



**The impact of digitization on the Algerian university's openness to its socio-economic environment**  
**The Innovative Projects Monitoring System platform as a model**

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**Abstract:**

*This study aims to examine the realities and challenges of the digital transformation adopted by the Ministry of Higher Education and Scientific Research across its various university institutions by focusing on the contribution of the Innovative Projects Monitoring System platform in promoting an entrepreneurial culture among students. It also aims to assess the responsiveness of the Algerian society in general, and students in particular, to this new culture. The study concluded with a set of findings, foremost of which is that the Innovative Projects Monitoring System platform has contributed to spreading the entrepreneurial culture among university students. Additionally, the platform undertakes several tasks aimed at enhancing the students' knowledge level in the field of entrepreneurship.*

**Keywords:** digital transformation, entrepreneurial culture, entrepreneurship, communication technology.

# **L'impact de la numérisation sur l'ouverture de l'université algérienne à son environnement socio-économique**

## **La plateforme du Système de suivi des projets innovants comme modèle**

### **Résumé :**

*Cette étude vise à examiner les réalités et les défis de la transformation numérique adoptée par le ministère de l'Enseignement supérieur et de la Recherche scientifique dans ses différents établissements universitaires, en mettant l'accent sur la contribution de la plateforme du Système de suivi des projets innovants à la promotion d'une culture entrepreneuriale chez les étudiants. Elle vise également à évaluer la réceptivité de la société algérienne en général, et des étudiants en particulier, à cette nouvelle culture. L'étude s'est conclue par une série de conclusions, dont la plus importante est que la plateforme du Système de suivi des projets innovants a contribué à diffuser la culture entrepreneuriale parmi les étudiants universitaires. En outre, la plateforme entreprend plusieurs tâches visant à améliorer le niveau de connaissances des étudiants dans le domaine de l'entrepreneuriat.*

**Mots-clés** : *transformation numérique, culture entrepreneuriale, entrepreneuriat, technologies de la communication.*



## **Introduction:**

In light of the changes witnessed by the University of Algeria, especially in the field of digitization of its interests in keeping with the growing global transformations, which seeks to advance the path of higher education and scientific research as a safety valve and a contributor to its prosperity, the University of Algeria, being the locomotive that carries the milestones of national development and fertile ground for the production of creative ideas and creative institutions, has embarked on a wide process in the field of digitization, using all its joints in an attempt to resurrect its functions in a dynamic and fast-performing document reflected by the control of information and communication technology, this revolution, which has become there is no need to leave it behind or try to neglect it, but the need to give it priority support For both educational and economic bet.

Regarding the economic environment in Algeria, which is characterized by rapid change, the University of Algeria has set a path among many educational paths to support the entrepreneurial orientation to spare students the scourge of unemployment after graduation and instill the features of economic actors in the country in light of the imposed economic reality and it is necessary to deal with it and invent solutions to deter the by encouraging students to enter the world of entrepreneurship and entrepreneurship, perhaps the talk here is about The digital platform developed by the Ministry of higher education and scientific research under the name of the system of follow-up of innovative projects, through which the University seeks to achieve a qualitative leap in the field of entrepreneurship, which prompts us to address research on this platform and monitor its role in spreading the entrepreneurial culture at the University of Algeria, and here we should ask the following question:

**How have the innovative projects monitoring system platform of the Algerian Ministry of higher education and scientific research contributed to the dissemination of entrepreneurial culture among students as part of the efforts to digitize the jobs of the Algerian university?**

This problem has resulted in the following sub-questions:

- What are the tasks assigned to the innovative projects monitoring system platform?
- How do students with project ideas benefit from the platform?
- What are the manifestations of the contribution of the innovative projects monitoring system platform to the dissemination of entrepreneurial culture?

***Curriculum of study:***

To answer the problem posed, we have adopted the ethnographic method, according to Giampietro Gobbo this method relies on observation as a method of knowledge or central perception and uses asking questions and collecting documents by describing the phenomenon as it really is and trying to analyze it in order to clarify the phenomenon and indicate its characteristics.

***The importance of the study:***

The importance of the study is to highlight the growing role of university education with the manifestations of modernity through the digital transformation witnessed by various sectors in Algeria, especially the sector of higher education and scientific research and perhaps talking about student entrepreneurship and the extent of the contribution of higher education and scientific research in university-conscious youth in the national economy away from dependence for the fuel sector.

***Objectives of the study:***

This research paper aims at achieving a set of goals as follows:



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- To discuss the concept of digital transformation and monitor its features in the higher education and scientific research sector in Algeria.
- To identify the platform of the innovative projects follow-up system of the Algerian Ministry of higher education and scientific research.
- To monitor the relationship between tasks of the platform and the dissemination of entrepreneurial culture among students.
- To address the most important challenges facing digital transformation in the higher education sector.

In an attempt to dive more into the topic under study, we focus on the following elements:

- The platform of the innovative projects follow-up system of the Algerian Ministry of higher education and scientific research.
- What is the relationship between the digital transformation and entrepreneurial culture among students?
- Scientific research in the service of entrepreneurship and entrepreneurship.

## **1. Study concepts:**

### **1.1.Digital transformation**

Improving the performance of various institutions and organizations has become an obsession that calls for urgent solutions to keep pace with the changes taking place in the field of digitization and information technology, as the adoption of this model has become a necessity at the present time.

#### ***The concept of digital transformation:***

Digital transformation is defined as a government project that includes all the services of various institutions and sectors in the country, where it works to serve members of society in light of the transformation of vital services from their traditional classical form

to another type of services completely dependent on modern technologies in the field of communication technology (Shaoshi and Khallouf, 2023)

This definition reveals that digital transformation aims at bringing about that change in the quality of services provided by focusing on speed and transparency in transactions characterized by the absence of human intervention in many cases, which creates a kind of trust between institutions and individuals benefiting from the various services provided, but at the same time it imposes monitoring of material possibilities to ensure the provision of AIDS in the digital transformation process, and another human resource is represented by qualified human cadres to deal with this transformation, and on the third hand, another challenge arises, which is the commitment of society and its members to a digital culture that facilitates the process of this digital transformation.

Thus, we can summarize the most important goals of digital transformation in the following points:

- The speed of performance of institutions in providing services to community members.
- Raising the quality of the services provided by saving time and effort.
- Promoting transparency and trust between the institution and the community.
- To enable different groups of society to access the service with the same performance and quality required.
- Enshrining the citizen's right to access information.

### **1.2. Communication technology:**

The digital transformation is interconnected with communication technology, which witnesses a qualitative joke and revolution in the rapid growth, which has changed all aspects of life, from socialization through education to economics and other areas where the impact of communication technology was the most prominent event.



### *The concept of communication technology:*

- **Communication:** The concept of communication has many definitions and we can hardly find a complete comprehensive definition, due to the different schools and disciplines that defined communication, some of them gave communication a definition that focuses on the message and its content and marginalizes the reverberation and impact, for example, and therefore we will content ourselves with the concept of communication as defined by Mustafa Hijazi (Hijazi, 1990, p.37), which is an interaction between two or more parties who exchange roles so that each party affects the other and so that the process proceeds in an evolving dynamic form towards greater understanding and positivity, or crisis and negativity, towards cooperation or conflict.
- **Communication technology:** The word technology does not exist in Arabic dictionaries and its counterpart in the Arabic language. It is a technical word composed of two syllables "Technic" means the means or the way and the word "Logi" means science, and therefore it can be said that technology means the science of the means by which a person can achieve his goals (Hadid and Brahma, 2014). Communication technology, therefore, means any tool, device or means that helps to produce, distribute, store, receive, display and retrieve data (DeLeo, 2010)
- **Culture:** culture is one of the concepts that is surrounded by ambiguity and complexity due to the multiplicity of stripes of those who contributed to trying to present its concept as well as its multidimensionality, where bin Habib Abdul Razzaq (bin Habib, 2009, p.31) says that culture is a set of explicit or implicit behavioral patterns acquired or transmitted by symbols and represent distinct features of a group of people, including their associations with things, the basic core of culture lies in traditional ideas, especially the values related to them.

- **Entrepreneurship:** like the rest of the concepts, the concept of entrepreneurship has not been defined differently by researchers this is due to their different specialties and ideologies, and therefore, there are many definitions that considered entrepreneurship from the risk side, including those who looked at entrepreneurship from the angle of creating new products and making profits, perhaps one of the most important definitions that can be referred to in our research is what Shane and (shane&venkataraman, 2000) Venkataraman stated that entrepreneurship is a series of stages opportunities to create future goods and services are discovered, evaluated and exploited.

Thus, the concept of entrepreneurial culture in our study is the totality of the qualities, skills and information acquired by university students and an attempt to exploit and apply them in finding innovative ideas and creating mini-enterprises.

## **2. The platform of the innovative projects follow-up system of the Algerian Ministry of higher education and scientific research:**

### **2.1. What is the platform:**

It is a digital platform developed by the Ministry of higher education and scientific research, supervised by the National Coordinating Committee for innovation follow-up and university business incubators to follow up innovative projects, a registered trademark/ startup company, working to ensure the proper functioning of projects and control while ensuring the principle of intellectual property.

The platform also allows the division of roles between the actors in the process of developing start-up institutions, between the concerned ministry and students, and accompanied by the managers of incubators in various university institutions across the country:

- The main user of the platform has the authority to manage incubator projects and accounts.



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- The platform facilitates the incubator managers to manage and evaluate the projects of their institutions through a continuous accompanying process supervised by the director of the incubator. It authorizes the student to update or modify the information according to the advice and guidance of the director based on the experience gained in the field of entrepreneurship and contracting.

- The platform allows project supervisors to follow up on their projects from the start to the actual embodiment on the ground.

- The platform provides an opportunity to register various student projects and open accounts for them while ensuring the intellectual property of their owners, which encourages the rest of the students to enter the world of entrepreneurship through the transfer of ideas and the good competitiveness created by this space to establish a new platform entitled Innovation and Entrepreneurship.

The platform seeks to provide many services related to the field of entrepreneurship by providing training presentations on entrepreneurship and its most important pillars and components, in addition to explaining and simplifying the preparation of prototypes for innovative projects, the platform also enhances for various fields of formation supervised by a committee of 47 members of professors and trainers who are keen to provide solutions to the problems that beset the entrepreneurial path for students in addition to the guidance and clarifications provided.

## **2.2. Objectives of the innovative projects monitoring system platform:**

The Ministry of higher education and scientific research aims to achieve many goals behind the development of this platform, which can be summarized as follows:

- Supporting the student's entrepreneurial thinking and orientation towards innovation and creativity, which may be the most important goals at all, in order to embody the important role played by the University and the outputs of

higher education in building the national economy and contributing to the advancement of the general welfare of community members through the creation of emerging institutions that provide added value, create revolution and achieve community stability under the desired economic well-being.Y

- Raising an innovative generation, perhaps the target group is the youth category, which is the same category that has become completely dependent on technological means, which facilitates the process of reaching this category through various digital platforms ,and therefore, expanding the innovation area.
- Directing projects and ideas towards keeping abreast of technological developments and digital transformations in the face of crises, which was manifested during the corona pandemic, where the need for innovation became a necessity in addressing the simplest humanitarian needs, as many protests and innovations emerged to meet the situation then, and therefore this platform came as a serious attempt to always think of renewed solutions to face emergency crises.

### **3. Digital transformation and entrepreneurial culture among students, what is the relationship**

In a study by "James W. Carey" on communication as a culture, essays on media and Society, New York in 2009, which was compiled in the form of essays, revised and published in a book, in which he emphasizes that communication is not just the transfer of information, recalling the link between the words communication and society, where he expands his definition to include culture at the meeting of a people, and in this context Carey questions the American tradition that focuses on the functionality of communication as a means of social and political control and thus poses an issue for examining the content of communication and the meanings of its symbols, and therefore he seeks to reformulate the



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goal of communication studies, to review in this book highlights the transformation that communication and its contemporary technologies have brought about in the replacement of culture. The same approach was brought by Pierre Bourdieu (Shentof, 2017, p. 127) about his view of cultural capital, which is the acquired culture or "habitus", where the individual becomes equipped with accumulations of habits, predispositions and experiences resulting from his living, which then turn into an assimilation pattern and a value system through it he builds his social project.

Based on what was said previously, talking about digital transformation is inevitably known resistance by some social groups due to the saturation over the years with the classic public service culture, which caused at the beginning of digital transformation an aversion to this new phenomenon, because people are often afraid of renewal to maintain the so-called comfort zone, in the case of the entrepreneurial culture that the University of Algeria is trying to spread to its students by developing multiple mechanisms and mechanisms to facilitate their entry into the field of entrepreneurship accompanied by bodies affiliated to the sector such as business incubators and entrepreneurship development centers, as well as the specific legal arsenal of the activity in this area.

#### **4. Economic and social effects of entrepreneurship:**

- **The economic effects are as follows:**

- Increase the average per capita income and bring about a change in business and society structures and in the supply and demand side, thereby ensuring financial independence and diversification in the local economy, including the national economy.
- Directing activities in targeted development areas, by monitoring and encouraging projects that respond to the actual needs of these areas.

- Developing exports, maintaining the continuity of competition, and getting out of dependence on oil.
- Contribute to the proper growth of the economy.
- **About social effects:**
  - Justice of Social Development and distribution of wealth " regional balance of the economic process.
  - Contribute to the employment of community members.
  - Reducing the migration of the population from cities to rural areas.

### **3.1 elements of entrepreneurial culture:**

Through this element, we will try to be familiar with the most important elements on which entrepreneurial culture which derives its support from the cultural specificity of society is based. Despite the unity of the global conditions that we witness, this does not mean the unity of the cultures of societies, but rather the latter are characterized by variation and difference, and the elements of entrepreneurial culture as reviewed by researcher:

- **Regarding the social environment:** the social environment is the most important components of the entrepreneurial culture since and it is its originator and incubator,
- therefore it forms the motivation and incentive for individuals to create their entrepreneurial institutions, and in view of the mechanisms provided by this platform of remote accompaniment mechanisms, it thus provides a stimulating work environment that enables students wishing to establish their own institutions to actually start on the path of their development.
- **About the family:** the family contributes to the development of entrepreneurial abilities of children through social revitalization and the responsibility and initiative instilled in them. The family can be the first hindrance to the establishment of mini-enterprises due to its certain



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culture, which may refuse to take risks and establish private entrepreneurial projects.

- **About the school:** the school is considered an extension of the primary role of the family, as it carries out educational tasks, as it also has to extend learning bridges towards instilling entrepreneurial culture among students, through training programs and various activities.
- **Religion:** religion is considered a basic reference for most values and standards in society, based on which the various behaviors of social actors are formed, such as mastering work, renouncing dependence and laziness and other values that urge halal earning and striving for livelihood.
- **Cultural construction:** cultural construction in all its implications affects the stereotyping of the activities of community members. Bedouin communities are characterized by agricultural activities and herding, so they pass this culture to their children through training and practice, and then the children acquire this culture, which expresses their cultural specificity.
- We can point out here that Stephen has identified indicators of entrepreneurial culture at the individual level and related to people who have an entrepreneurial culture, but we believe that there is another level of indicators of entrepreneurial culture that stands out at the collective or community level, and some points can be identified that the researcher believes that it is very important to be present in society if he wants to promote development at the economic and social levels, and they can be summarized as follows:
- The aim is to create bodies to support the entrepreneurial field while providing the necessary incentives to improve the level of micro-enterprises quantitatively and qualitatively.

- The purpose of organizing events encouraging the entry of the world of entrepreneurship, from national and international forums.
- Organizing competitions for the best institutions is also an indicator of the presence of entrepreneurial culture at its community level.
- The aim is to strengthen the educational and educational map with standards of entrepreneurship, another facet of entrepreneurial culture.

Due to the spread of specialized training courses in the fields of contracting.

And other manifestations of entrepreneurial culture at the societal level that serve as the locomotive and incubator for each individual culture that influences and is influenced by it to move to entrepreneurial action.

Huybens and Al have found that entrepreneurial culture can be acquired through four types of knowledge, namely theoretical, procedural, applied ( by practice) knowledge, as well as practical know-how.

## **5. Scientific research in the contracting service:**

It seems that it is inevitable to focus on the field of entrepreneurship among students to keep up with the dynamics of change, especially since there are studies confirming that entrepreneurial culture can be acquired through knowledge and skills that can be taught, unlike those who support the proposition that entrepreneurship is innate in humans, and therefore the university is the fertile ground for the formation of knowledge and its development, acquiring skills and controlling them, and thus producing behaviors represented in the establishment of entrepreneurial institutions, and this is what AMR Zeidan confirmed (Zeidan, 2010, P. 07) that entrepreneurship is teachable. He pointed out that training and education are one of the most important determinants of the emergence of the contractor in societies and that there is no contractor Naturally, entrepreneurship



is a system that is subject to education and qualification like other fields, but the challenge remains around the level and quality of this entrepreneurial education aimed at those who want to create institutions, which we will discuss in the upcoming elements.

### **5.1. Entrepreneurial education as a mechanism for spreading entrepreneurial culture:**

In its simplest definition, entrepreneurial education is considered to be various knowledge and gains that are provided to the individual to improve his entrepreneurial positions, and the definitions provided for entrepreneurial education have been numerous and varied with a variety of definitions that explained the phenomenon of entrepreneurship in societies.

#### ***5.1.1. Definition of entrepreneurial education:***

In a joint document of the International Labor Organization and UNESCO in 2006 entitled "Towards an entrepreneurial culture" entrepreneurial education was defined as follows (Qaidi, 2016-2017, P.108): entrepreneurial education is generally considered as an educational approach aimed at enhancing self-esteem and self-confidence by promoting and nurturing individual talents and creativity, at the same time building values and related skills that will help students expand their knowledge in the study and the following opportunities and adopt the necessary methods the use of personal, behavioral, directional activities and those related to the planning of the career path.

#### ***5.1.2. Entrepreneurial education programs:***

Considering that the educational process is a continuous process, entrepreneurial education must necessarily be permanent and linked to all educational levels, and therefore it passes through five specific stages of development (Badiyar and arabash, 2019, pp. 15-16):

- Learn the basics of entrepreneurship:

It is necessary for students to learn and practice various entrepreneurial activities in primary, preparatory and secondary school classes. At this stage, students learn the basics of economics, the opportunities and career choices resulting from it, and master the basic skills for success in the self-employment economy. Therefore, the motivation for learning and a sense of individual opportunities are the special outputs at this stage.

- Awareness of competence:

Students learn to speak the business language, and see various problems from the point of view of employers, and this is a fundamental aspect in the profession and technical education, as the focus is on the initial competencies and their discovery, which can be learned in a special course on entrepreneurship, or be contained in other courses and curricula that are related to it.

- Creative applications for:

This stage is expressed at the level of field friction by attending seminars, forums and training courses so that individuals are guaranteed many creative applications, and therefore a deep and comprehensive knowledge is gained that allows them to present new concepts and ideas and pour them into an organized container for an integrated action plan.

- The project started:

After the theoretical knowledge is acquired, which is reflected by good control in its Applied side, the journey of searching for technical assistance and specialized accompaniment begins to embody the project through the various support and assistance programs offered at universities to reach the achievement of creating an entrepreneurial enterprise.



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- The growth factor:

When an organization matures, it will face many challenges, and it is customary that many owners of organizations do not seek help, which can be a support and a supporter to learn more about potential problems and identify them in order to deal with them in time and find practical and effective solutions to pay for all the damage and contribute to its growth and development.

### **Conclusion:**

- Based on the above, we can say that the digital transformation that Algeria has known in general and adopted by the Ministry of higher education and scientific research is beginning to bear fruit, and this is shown in the multiple digital platforms that have been developed, which in this study we had a pause about its tasks and the most important pillars, as well as its relationship to the dissemination of entrepreneurial culture among students, and some of the results that he monitored are as follows:
- The Ministry of Higher Education and Scientific research, through the tasks assigned to the innovative projects monitoring system platform, has contributed to spreading the entrepreneurial culture among students, and this is evident in many emerging institutions across various university institutions in Algeria.
- The culture of Algerian society, especially the Algerian youth, attracted by the job due to the absence or low level of risk compared to the creation of a private start-up institution.
- The innovative projects monitoring system platform works to follow up and accompany students at all stages of the development of their institution, but given the possibilities imposed by digitization of hardware and speed of internet

flow, which prevents a large number of students from following this process, which hinders many distinguished projects.

- The platform performs many tasks that contribute to raising the students' cognitive abilities.
- The platform was able to benefit a large segment of university youth in the field of entrepreneurial training.

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