Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 4 Issue 09 September 2021

Article DOI: 10.47191/jefms/v4-i9-22, Impact Factor: 6.228

Page No. 1767-1776

Governance of the Digital Transformation in Moroccan Universities: Case Study of Cadi Ayyad University-Marrakech

Samira EL FEROUALI[1], Abdelali EZZIADI[2], Said OUHADI[3], Mohamed EL GOUCH[4]

[1]PhD Student ENCG , Cadi Ayyad University Marrakech

[2]Researcher-Professor, FP Sidi Bennour, University, El-Jadida

[3]Researcher-Professor, ENCG, Cadi Ayyad University Marrakech

[4]PhD Student FSJES, LRSGO, Ibn Tofail University Kenitra

ABSTRACT: For the past few years, digital transformation, digital revolution, and technological upheaval have become the main keywords in the management of all types of organizations. The current crisis of the Covid-19 has increased the interest of managers and decision makers for digital transformation, especially in public administrations and institutions. This strategic and operational dimension of digital requires good governance to ensure this transition achieves the desired objectives. At this point, we would like to remind you that governance is the set of best practices to be implemented by all the stakeholders of a company to ensure that the company's information system complies with regulations and, above all, that it performs well in terms of value creation.

This paper aims to understand the governance of the digital transformation of Moroccan universities by relying on the results of a qualitative study conducted among the actors of Cadi Ayyad University as a unit of our analysis. By relying on an inductive approach through semi-structured interviews with decision-makers at the university and institutions, managers of operational user centers, researcher-teachers, and of course students, who are the focus of interest and the reason for the university's existence.

This exploratory work aims to highlight the challenges of digitalization; It also shows, the expected objectives; the current results and the associated risks. It is a preliminary step for future work on the determining factors of the digital transition within Moroccan universities, based on a quantitative approach with 12 universities.

KEYWORDS: Governance, Digital Transformation, EEP, Transition, Universities

I. CONTEXT, PROBLEMATIC AND OBJECTIVES OF THE RESEARCH

The issue of digital transformation is becoming a vital competitive issue, to meet the new challenges of innovation in the university. It is the priority of leaders to ensure good governance of this strategic axis in the university.

This digitalization requires a radical transformation of the premises and equipment adapted to developments related to digitalisation for each university according to TAMER H. (2019) it requires the acceptance and adoption of this strategy by the different stakeholders of the university.

We will analyze in this first part, the digitalization in teaching and in the other administrative functions of the university.

1. Historical evolution of the integration of ICT in the main mission of universities: Teaching in the digital age

In-class teaching, especially with small numbers of students, favors the involvement of the teacher. However, the large number of students in the humanities, law, economics and social sciences hinders direct exchanges between the teacher and the students. In addition, the lack of motivation and the loss of students in most disciplines at the university leads to a re-examination of the content, the teaching methods and the human relations with the students (Mucchielli, 1998). This observation has motivated policy makers to rethink the place of ICT in the learning process. This integration has since gone through three generations. The first was characterized by correspondence study, with paper as the dominant mode of communication. The second generation used educational technology such as television and video. The introduction of online courses and the use of the Internet are considered the beginning of the third generation of distance education (Saeed Paivandi, 2009).

Governance of the Digital Transformation in Moroccan Universities: Case Study of Cadi Ayyad University-Marrakech

In 2006, the Ministry of National Education, Vocational Training, Higher Education and Scientific Research launched the GINIE strategy (Generalization of Information and Communication Technologies in Education) which "aimed to provide, over 3 years, 6 million students and 230,000 teachers with the equipment of 8,604 establishments with multimedia rooms (MMS)" (Messaoudi and Talbi, 2012)[1] . This strategy had at least two objectives:

- Actively involve teachers in integrating ICT into teaching.
- Contribute to improving the quality of teaching and learning through the use of ICT

In addition to the GINIE program (2006), the national Digital Morocco 2013 strategy aims to equip universities with computer tools and internet connections. However, studies show that "practices and uses do not yet follow" (Kaddouri, Bouamri and Azzimani, 2012)[2]. Globally, at least five programs are listed that give priority to ICT as an object and tools for learning and governance (Kaddouri, Bouamri and Azzimani, 2012).

Table 1. List of ICT programs in higher education

Year	Program	Objectives
1998	MAROC Wide Area Network (MARWAN)	Provide universities with high-speed Internet access (between 2 and 100 Mbps)
2004	Moroccan Virtual Campus (CVM)	Promote the use of ICT in classroom teaching
2009	Maroc Numeric 2013	Support universities in equipping and training teachers.
2010	Injaz	Provide subsidized laptops and internet access to students

Until the end of 2019, the digital content produced under this program does not exceed 600 resources. The class-learning at the Moroccan university, was done as part of the hybrid degree courses for the master's level, but it remains very limited. The COVID-19 pandemic pushed the ministry to suspend class-teaching and to replace it by distance class learning mobilizing all available and possible means (platforms, social networks, virtual classes, audio files, regional radio channels and national TV channels...). This has allowed to reactivate the GINIE program and to exceed in two months the digital production of more than ten years.

However, given the rate of access to the Internet, especially in remote areas, and due to the cost of Internet subscription, the precarious situation of most families, distance learning hinders the social disparities between the urban and rural world on the one hand, and between social strata on the other. As a result, they limit the achievement of the expected objectives of distance education. Messaoudi and Talbi (2012) note that the obstacles to the integration of ICT in education in Morocco are diverse: non-effective use of the equipment installed, lack or poor mastery of the pedagogical use of ICT, poor local management, lack of motivation, etc. These obstacles could negatively impact the perception of distance education among students and teachers as the main stakeholders of the university.

These obstacles could negatively impact the perception of distance education among students and teachers as the main stakeholders of the university. Even if adopted unreflectively, distance education risks "perpetuating traditional teaching methods by using a new medium" (Lebrun, 2004)[3]. Hence the need for a finalized and adaptive governance system for the integration of ICT in education that favors a partnership approach over a simple top-down strategy.

[1] Messaoudi Fouzia et Talbi Mohammed (2012), Réussir l'intégration des TICE au Maroc : regard sur le déploiement de la stratégie nationale GENIE, https://edutice.archives-ouvertes.fr/edutice-00826643/file/a1203e.htm

[2] **Mehdi** Kaddouri**, Abderrahmane** Bouamri **et Toufik** Azzimani, Le non-usage des TIC en contexte universitaire : Entre signes, sujets et sens, Revue généraliste de recherches en éducation et formation, 2012, pp. 71-88, https://doi.org/10.4000/rechercheseducations.1041

[3] Lebrun, M. (2004). La formation des enseignants universitaires aux TIC : allier pédagogie et innovation, Revue Internationale des Technologies en Pédagogie Universitaire (Canada, Québec), 1,1, p. 11-21

2. integration of ICT in university support functions: a quest for managerial performance faced with resistance to change

The performance of the Moroccan university today, as a public institution, depends on the efficiency of its governance system. This could be based on :

- ✓ The dematerialization of the university-user relationship and online access to services offered;
- ✓ The reduction of costs and the development of the university's performance;
- ✓ Simplification of procedures and improvement of services for students, teachers and the external environment;
- ✓ Improvement and diversification of communication channels with the internal and external environment of the university.

These objectives could be achieved if the university takes advantage of the preponderant role played by ICT. The functions of human resources management, accounting and finance, maintenance, student management ... are all support functions that could be facilitated by ICT.

This digital transition will certainly push the different actors to leave their comfort zone for a while and will create a resistance to change. Hence the need to set up a governance system for this digital transformation based on a participative, progressive, mutual and demonstrative approach.

3. Problem and expected objectives

In this contextualization of the digital transformation in universities, particularly in terms of governance and performance, our paper aims to understand the perception of this digital transition by the main stakeholders (teachers, students, administratives and technicals staff) and the expectations of each stakeholder. This step will allow us to understand the process of the integration and the consideration of these perceptions and expectations in the governance system at the strategic and operational levels. Thus, we formulate our problem as follows:

"How do Moroccan universities ensure the governance of their digital transition?".

This problem is both original and complex. It is original concerning the current context characterized by the COVID19 pandemic that has upset the managerial and work practices of all organizations around the world. Also, its relevance can be explained by the status given by the framework law n° 51-17 to off class education, training and scientific research system and this law promotes also the integration of information and communication technologies to improve the quality and the performance of learning. In addition, the national strategy of the dematerialization of public services makes the governance of such a project a subject of capital importance.

It is complex as it mobilizes several disciplines at the same time: Management Sciences, Sociology, Political Sciences, Law, Computer Science....). From this central research question arise several specific questions that will structure our access to the field through the case study of Cadi Ayyad University of Marrakech.

Thus, our paper aims to address three main objectives:

1. To discuss the strategy of digitization of processes implemented by Cadi Ayyad University;
2. Identify the perception and obstacles of digitalization within Cadi Ayyad University;
3. And finally study the expectations of the implementation of digitalization.

In addition, the choice of the university as a context for our research is justified on the one hand, by the objective set for this work to explain and understand the reality of the governance of digital transformation within Cadi Ayyad University of which I am a stakeholder with a double cap as a Phd student and as an administratif . On the other hand, we are not aiming through this investigation at the reproducibility and generalization of the results which deserves the choice of a representative sample.

Without forgetting the interest in this process of digitalization which constitutes a major stake in the governance of the public administration and also the fruit of the managerial practices of New Public Management.

II. THEORETICAL FRAMING OF THE INTEGRATION OF ICT IN THE UNIVERSITY PROFESSIONS

The works on the integration of ICT often use the same theoretical corpus and analysis models. These are mainly the Theory of Organizational Change (Lewin 1947), the Theory of Reasoned Action (Ajzen and Fishbein, 1980)[4], the Theory of Planned Behavior (Ajzen, 1985), the Theory of Diffusion of Innovations, the Technology Acceptance Model, the Unified Theory of Acceptance of Technology Use. And finally, the theory of new public management that appeared in the United Kingdom in the 1980s (Amar and Berthier, 2007).

[4] Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

1. The theory of organizational change management

The theory of organizational change management (Lewin 1947; Collerette, Delisle and Perron, 2002) emphasizes the dynamic nature of the change process that the actor goes through. it emphasizes that this process follows a path characterized by three phases:

- Unfreeze: this corresponds to the period when actors begin to question their perceptions and behaviors, whether voluntarily or not;
- The transition (Change): the actor begins to adapt to the procedures by experimenting with new ways of doing things, and finally the change will only be valid for those who have accepted the change or resistance to change for others; and
- Recrystallization (refreeze) which consists in stabilizing the new organization induced by the changes and consolidating it to avoid any return to old routines.

2. Theories of reasoned action and planned behavior

The theory of reasoned action and the theory of planned behavior, Davis (1989)[5] , cited by Bouyzem and Al Meriouh, 2019)[6], distinguishes two factors that facilitate the acceptance of technology : the perceived usefulness and perceived ease of use. The first factor refers to "the degree to which a person believes that using a particular system could improve his or her job performance" and the second implies "the degree to which a person believes that using a particular system will be effortless" (Trigui and Chapellier, 2006)[7]

3. The theory of interpersonal behavior

The theory of interpersonal behavior (Triandis, 1980) proposes a more refined framework for analyzing the appropriation of ICTs by distinguishing between direct determinants of behavior: intention, habit and facilitating conditions of use. This is a basic theory of the work on information systems (Thompson et al, 1991; Limayem et al, 1994; Limayem and Chabchoub, 1998).

The study of Kaddouri, Bouamri and Azzimani (2012) concludes that the situation of non-use of ICT students is not explained by "a negative attitude towards the use of ICT, but because of the inaccessibility of technological tools and the lack of adequate support to appropriate the signs specific to information technology and communication, and to make these tools vectors of access to knowledge and knowledge building."

4. The theory of the new public management

We conclude with the theory of new public management that dates back to the 80s, when several countries around the world had to face financial crises (Morgana 2012), applying the practices of private sector management to the public sector, this theory refers to "the set of processes of finalization, organization, animation and control of public organizations aimed at developing their general performance and steering their evolution in accordance with their vocation. According to (Pesqueux 2006).

It constitutes a reference framework for the organizational change of public institutions in general and the governance of digital transformation in particular.

III. EPISTEMOLOGICAL AND METHODOLOGICAL CHOICES

Epistemology is the study of science by reflecting on its nature, its method and its value. This amounts to positioning ourselves in an epistemological paradigm.

The willingness to interpret the results in order to understand the functioning of a system leads us to situate ourselves in an interpretative posture since "this posture supposes two things: The object of research is a construction (mental, social) which is the case in this study, and since the researcher aims to understand the meanings that the actors give to their action or, more

[5] Davis, "Perceived Usefulness, Perceived Ease of Use , and User Acceptance of lnformation Technology," *MIS Q.*, vol. 13, no. 3, pp. 319–340, 1989.

[6] Bouyzem Meriem et AL MERIOUH Youssef (2019), Etude exploratoire des déterminants de l'adoption du E-Learning par les professeurs de l'enseignement supérieur : Cas de l'université Abdelmalek Essaadi, International Journal of Business and Technology Studies and Research, Vol 1, Issue 1, http://doi.org/10.5281/zenodo.3533062

[7] Trigui Thouraya et Chapellier Phillippe, Le comportement des petits et moyens cabinets d'expertise comptable en matière d'utilisation des TIC, 27ème Congrès de l'Association Francophone de Comptabilité, Tunis, mai 2006

simply, the meanings that they attribute to the object of the research." (Marie -laure. Gavard perret. David Gotteland. Christophe Haon. Alain jolibert 2008).

In order to study our research problem, we rely on exploratory qualitative research, via the case study "Cadi Ayyad University". This approach is the most appropriate for our study, because it has an explanatory and comprehensive aim; (M.Velmuradova 2017). Exploratory research is a form of qualitative research in the sense of the work of researchers (Trudel, Simard, and Vonarx 2007). It serves to clarify a more or less defined phenomenon. Indeed, exploration as a major methodological choice in our research is a legitimate choice, justified by the central objective of this research work. This analysis will be based on an inductive reasoning mode for the reason that our research is part of an exploratory approach to better understand the complex reality of the governance of digital transformation within the university by conducting an empirical study in the field.

This major methodological choice is justified by the nature of our central research question, formulated by "how". In this sense, (Basias and Pollalis 2018) point out that the research questions formulated by "how", "what", "when", "where" are explained by the qualitative approach by giving elements of response to the research questions. Then we note according to the literature review , the problematic object of our study is not sufficiently addressed.

For the collection of data, we interviewed 20 people. Belonging to 3 categories of stakeholders most involved in the process of digitalization within the university.

Table 2: Presentation of interviewees

Stakeholders category	Kind	Total number
Research teachers	3 men	3
Students	5 women 2 men	7
Employees	7 men including 2 in SI 3 women	10

In fact, when conducting the interviews, we gave the interviewees time to express their views on the issue of governance of digital transformation within the university. The average duration of these interviews is 45 minutes. In order to be able to exploit them, we proceeded to transcribe the respondents' statements to the letter of the respondents' statements.

For the data analysis, we proceeded to the content analysis, structured with the help of the main axes fixed for this research work:

-1st axis: the digitalization of processes within Cadi Ayyad University;

- 2nd axis: the perception and brakes of the digitalization within the university;

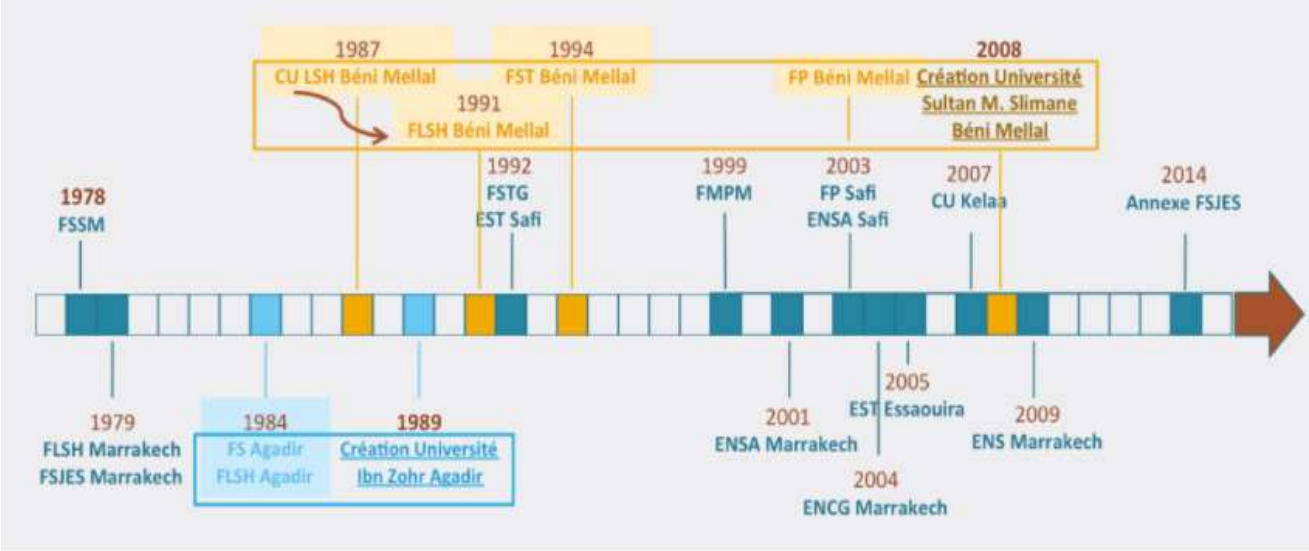
- 3rd axis: the expectations of the implementation of digitalization.

This type of analysis used in our research is relevant, insofar as it will allow us to understand this complex reality and this phenomenon which is in its embryonic phase. This is done through the use of the words of each stakeholder in relation to each axis. In addition, in order to strengthen the validity of our results, we used a qualitative data analysis software (Nvivo software). The textual analysis of the data using this computer tool reinforces the reliability of the research results and reduces the bias of subjectivity.

IV. PRESENTATION OF THE UCA

Cadi Ayyad University of Marrakech is a public institution of higher education. Since the creation of the first nucleus in 1978 (Faculty of Sciences Semlalia), then the Faculty of Letters and Humanities and the Faculty of Legal, Economic and Social Sciences in 1979, the network of establishments has developed to cover the whole region, and even to be the incubator of two universities: Sultan Moulay Slimane of Beni Mellal and Ibn Zohr of Agadir.

Figure 1: Historical evolution of the UCA



Source: www.uca.ma

In a few figures, the UCA has[8]: 69320 students spread over 14 establishments with a number of 167 courses of study including 6 double degree courses and 24 continuing education courses, 14447 researcher-teachers and 822 administratives staff, 64 laboratories, 82 research teams, 1 technology transfer center, the UCA collaborates with 580 research organizations, 1350 doctoral students, more than 500 incoming and outgoing mobilities per year and 150 co-organized scientific events per year

A few years ago, UCA took advantage of the evolution of ICT and anticipated the development of distance learning practices through the UC@MOOC project[9]. Today, this project totals: more than 17,000,000 minutes viewed with 4,000,000 views/visits, more than 27,500 subscribers to the UC@MOOC channels; 390 pedagogical units put online, and more than 20 pedagogical units in the process of being put together, a total of 125 finalized courses; and more than 100 teachers involved.

V. DISCUSSION OF THE RESULTS

To understand this tangled truth of digital transformation within Cadi Ayyad University, we will proceed to the analysis of empirical data collected from the three stakeholders; teachers, students and officials. To do this, we will present the results of our analysis along the following three main axes: starting with the digitization of processes within Cadi Ayyad University; then we will analyze the perception and obstacles of digitalization within Cadi Ayyad University and finally we will conclude with the expectations of the implementation of digitalization.

a. Digitization of processes within Cadi Ayyad University

Cadi Ayyad University is involved in several projects in order to enhance its digital strategy[10] we cite as examples: the Project "MOOCs for Morocco" with the Embassy of the United States and Dar America set up in 2015; the TEMPUS BUCUM Project this project concerns the establishment of a production unit of MOOCs; the Project on E-Learning in the Maghreb UCA British and Ministry.

In 2016 UCA is engaged in the accreditation of a professional license in hybrid mode, which combines two learning modalities: the classroom (40%) and e-learning (60%).

UCA is committed to a set of platforms, namely: The pre-registration platform (pre-registration.uca.ma); The application platform for new baccalaureate holders of institutions with regulated access; The creation of a Guichet UCA Unique (http://candidature.uca.ma).

In addition to The redirection to the national competition platform for the network of ENSAs: http://www.ensa-concours.ma (ENSA Marrakech, ENSA Safi); The redirection to the national competition platform for the network of ENCGs:

[8] Site de l'UCA

[9] Rapport d'activité 2015-2017

[10] Rapport d'activité 2015-2017

http://tafem.ma/concours (ENCG Marrakech); The establishment of other platforms for the benefit of students including the UC@Student application developed and integrated with the UC@mobile application already deployed on Play Store.

The issue of digitization of processes is becoming a fertile avenue of research and an inescapable field of investigation, becoming indispensable within the public institution in general and in the university in particular (figure 2).

This premise is strongly supported by the various interviewees, due to their interest in this issue before and during this period of health crisis. In this line of thought, "before COVID 19 the university had a vision of becoming SMART University by relying on a digital strategy" (official's statement). Indeed, this economic climate makes the digitalization of organizational processes necessary. The respondents support this hypothesis confirming the indispensability of the implementation of the digital strategy.

In the opinion of the researcher-teachers interviewed, the introduction of the digital strategy in the university goes back a long way. However, its operationalization is still basic in the sense that the introduction of digital devices only affects certain processes. Indeed, the spread of Covid once again reinforces the need for computerization of the university's processes. According to these teachers, the digital transformation "has taken off at a rapid pace despite the fact that the university was already engaged in this process before the pandemic.

As for the implementation of the university's digital transformation strategy, the respondents confirm the absence of a comprehensive and integrative digital strategy. Insofar as the digitalization of processes within Cadi Ayyad University differ from one "institution to another, from one service to another and from one department to another. In this perspective, the digitization of the pedagogical component (distance learning) is in its initial phase with basic practices that still deserve improvement (in terms of infrastructure) and reflection in the sense of teachers. As far as the students are concerned, they declare that it is a good start in terms of digitalization, which requires a lot of effort to achieve the expected results.

In addition, some services such as schooling (apogee system) despite its operation for several years (according to the statements of some officials) "The digitization of some services began 8 years ago as for example the schooling service" confirmed by another statement "The digitization of some services schooling, library (documentary fund) archiving was before the covid19, we started this process 8 years ago ".

Despite the efforts made in the schooling service, it does not affect the administrative functioning in all its stages.

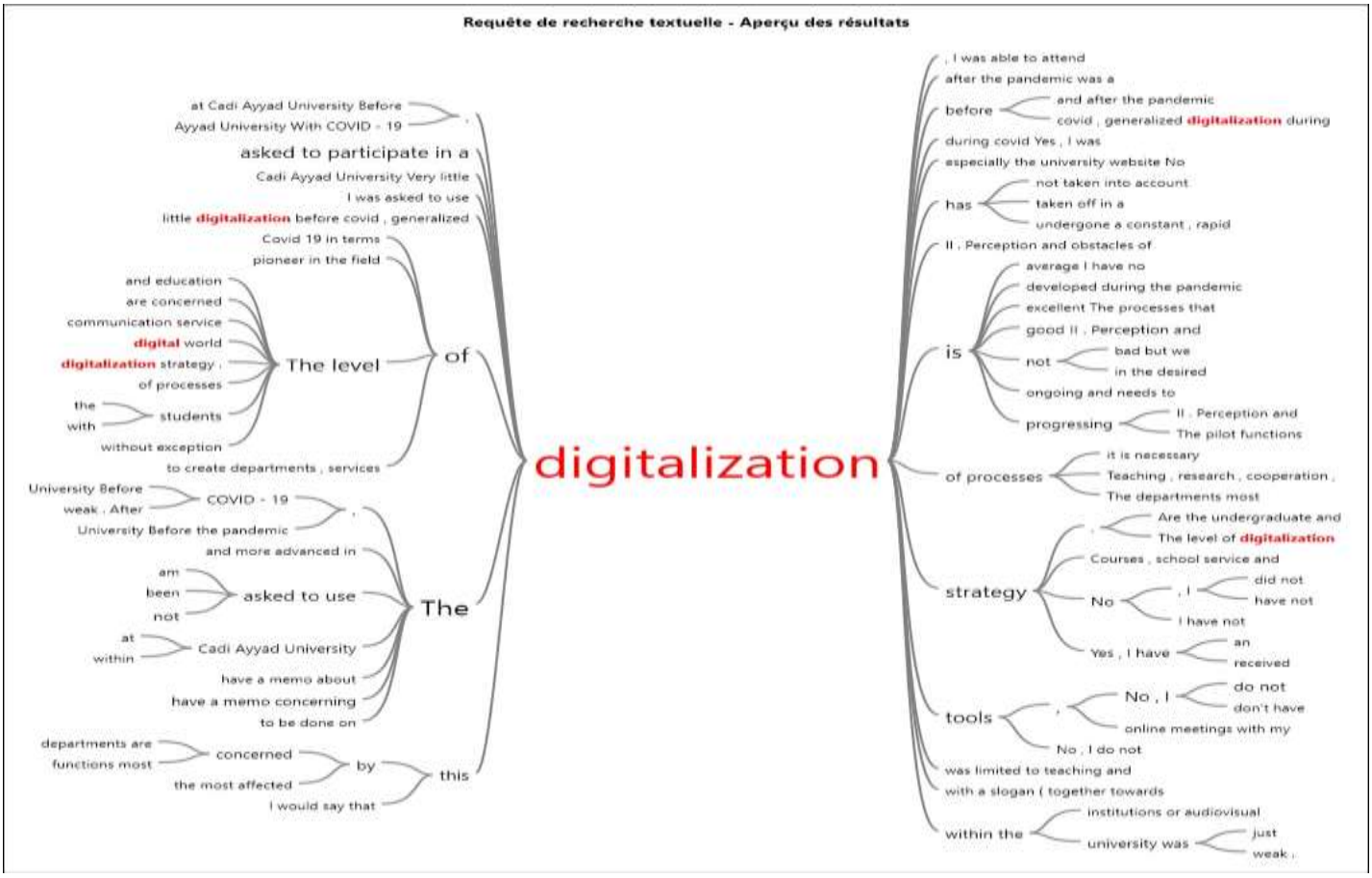
Despite of the generalization of the apogee in all the university it remains basic compared to the one of the other paid ones as France, which it has used for about thirty years. This system is reinforced by other applications and personal initiatives in some establishments, for example "the E-Sco" is an application set up by an establishment under the Cadi Ayyad University to facilitate and accompany the student regarding the requests for certificates, transcripts ... (there is still the electronic signature for the system to be 100% digitalized) according to (the statement of an official in SI).

On the other hand, the other administrative services are still in their embryonic phase with personal initiatives to maintain the operation, in this sense the officials who report to the information systems services confirm that no internal notes are encouraging the digitalization of the process.

Even if the digitalization of processes is a strategic axis, its implementation, communication and support are always questioned, because its implementation is done in a personal way and by initiatives of some employees.

This is confirmed by the statement of an official who announced that: "the digitalization in the financial service has already been started for several years, it was an operation that was developed by our institution from the expression of need to the payment this application was developed by a teacher" another statement confirmed this reality "the partial digitalization and based on personal initiatives.

Figure 2: Contextuel analysis of the concept « digitalization »



Source: Results of the NVIVO analysis

b. The perception and obstacles of digitalization within the university:

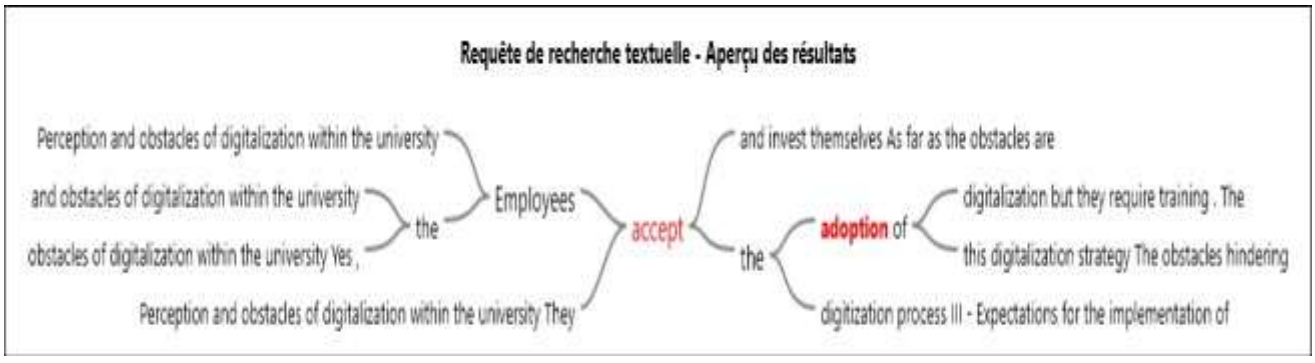
The implementation of this process of digitalization within the university requires the study of the perception of the users towards this strategy.

After the analysis of the results we find that there is an acceptance of this process by a majority (figure3) of the interviewees who consider it as a means of improving the functioning of the university quickly and efficiently, especially in this period of crisis which has shown its usefulness for the continuity of work both at the administrative level and in teaching.

The interviewees confirm that their acceptance of this new process is not enough to expect the expected results, it is necessary to establish this culture by ensuring a good accompaniment reinforced by training and above all to ensure that the employees participate in the implementation of this new process to establish a culture of trust among users.

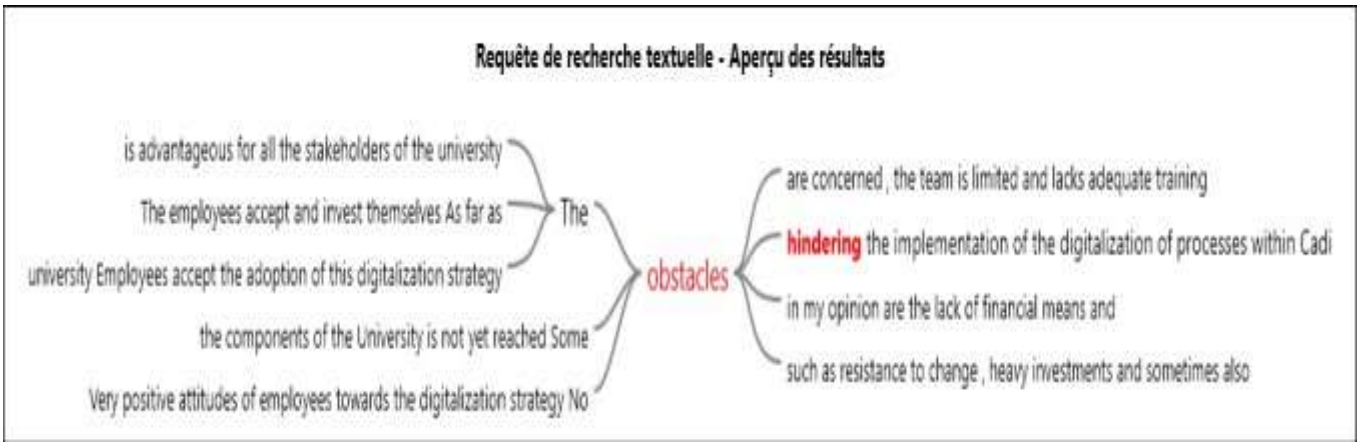
Despite this culture of acceptance, there is a reluctance among some employees, confirmed by several respondents: "There are several people who are not very keen on this digitalization strategy" who see this strategy as a means of control and others see it as a risk of losing their credibility and power with regard to the digitalization of the process.

Figure 3 : contextuel analysis of the concept « acceptance »



Many of obstacles (figure 4) to the implementation of this process were confirmed by the interviewees who claimed that among the obstacles: low level of computer infrastructure, lack of sophisticated equipment, lack of training and support, resistance to change, insufficient technical skills to be able to support users in the computerization of processes.

Figure 4: ***Contextuel analysis of the concept « digitalisation implementing*** **obstacles »**



Source: Results of the NVIVO analysis

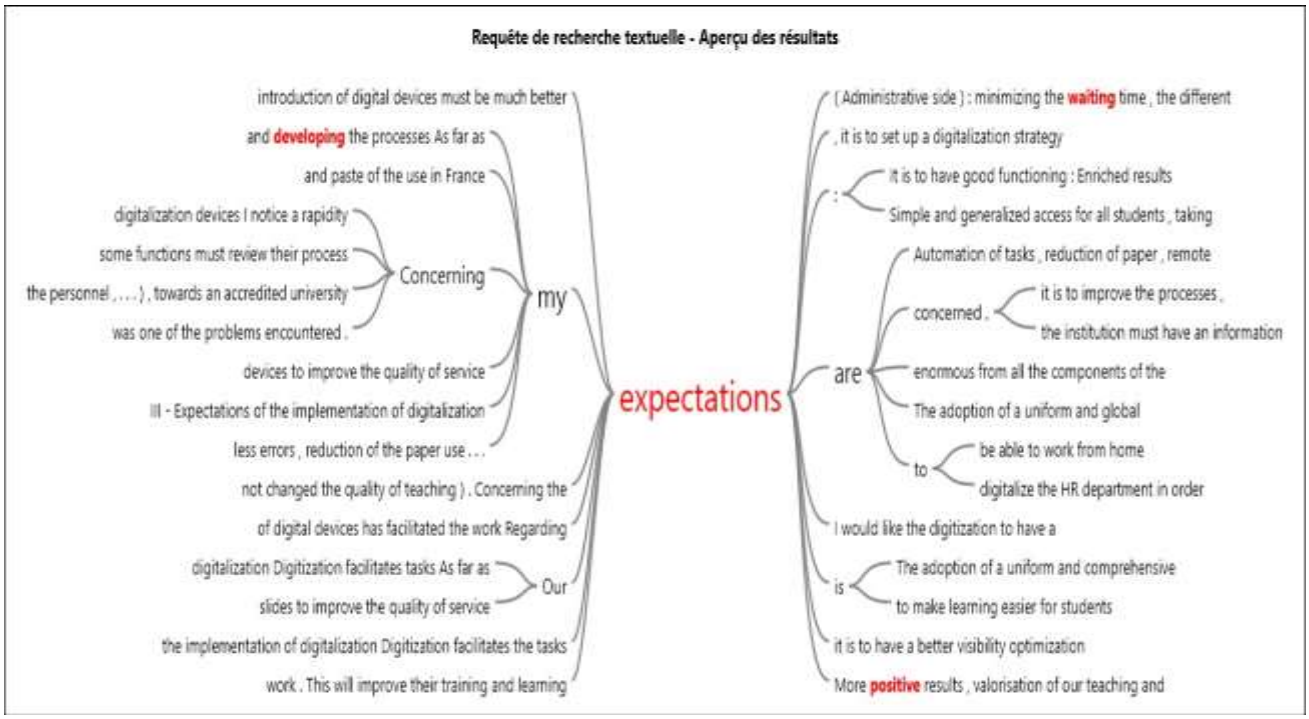
c. Digitalization implementing expectation

They are huge expectations (figure 5) with the university components, teachers insist on the infrastructure that must be robust to support the change of the teaching component by introducing the culture of flipped classes by moving from a culture of original classes with face-to-face teaching to classes in hybrid mode and remote.

These are becoming a necessity today with the onset of the health crisis caused by the COVID 19 pandemic, but also a trend and a necessity to accompany universal change.

The interviewees state that among the pilot processes of this strategy, there is the transparency of procedures, which has allowed for more traceability, saving time, gain in quality of services offered by the university in the various administrative services, distance learning with a solid infrastructure to benefit from a reversed pedagogy, profitable and reliable in terms of teaching quality, which will allow for a systemic vision of the "levels" of learners.

Figure 5: ***Contextuel analysis of the concept «*** **digitalization implementing expectation**



Source: Results of the NVIVO analysis

VI. CONCLUSION

The objective of this scientific article is to understand the governance of the digital transformation within Cadi Ayyad University in order to position the university in this process of digital transformation by conducting an empirical study through semi-directive interviews with 20 interviewees from the different stakeholders "teachers, officials and students".

These interviews deal with different aspects: the strategic level of the implementation of this digitalization process, the perceptions and the obstacles of its implementation, the expectations of the different stakeholders.

The results of this study confirm that the digitization of processes within the university is still in its embryonic phase. It requires a rigorous work of the persons in charge to generalize this system in all the administrative procedures and the teaching by making participated the various poles departments, services... in the process of the implementation of this strategy by insisting on its indispensability especially in this period of health crisis and thereafter to follow the evolution at the universal level.

In terms of limitations, we were not able to interview all the key actors involved in the strategic management of the digital transition of the UCA due to their unavailability during the interview period.

As for the perspectives of this study, we would like to generalize the results by taking into consideration all the universities in the kingdom of Morocco through a quantitative study in order to measure the performance of the digital transformation as a strategic axis of university governance.

REFERENCES

1) Mehdi Kaddouri, Abderrahmane Bouamri et Toufik Azzimani, Le non-usage des TIC en contexte universitaire : Entre signes, sujets et sens, Revue généraliste de recherches en éducation et formation, 2012, pp. 71-88. https://doi.org/10.4000/rechercheseducations.1041
2) Messaoudi Fouzia et Talbi Mohammed (2012), Réussir l'intégration des TICE au Maroc : regard sur le déploiement de la stratégie nationale GENIE, https://edutice.archives-ouvertes.fr/edutice-00826643/file/a1203e.htm
3) Lebrun, M. (2004). La formation des enseignants universitaires aux TIC : allier pédagogie et innovation, Revue Internationale des Technologies en Pédagogie Universitaire (Canada, Québec), 1,1, p. 11-21
4) Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.
5) Davis, “Perceived Usefulness , Perceived Ease of Use , and User Acceptance of lnformation Technology,” *MIS Q.*, vol. 13, no. 3, pp. 319–340, 1989.
6) Bouyzem Meriem et AL MERIOUH Youssef (2019), Etude exploratoire des déterminants de l’adoption du E-Learning par les professeurs de l’enseignement supérieur : Cas de l’université Abdelmalek Essaadi, International Journal of Business and Tech-nology Studies and Research, Vol 1, Issue 1, http://doi.org/10.5281/zenodo.3533062
7) Trigui Thouraya et Chapellier Phillippe, Le comportement des petits et moyens cabinets d’expertise comptable en matière d’utilisation des TIC, 27ème Congrès de l’Association Francophone de Comptabilité, Tunis, mai 2006
8) Velmuradova M., Epistémologies et méthodologies de la recherche en Sciences de gestion, Note de synthèse, 2017
9) Marie –laure. Gavard perret. David Gotteland. Christophe Haon. Alain jolibert, Méthodologie de recherche : réussir son mémoire ou sa thèse en science de gestion, 2008
10) Collerette. P, Delisle. G, Perron. R, Le Changement Organisationnel: Théorie et Pratique, Presse de l’université du Quebeq 2002
11) Pesqueux, Yvon. 2006. « Le `` nouveau management public ’ ’ (ou New Public Management) », 12.
12) TAMER H. (2019) « L’impact de la digitalisation des universités sur la motivation des usagers : Revue de littérature » Revue Internationale des Sciences de Gestion « Numéro 4 : Juillet 2019 / Volume 2 : numéro 3 » p : 265- 279