an entrepreneur if trusting in his capabilities to create and manage his project is one of his values and features.

Secondly, 27.8% of students said that they was not trained to be entrepreneurs, we can relate this reason with one of believes of management school of thought on entrepreneurship, it say

that an entrepreneur can be taught and developed through classroom training. If these students were training in entrepreneurship they would choose self employment.

Thirdly, 16.7% of students do not have the capacities to manage a group of people. This result can be related also with management school that based on believing that an entrepreneur must be a manager.

Fourthly, 11.1% of students do not like to take risk. This can be related with the thinking of scholars of psychological characteristics school who say that risk taking is one of necessary behaviour or skill of an entrepreneur.

Lastly, Minority of students (5.6%) got a job already.

- The qualities of student who choose entrepreneurship are classified as the following:
 - 1. 22.6% of students can take the initiative and they can resilience in bad situations.
 - 2. 20.8% of students are adaptable in different situations.
 - 3. 18.9% of them know about their strengths and weaknesses.
 - 4. 15.1% like to solve people's problems.
- 60% of students were familiar with the concept of entrepreneurship before they participate in the programs. This can be a result of the popularity of the concept in these years.
- 84% of students assured that entrepreneurship programs increased their knowledge about starting and managing a business.
- 88% in general of students agreed that entrepreneurship programs increased their interest in starting their own companies. This result confirms our second hypothesis "entrepreneurship programs on Algerian business schools influence students to choose this field".
- 74% of students agreed that entrepreneurship programs provide them with the necessary skills to start and manage a business.
- These programs helped students in: Developing a business plan (96%), Conducting market research (60%), Prototyping a product or service (60%).
- The resources that will help students to establish a business in Algeria are classified according to them as the following:
 - a. Funding opportunities (30.5%).

- b. Legal or regulatory guidance (26%).
- c. Access to mentorship o coaching (22.9%).
- d. Networking opportunities (20.6%).
- 82% of students heard about university incubators.
- Only 42% of students had visit university incubators, 67% of them had visit it 1 to 3 times.
- Only 22% of students had participated in UI programs and 73% of them have an innovative type of projects?
- 81% of participants rate the university incubators' programs 2 or 3out of 5, it is a medium rating. This confirm our third hypothesis, university incubators are not efficient yet.

Conclusion

This chapter was the practical part of our study where we find out the impact of entrepreneurship programs in Algerian business schools on students' attitudes towards establishing their own companies.

The results from our qualitative and quantitative approaches confirm that universities have a role in fostering entrepreneurship by programs and courses or by university incubators that accompany and guide student to translate their entrepreneurial ideas to real projects and businesses. It also helped us confirm that entrepreneurship programs in Algerian business schools influence students to choose this field. Moreover, we can determine from the data collected that there is a high level of students' inclination towards entrepreneurship. In the end, one of the consequences to our chapter is: university incubators are not efficient yet according to the student of business schools.

Based on this investigation, we confirm that there is an influence of university entrepreneurship programs on students' interest to set up their own businesses.



The objective of our study was to investigate about the impact of university entrepreneurship programs in Algeria on students' attitudes towards starting their own companies.

The reasons that made us choose this subject are: the importance of entrepreneurship for our country, the new mission of universities; from research and teaching to promoting entrepreneurship, attitudes and interest of students towards self employment and entrepreneurship.

The main question we choose for this study was: "is there any influence of university entrepreneurship programs on students' interest to set up their own businesses?"

To answer it question we had two types of approaches. The first one was desk research, collecting documentations from students directly was the research method to this type. The second is quantitative approach where we designed a questionnaire to students in their last year ho engaged with entrepreneurship programs and courses. Our style in this research was descriptive and analytical.

Our study contains two theoretical chapters and one practical chapter. The results that we get from these chapters are the following:

Theoretical results

- There are six schools of thought on entrepreneurship: The Great Person School, Psychological Characteristics School, Classical School, Management School, Leadership School, and Intrapreneurship School. Each one of these schools has special points of view on defining entrepreneurship and the characteristics of an entrepreneur.
- There are several types of entrepreneurship. We mentioned these four types: social entrepreneurship, small business entrepreneurship, corporate entrepreneurship and technology entrepreneurship. All of them have different mission but they all aim to impact positively on the economic growth of countries.
- Entrepreneurs will definitely face multiple types of risk, and the successful one is who can manage these risks. To manage risk there is a paradigm to follow, it includes six steps: identify the risk, analyze it, plan how to face if, track and do the actions, control these actions and finally communicate. As a tool to manage risk, entrepreneur can use the risk management plan.

- Entrepreneurial ecosystem refers to the interconnected network of various actors, resources, and institutions that collectively support entrepreneurship. We mentioned three models of entrepreneurial ecosystem: ecosystem domains, six six entrepreneurship ecosystem model, ecosystem attributes. The three models considered universities and educational institutions as an important element in the ecosystem. As a successful example of EEs we talked about Silicon Valley ecosystem, this example showed the role of universities in creating an entrepreneurial ecosystem.
- Universities are starting to be entrepreneurial and their new mission is fostering entrepreneurship. University incubators are part of entrepreneurial university that help students in realising their businesses
- Business canvas model is a simple and helpful plan that describes the rationale of how an organization creates, delivers, and captures values. There are nine elements in this model: customers, value propositions, key activities, key partners, key resources, customer relationships, channels, revenue, and costs. The creation of this model is important for each student who wants to be an entrepreneur and entrepreneurial universities are training their scholars to have the capacity to create it.

Test of hypothesis

The practical part helped us in confirming our hypotheses.

The results of our qualitative study: 4 schools of business (ESC, EHEC, EGSEN, and ENSM) promote entrepreneurship by programs and courses. And all of them promote it by having incubators in their locals. This confirms our first hypothesis "university have a role in promoting entrepreneurship".

Our second hypothesis "entrepreneurship programs in Algerian business schools influence students to choose this field" is confirmed by this statistic: 88% of students agreed that entrepreneurship programs increased their interest in starting their own companies.

The third hypothesis "there is a high level of students inclination towards entrepreneurship" is true and this confirm it; 72% of students prefer self employment and starting their own businesses.

The fourth and last hypothesis "university incubators are not efficient yet" is true according to this statistic: 81% of participants rate the university incubators' programs a medium rating.

The results of our study helped us insure that there is an influence of university entrepreneurship programs on students' interest to set up their own businesses.

Difficulties

The difficulties that we faced in the realization of this reaserch were: the time, the limited number of answers to our questionnaire.

Critics to our study

The principal critic to our study was the number of answers to the questionnaire. Our aim was to study all the population but the number of answers was limited. This can be related with time that we distributed the questionnaire, it was in May and the students in their last year were busy with preparing their researches.

Suggestions

in order to develop this reaserch and this field i suggest to other students to study these topics:

- Entrepreneurship education and skills development
- Entrepreneurship culture among students
- The role of personl developement on the attitudes towards entrepreneurship

Recommendations

- We suggest to ESC to follow the other schools and teach entrepreneurship to students in their fourth yea, In order to give this model and more value and time
- We suggest to ENSSEA to start promoting entrepreneurship by courses and models
- The five schools can prepare competitions about the best project or business between all the students of the university campus. Each school will have a winner, and the five winners will compete to have the title of "best project of the campus"
- We propose to ENSM to add a practical part to its programs
- All the schools should follow the practical part of programs in EHEC
- According to the high level of students who did not participate in university incubators
 programs, we suggest to incubators to develop and work on their communication with
 students and planning for new events and formations that help in getting students'
 attention.



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Appendices

Annex one

الجمهورية الجزائرية الديمقراطية الشعبية وزارة التعليم العالي والبحث العلمي

قرار رفع المروع مذكرة تخرج للحصول على المروع مذكرة تخرج للحصول على شهادة جامعية -مؤسسة ناشنة من قبل طلبة مؤسسات التعليم العالي

إنَّ وزير التعليم العالي والبحث العلمي،

- وبمقتضى المرسوم الرئاسي رقم 22-305 المؤرخ في 11 صفر عام 1444 الموافق 8 سبتمبر سنة 2022 والمتضمن تعيين أعضاء الحكومة.
- وبمقتضى المرسوم التنفيذي رقم 77-13 المؤرخ في 18 ربيع الأول عام 1434 الموافق 30 يناير سنة 2013 الذي يحدد صلاحيات وزير التعليم العالى والبحث العلمي،
- وبمقتضى المرسوم التنفيذي رقم 22-208 المؤرخ في 5 ذي القعدة عام 1443 الموافق 5 جوان سنة 2022 الذي يحدّد نظام الدراسات والتكوين للحصول على شهادات التعليم العالي،

يُقرّر ما يأتى:

المادة الأولى: يهدف هذا القرار إلى تحديد كيفيات إعداد مشروع مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة من قبل طلبة مؤسسات التعليم العالى.

المادة 2: يهدف مشروع مذكرة تخرج للحصول على شهادة جامعية -مؤسسة ناشئة في الأساس، إلى خلق جيل من الطلبة رواد الأعمال لهم القدرة والرغبة في التوجه نحو ربادة الأعمال الابتكارية وخلق المؤسسات الناشئة الخلاقة للثروة ومناصب شغل، والتي تعد عملا مربحا يقوم على أسس ودعائم الابتكار والتكنولوجيا، يهدف إلى إيجاد حلا تقنيا، أو تكنولوجيا، أو رقميا لمؤسسات قائمة أو مؤسسات مستقلة بذاتها.

المادة 3: تشتمل مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة على مجموعة من البرامج التدريبية في مجال إعداد مخططات الأعمال موجهة لمرافقة الطلبة المسجلين لإعدادها، والتي تسمح لهم بإعداد مذكرة تخرج قابلة للتحويل إلى مشروع مؤسسة ناشئة.

المادة 4: يسمح لطلبة الليسانس والماستر والدكتوراه وطلبة الهندسة والهندسة المعمارية طلبة علوم البيطرة من مختلف التخصصات والكليات إعداد مشروع مذكرة تخرج للحصول على شهادة جامعية

- مؤسسة ناشئة.

فرات ميدانية حول نموذج الأعمال

المادة 5: يتلقى الطلبة المسجلين في هذا المسلمين ورات تدر والتسويق الالكتروني والمناجمنت والتمويل والمحاسبة المادة 6: يمكن لكل طالب في السنة الأخيرة من مساره التعليمي صاحب فكرة قابلة أن تتطور إلى مؤسسة ناشئة أن يرافق من حاضنة أعمال مؤسسته الجامعية ويناقش مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة.

المادة 7: يمكن للطلبة الذين يعدون مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة تكوين فرق عمل تتكون من مجموعات صغيرة من الطلبة (من طالبين (02) إلى سنة (06) طلبة) من تخصصات وكليات مختلفة من أجل مشروع مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة.

المادة 8: يقوم الطلبة المسجلين بإعداد مشاريع مذكرات تخرج للحصول على شهادة جامعية - مؤسسة ناشئة في شكل "فكرة مؤسسة ناشئة Start-up.

المادة 9: يحصل الطلبة الذين يقومون بإعداد مشروع مذكرة تخرج للحصول على شهادة جامعية - مؤسسة ناشئة، بعد القيام بعرض ومناقشة مشاريعهم أمام لجنة علمية وخبراء متخصصين في مجال إختصاصهم، تضم: المؤطر، عضو من حاضنة الأعمال أو دار المقاولاتية وممثل عن الشركاء الاقتصاديين والاجتماعيين، على شهادة نهاية الدراسة الجامعية وعلى دبلوم مؤسسة ناشئة، يهدف على الأقل للحصول على وسم "لابل" مشروع مبتكر.

تسهر إدارة حاضنات الأعمال الجامعية على مرافقة المشاريع الحاصلة على وسم " لابل" مشروع مبتكر للتحول الفوري إلى مؤسسات ناشئة حاصلة على وسم " لابل" من قبل اللجنة الوطنية لمنح علامة "لابل".

المادة 10: يتم تسجيل المشاريع المتميزة في مسابقة وطنية لأفضل المؤسسات الناشئة و تُثمّن المشاريع الفائزة بدعم مالي مناسب من طرف وزارة التعليم العالي والبحث العلمي والشركاء الاقتصاديين والاجتماعيين المهتمين بالمجال.

المادة 11: ينشر هذا القرار في النشرة الرسمية للتعليم العالى والبحث العلمي.



Annex two

Questionnaire

University entrepreneurship programs in Algeria and their impact on students' attitudes towards establishing their own companies

This questionnaire aims to gather information about university entrepreneurship programs in Algeria (university center of-kolea-) and their impact on students' attitudes towards establishing their own companies. The questionnaire is designed for only students in their last year who have participated in an entrepreneurship program or take courses in this field. It will be administered online and will take approximately 10-15 minutes to complete. The data collected will be used to analyze the effectiveness of entrepreneurship programs in Algeria and identify areas for improvement.

Your feedback is important to us as we strive to improve entrepreneurship programs in Algeria. We recognize that your time is valuable, and we thank you for taking the time to provide us with your valuable opinions.

يهدف هذا الاستبيان إلى جمع معلومات حول برامج ريادة الأعمال الجامعية في الجزائر (القطب الجامعي-القليعة-) وتأثير ها على مواقف الطلاب تجاه تأسيس شركاتهم الخاصة. تم تصميم هذا الاستبيان فقط للطلاب في عامهم الأخير الذين درسوا مقياس ريادة الأعمال. سيتم إدارته عبر الإنترنت وسيستغرق إكماله من 10 الى 15دقيقة سيتم استخدام البيانات التي تم جمعها لتحليل فعالية برامج ريادة الأعمال في الجزائر وتحديد مجالات التحسين.

ملاحظاتك مهمة بالنسبة لنا لأننا نسعى جاهدين لتحسين برامج ريادة الأعمال في الجزائر ، نحن ندرك أن وقتك ثمين ، و نشكرك على تخصيص الوقت لتزويدنا بتعليقاتك القيمة.

- 1. In which school you belong?
 - o ESC
 - o EHEC
 - o ESGEN
 - o ENSSEA
 - o ENSM
- ما هو تخصصك؟/ ?What is your option
- 3. What is your preference after your graduation? / ماذا تفضل بعد التخرج؟
 - o Self employment and starting your own business/ العمل الحر وإنشاء مشروعك خاص
 - o An employee in a company/ موظف في مؤسسة
- 4. What are the reasons that made you choose to be an employee and not having your own business/ما هي اسباب اختيارك ان تكون موظف و عدم اختيار العمل الحر
 - o I already got a job/اقد حصلت على وظيفة
 - o i will be satisfied with my status as an employee/ساکون راضیا بصفتی موظف
 - o i don't trust my ability to start a business/لا اثق بقدرتي على بدء عمل تجاري
 - o i don't have the capacities to manage a group of people/ لا اتحلى بالقدرة على تسيير /مجموعة من الناس
 - o i was not trained to be an entrepreneur/لم اتدرب لاصبح رائد اعمال
 - o i don't like to take risque/ لا احب المخاطرة

- o I am not used to taking the initiative/ لست معتادا على أخذ زمام المبادرة
- o others
- 5. If you choosed self-employment, what qualities do you think you have among the following? إذا اخترت العمل الحر، فما هي الصفات التي تعتقد أنك تتمتع بها من بين ما يلي
 - o i like solving people's problems/ احب حل مشاكل الغير
 - o i'm adaptibal in different situations/ انا قادر على التكيف في عدة حالات
 - o انا قادر على أخذ زمام المبادرة / i can take the initiative
 - o i know about my strengths and weaknesses/ اعرف نقاط قوتى و ضعفى
 - o i can resilience in bad situations/يمكنني الصمود في المواقف السيئة
 - o others
- 6. Did you know what entrepreneurship meant before you studied it? هل كنت تعلم ماذا تعني المان يدر الله على المان المان
 - o Yes
 - o No
- 7. Did the entrepreneurship program/course increase your knowledge about starting and managing a business? هل برامج و دروس ريادة الاعمال زادت من رصيدك المعرفي حول كيفية انشاء و يسبير المشاريع؟
 - o Yes
 - o No
- 8. Please choose how much you agree to these suggestions على على المقتلك على المقتلك على المقتل على هذه الاقتراحات
 - o the entrepreneurship program/course increase your interest in starting your own company. برامج ریادة الاعمال تزید من اهتمامك حول تاسیس مشروعك الخاص
 - o The entrepreneurship program/course provides you with the necessary skills to start and manage a business. توفر لك برامج ريادة الاعمال المهارات اللازمة التي ستساعدك
 - o The entrepreneurship program/course provides you with networking opportunities with other entrepreneurs or professionals in the industry. تساعدك هذه البرامج على التواصل مع رواد اعمال اخرين و اشخاص مهمين في هذا المجال
 - o The entrepreneurship program/course changes your perception of entrepreneurship and starting a business in Algeria. غيرت هذه البرامج من منظورك حول تاسيس الاعمال و المشاريع في الجزائر
 - o The entrepreneurship program/course provides you with any practical experience, such as developing a business plan, conducting market research, or prototyping a product or service. توفر لك هذه البرامج خبرات و تجارب تطبيقية مثل انشاء مخطط عمل او دراسة السوق او وضع نموذج اولى لمنتج او خدمة
- 9. What factors do you think hinder the establishment of new businesses in Algeria? ما المجرودة في ال
 - o لقص التمويل / Lack of funding
 - o الاجراءات صعبة / the procedures are difficult
 - o القدرة على دخول الاسواق / Lack of access to markets
 - o Inadequate information on this field/معلومات غير كافية عن هذا المجال/o
 - اخری ٥

- 10. What types of resources or support do you think would be most helpful for students who want to start their own businesses in Algeria? ما هي أنواع الموارد أو الدعم التي تعتقد أنها عنون منيدة الغاية للطلاب الذين ير غبون في بدء أعمالهم النجارية الخاصة في الجزائر ؟
 - o فرص تمویل / Funding opportunities
 - o الحصول على الإرشاد أو التدريب / Access to mentorship or coaching
 - Legal or regulatory guidance / التوجيه القانوني أو التنظيمي ٥
 - o فرص تواصل / Networking opportunities
 - اخری ٥
- 11. What improvements do you think could be made to the entrepreneurship program/course to better prepare students for starting their own businesses? ما هي إمان المعال ا
- 12. Have you heard of university incubators before? هل سمعت عن حاضنات الاعمال الجامعية من
- هل زرت دار أو حاضنة ريادة الأعمال? Have you visit the entrepreneurship house or incubator
 - o Yes
 - o No
- 14. if yes, how many times?/ ? إذا كان نعم، كم مرة
 - o 1-3 times
 - o 4-6 times
 - o 7-9 times
 - o More
- - o If yes, the student will answer the second section
 - o If not the questionnaire will end

برنامج حاضنات الأعمال الجامعية/Section two: university incubator program

- ما هو نوع مشروعك؟ .?16. What is the type of your project
 - o technologic startup/ شركة ناشئة تكنولوجية
 - o innovant project/مشروع مبتكر
 - o non innovant small business/الأعمال التجارية الصغيرة غير المبتكرة
- 17. Please indicate the duration of your participation in this program كم مدة مشاركتكم في هذا البرنامج ؟
 - o less than 3 months / اقل من ثلاثة اشهر
 - من ثلاثة الى ستة اشهر / 3-6 months
 - من ستة الى اثنة عشر اشهر / 6-12 months
 - o more than 12 months / اكثر من اثنة عشر اشهر
- 18. How would you rate your overall experience in the university incubator program? كيف يقيم تجربتك الإجمالية في برنامج حاضنة الاعمال الجامعية ؟
 - o 1 Very poor / سيئة للغاية
 - 0 2
 - 0 3
 - 0 4

- o 5 Excellent / ممتازة
- 19. How satisfied were you with the following aspects of the university incubator program? ما مدى رضاك عن الجوانب التالية من برنامج حاضنة الجامعة
 - o Mentorship and guidance / الإرشاد والتوجيه
 - o access to resources / الحصول على الموارد
 - o networking opportunities / فرص تواصل
 - o training and workshops / عمل
 - o facilities and workspace / المرافق وأماكن العمل
- 20. Please choose how much you agree to these suggestions رجاءا اختر مدى نسبة موافقتك على
 - o you recommend the university incubator program to other students / توصيي بهذا
 - o university incubator programs are important for fostering entrepreneurship and innovation on campus / هذه البرامج مهمة جدا لتعزيز و ترويج ريادة الاعمال في الحرم الجامعي
 - o you will start your own business in the future as a result of your experience with the university incubator program / ستبدا عملك الخاص في المستقبل نتيجة لتجربتك مع هذا البرنامج
 - o through this program you participated in many networking events or opportunities من خلال هذا البرنامج في العديد من أحداث أو فرص التي ربطتك مع مساهمين اخرين من هذا البرنامج
 - o through this program you attended many workshops or training sessions / من خلال هذا البرنامج حضرت العديد من حلقات العمل او دورات العمل
- 21. you feel confident in your entrepreneurial and business skills after participating in the university incubator program تشعر بالثقة في مهاراتك في ريادة الأعمال بعد المشاركة في برنامج حاضنة الجامعة حاضنة الجامعة
 - o 1 not confident at all
 - 0 2
 - 0 3
 - 0 4
 - o 5 very confident
- 22. Did you have a personalized accompaniment (individual monitoring by the incubator).
 - o Yes
 - o No
- 23. What recommendation you give to your incubator? ? ما هي التوصية التي تقدمها إلى حاضنتك ؟ 24. What is your gender?
 - o Male
 - o Female