

New Missions for Algerian Universities?

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Abstract:

Ministry of higher education restructured study's hierarchy by introducing the LMD system. Yet, both local and foreign enterprises plaint inadequate educated workforce as one problematic factor for doing business (see *World Economic Forum Reports*). Furthermore, university-industry collaboration in R&D is so week (*GCR, different reports*), reflecting the limited role of universities in problem-solution puzzle

Key words:

Third mission, entrepreneurial university, mode 2, triple helix

Introduction,

During last ten years, Algeria has been engaged in ambitious five-year programs aiming to divorce underdevelopment. Instructions have been made to engage university to whole economic and societal development. Accordingly, ministry of higher education restructured study's hierarchy by introducing the LMD system. Almost all Algeria universities adopt this approach and create, as their international homologues, different second cycle specialties as a respond, they believe, to market pressures.

Yet, both local and foreign enterprises plaint inadequate educated workforce as one problematic factor for doing business (see *World Economic Forum Reports*). Furthermore, university-industry collaboration in R&D is so week (*GCR, different reports*), reflecting the limited role of universities in problem-solution puzzle.

The paper sheds light on new missions that universities in Algeria are facing. It investigates whether the current hierarchy fits with market demands, and what are the perspectives and challenges to integrate university in everyday life?

The paper's structure follows the stream of presenting a theoretical background on the topic of third generation universities, in first stance. The characteristics of modern university are treated in second place. In a third point, the study exposes the current situation of Algeria's higher education. Results and paper recommendations conclude the paper.

1- Theoretical background

One characteristics of modern life is the hegemony of Knowledge as an engine for economic development and social prosperity (A. Frane, 2014; K. Thorn, M. Soo, 2006). This means that sectors with high value of R&D creatitivity conduct the remaining ones and the production, dissemination and application of Knowledge come at front-head. As Knowledge is a complex and evolutionary process, its production and transfer necessitates a cooperative system between different spheres at various levels. Thus, the emergence of National Innovation System (NIS) has been seen as a mandatory arrangement for the implementation of the Knowledge-based Economy. Within NIS, university overtakes its traditional tasks of teaching and research. It undertakes new priorities and engages in business world as a partner or

entrepreneur. This shift refers to the emergence of third generation university with novel missions for higher education.

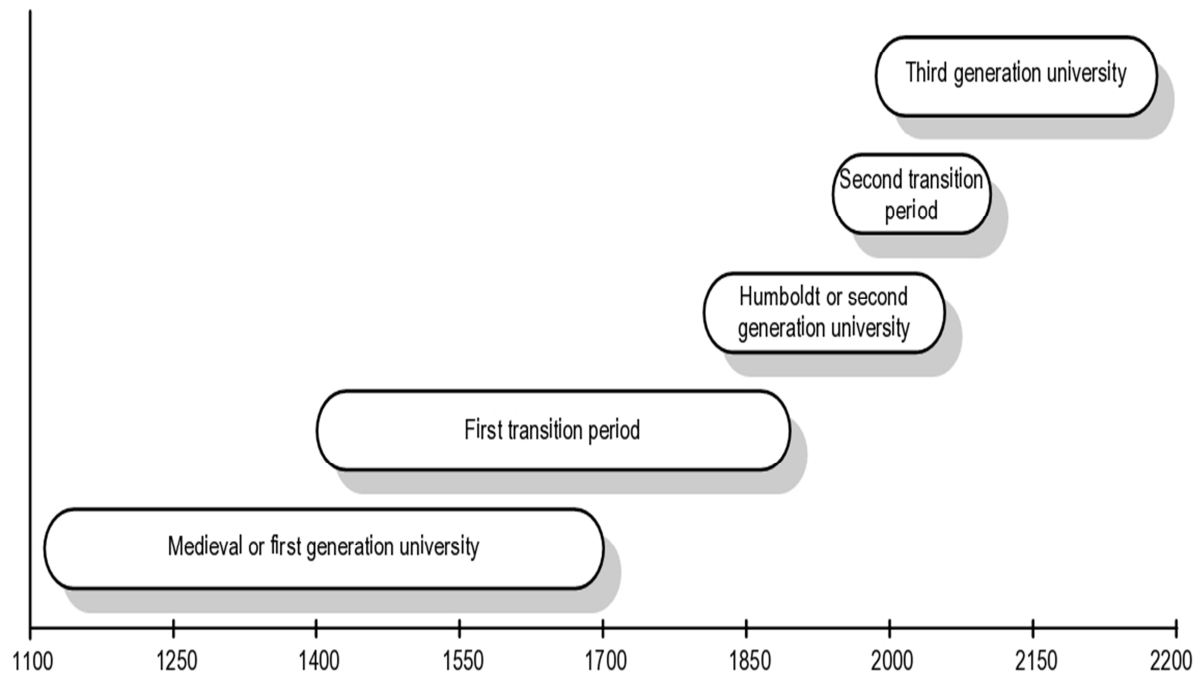
It is necessary to present three stages of development that university saw.

We can say that the origin of university is related to religion studies. Many lectures from the antic past were religion spoken-man having the permission to organize public lectures; however, the establishment of university, independent of monasteries, churches and Mosques¹ was funded by many famous Muslim scholars such as *Abu Hanifa ano'man, Ibn Sia and Abou hamid el-Gazali*. During the Islamic golden era there were numerous institutions that provide higher education; the famous one is the House of wisdom which is considered to be the first university in the world in the proper term of the word (see *Wikipedia* and *Wala' Wajih abdelhamid abdelghani 2009*).

As knowledge traversed to Europe after long period of middle-dark age, many places and scholars appeared. Reims, Tours, Angers, Laon can be seen as forerunners of the universities established later (*J.G.Wissema, 2009*). The existing universities, which spread rapidly between 1200 and 1300, were considered to protect religious thoughts and guidance and missed the permission to conquest knowledge or sciences. Nonetheless, the rapid change that the world saw (the spread of printing technology, the conquest of new geographical areas for example) created new ground for university. The rise of new thinking streams, especially in theology, favored rich debates among scholars within and outside university, leading to a first step toward questioning existing knowledge. Universities thus passed from pure act of learning to investigating, leading to a novel step, observation. Indeed, even the observatory approach was first, seen as rivalry to university's principals; applied sciences became the mainstream of sciences at universities. The second principle mission of university had just established: the university became sovereign vis-à-vis religion and raised independent thought characterized by experiments and objectivity; the HUMBOLDT's university model emerged.

The HUMBOLDT university favored researches based on experiments in order to draw final transparent argumentations, which will be verified. According to *J.G.Wissema (2009)*, only what was validated by observation could be seen as true rather than authorities' conclusions. This model still exist in modern era with some limitations, leading to the conception of new generation university accompanied by more engagement with environment and society. Hence, second transitional period has been commenced as a respond to international trends characterised by global integration, partnership, entrepreneurial activities...etc. The following figures sums-up the historical development of university (western approach)

¹ In Arabic language, the word's origin came from the mosque (الجامع *jami'*) where people meet to pray and learn the fundamentals of the religion; yet because mosques must be kept pure, nearer places are created to teach people. Through time, these places were isolated totally from mosques namely after the creation of new disciplines and applied research fields. The emergence of university took final phase, with the coming of Abbasid-era which inaugurated the *house of wisdom*.

Figure 1: University Development through Time.Source: *J.G. Wissema, 2009, p 4.*

Universities, in the modern era, introduce themselves in the business world as partner with different parties; they may collaborate with public research laboratories or with industrial sector. Even, they engage in trilateral partnership to encourage Innovation and knowledge transfer. This means that university go beyond the 'Ivory Tower' (*D. Bok, 1982*) and became a pivotal actor in innovation system, national competitiveness and economic and social development. Its importance has been increasing by the rise of Knowledge-based economy as modern mode of economic thought. The knowledge economy encouraged university to shift from mode2 of innovation to more complicated mode: triple helix, quadruple helix and quintuple helix. The entrepreneurial university (or academic entrepreneurial) term appears as a consequence to describe the entrepreneurial thinking in addition to basic activities of learning and research. In a modern market driven society the *academic entrepreneur* is the link between the academic world (= oriented toward knowledge) and the commercial world of the societies (= oriented toward innovation) (*Elias G. Carayannis 2013*).

It seems that at each epoch, university follows the evolutionary concept. Its characteristics depend according to environment and events. As the table shows, the first type concentrates on education tasks as its role is centred toward protecting religious believers and Devin guidance. At that stage, Latin language was seen as

lingua-franca with universal orientation. The second type introduces research. This is the result of discovering surrounding environment and natural physical phenomena. Experiments give birth to new scientific disciplines constituting modern sciences. However, researches were carried in one discipline and done by national language. Much universities of that epoch were national entities carried out research to respond national demand. The last type focuses on the commercialisation of know-how and knowledge transfer. It has global perspectives and uses English language as reference for researches, which grow to incorporate different disciplines. Researches are done to create value, the principal role of modern universities.

Table 2: Characteristics of the Three Generation Universities.

Source: J.G.Wissema. 2009.

	Characteristics of the:		
	First generation university	Second generation university	Third generation university
Objective	Education	Education plus research	Education and research plus know-how exploitation
Role	Defending the truth	Discovering nature	Creating value
Method	Scholastic	Modern science, monodisciplinary	Modern science, interdisciplinary
Creating	Professionals	Professionals plus scientists	Professionals and scientists plus entrepreneurs
Orientation	Universal	National	Global
Language	Latin	National languages	English
Organisation	Nationes, faculties, colleges	Faculties	University institutes
Management	Chancellor	(Part-time) academics	Professional management

As university became more engaged in economic and social development, developing countries draw novel strategies inducing higher education to take initiatives for further development. Algeria, as an example, adopts new structural change by vanishing classical

system, one adopted nearby independence, in favour of LMD system, which is considering as more suitable for economic and social pressures. The following point examines the development of Algeria's higher education.

2- Higher education in Algeria

According to a report published by higher education ministry, the Algerian university saw four major phases: 1) The inauguration of Algerian higher education, established just after independence; 2) First reforms of 1971; 3) The consolidating and

rationalising of universities as a response to events; 4) the adoption of new System: the LMD. Our interest will focus on the last phase.

Since 2004, Higher education in Algeria saw a remarkable break with traditional system. This system which is inspired from industrialised countries, characterised mainly by shortening years of study. The LMD is structured over 3 cycles totalised by 8 years of study with Doctorate diploma as higher qualification. This was totally different from the traditional system, in which studies are divided into short and long period. The first and primordial characteristic of this system is the progressive orientation of student according to his personal or professional project. The statistics show that there is a growing number of enrolled students, from 1034313 in 2009 to 1077945 in 2011, an increase of 4.2% in two years. Two third of them are enrolled in social sciences, less than one third in technology and exact sciences and less orientation to medical sciences. However, 23% of total enrolled students in 2011 finished their studies. As a report shows, there is a decline in the rate of return which was $\frac{1}{4}$ in 2011, $\frac{1}{8}$ in 2000.

In addition to this figure, majority of Algerian universities launched second cycle formation 'Master' since 2007 and engaged in third year formation since 2009. Yet, majority of second cycle formation is an academic Master, meaning that there is no orientation to Market need. This state led to less performance of Algerian universities at national and international level. At national level, the failure can be recognised by the refuse of collaboration in R&D between industry and higher education institutes. Indeed, Algeria is ranked 146 out of 148 in term of Industry-University cooperation. This reflects the quality of both scientific research institutes and the quality of educational system (133/148).

As an essay to validate the present situation of Algerian university, it is worth to run a comparison in some key elements as shows the following table

	China			USA			Tunisia			Algeria		
	P.ex	S.Ar	Sc.en	p.ex	S.Ar	Sc.en	P.ex	S.Ar	Sc.en	Pex	S.Ar	Sc.en
1973			0,211			48,668			2,43			
1986	2.081	2911	3,162	4,76419	178266	59,742	5,879	76	5,647	7	81	
1992	1.868	6956	2,841		198864	77,819	5,755	131	9,467		120	11,445
1999	1.906	15714.7	6,750	5,03685	188004,1	72,826	6,271	256,8	17,230	6.6	185,4	14,241
2005		41603.6	19,407	6,45157	205564,6	82,178	6,452	571,3	30,853		350,3	21,161
2009		74019.2	24,346	5,43391	208600,8	89,082	6,506	1022,4	34,397	4.34	606,5	30,787

Source: World Bank 2003. World development Indicators report (statistics as in xls format).

Hence, we can recognize the failure of Algerian university in three points

- By the increasing number of graduate unemployed people , i.e. unemployment with tertiary education (5.8% in 1991; 15.7 in 1995; 19.8% in 2008 as % of total unemployment)
- By comparing results with professional training centers (Centres de formation professionnelle) which are more flexible to market demand.

- By brain drain (Emigration rate of tertiary educated: 8.3 in 1990; 9.5 in 2000 as % of total tertiary educated population).

Conclusion.

The failure of higher education means that Algerian Universities belong to HAMBOLDT model of university which focuses on learning and primary research. They are far to endorse third mission that embraces wider environment and engage in entrepreneurial activities.

References

- Bok, Derek.1982. *Beyond the Ivory Tower*. United States of America.
- Elias G. Carayannis.2013. *Encyclopaedia of Creativity, Invention, Innovation and Entrepreneurship*. Springer. London.
- J.G.Wissema. 2009. *Towards the Third Generation of University: Managing the University in Transition*. Edward Elgar Publications. UK.
- Wala' Wajih abdelhamid abdelghani. 2009. *Higher Education in the Abbasid First Era*. Magistère dissertation, Ain chams university, Cairo, Egypt.

- Burns, T., Stalker, G. (1961).** "The Management of Innovation". Tavistock Publications, Londres.
- Damanpour, F. (1991).** "Organizational innovation: a meta-analysis of effects of determinants and moderators". *Academy of Management Journal*, p. 555-590.
- Godowski, C. (2003).** "Essai sur la dynamique d'assimilation des innovations managériales. Le cas des approches par activités", *Comptabilité – Contrôle – Audit*, Tome 9 : 71-86.
- Lafontaine, J.Ph. (2003).** "Les techniques de comptabilité environnementale, entre innovations comptables et innovations managériales", *Comptabilité – Contrôle – Audit*, Tome 9 : 111-127.
- Rahmouni, A.F.A. (2008).** "La mise en œuvre de la comptabilité par activités dans les entreprises françaises : caractéristiques et facteurs d'adoption et de succès". Doctorat en sciences de gestion, Université de Toulon-Var.
- Kimberly, J.R. (1981).** "Managerial innovation". In *Handbook of organizational design* (Eds, Nystrom, P.C., Starbuck, W.H.). Oxford: Oxford University Press, 84-104.
- Van de Ven, A. (1986).** "Central Problems in the Management of Innovation". *Management Science*, Vol : 32, n°5, mai.
- Kremen-Bolton, M. (1993).** Imitation Versus Innovation: Lessons to be learned from the Japanese. *Organizational Dynamics*, Winter: 30-45.
- Zaltma, G., Duncan, R., Holbeck, J. (1973).** "Innovations and organizations". Wiley.