

## **STUDY OF THE DIGITAL TRANSFORMATION OF HIGHER EDUCATION ESTABLISHMENTS: THE CASE OF THE MOROCCAN UNIVERSITY**

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### **Abstract**

The aim of this research is to study the digitization of Moroccan universities. To achieve this objective, we adopted a qualitative approach, interviewing the administrators of the e-learning system to find out how this training was organized at university level. The main findings of our study reveal that the main objective of digital learning was to digitize courses, without guaranteeing interactive learning spaces from which students can derive the same benefits as face-to-face learning. And that the organization of the e-learning service has an indirect effect on the perceived quality of the e-learning service. This indirect link is mediated by the variable pedagogy in its two forms: on the platform and face-to-face. Given that educational institutions need to design appropriate and effective content, implement an efficient delivery system and provide digital literacy training to their current faculty in order to achieve better learning outcomes.

**Keywords:** *Digitalization; E-Learning; Face-To-Face Pedagogy; Platform Pedagogy; Digital Strategy.*

### **Introduction**

The growing use of alternative teaching methods such as e-learning is clearly changing the traditional understanding of educational activities.

In the Moroccan context, universities are no exception in adopting e-learning to keep pace with educational developments in integrating innovative pedagogies into the learning process. The emergency program launched in 2009 and the reform of university education in Morocco have both emphasized the need to refocus the act of teaching on the learner, on the skills to be acquired by the latter, and on the gradual integration of information and communication technologies into teaching.

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 <http://dx.doi.org/10.47832/2717-8234.17.10>

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Moroccan universities are beginning to diversify their teaching practices to support the reforms underway in higher education, create a new dynamic and encourage students to adopt ICT as a learning tool. Indeed, the introduction of ICT into training and education could act as a vector for innovation, modernization of education systems and human and sustainable development in MoroccoAlmakari, (Almakari, Ahmed. 2020).

At present, Morocco's higher education needs have increased significantly to a point where it is impossible to meet them with conventional teaching resources. Indeed, Moroccan universities currently host over 500,000 students (A. Miraoui, 2018). This figure is set to rise in the coming years. This prospect calls for urgent measures that need to be tackled now. Furthermore, the constant evolution of training needs towards greater efficiency and flexibility has encouraged the emergence of pedagogical and IT tools based on NICTs. This evolution has given rise to e-learning (Almakari, Ahmed. 2020).

So we can't ignore the importance of e-learning and the need for it to resolve the disruption to the education sector caused by the COVID-19 pandemic.

Higher education is becoming a key driver of economic competitiveness in an increasingly knowledge-based global economy, as announced by the UNESCO World Report (2005). The imperative for countries to improve their employability skills calls for quality teaching in educational establishments. National and transnational debates, direct government regulations or incentives, and competition between private and public institutions are all driving institutions to deliver quality education as part of their curriculum Bahyaoui, S., & Said, R. A. D. I. (2019).

As higher education systems expand and diversify, society is increasingly concerned about the quality of programs. Much attention is paid to public evaluations and international rankings of higher education institutions.

As a result, higher education has seen the emergence of new concepts driven by changes in teaching practices. Learning methods have become even more complex with the integration of new technologies such as e-learning and coaching, tutoring, self-training, use of multiple media. All these new concepts mean that training can no longer be reduced to an internship in a single space-time environment (Almakari, Ahmed. 2020).

In a society with an emerging digital economy, ICTs are constantly evolving. They influence the formal and informal relationship with knowledge in the education system. The integration of ICTs into universities has become a necessity if we are to keep pace with the changes society is undergoing (Charlier, 2010), and should contribute to changes in the teaching and learning process. The classic paradigm centered on the transmission of knowledge is shifting towards a new, active e-learning paradigm in which the learner is responsible for constructing his or her own knowledge. Under these conditions, the learner's role becomes paramount Ali, H. et Ajmi, A. (2013).

As a result, e-learning is emerging as an essential support tool for training, both in the professional world and in initial training.

Some Moroccan universities have turned to e-learning to digitalize learning, lighten lecture halls, increase success rates, reduce drop-out rates and align themselves with global trends in teaching and learning. So it's necessary now to assess the quality of these training programs (A. TAQI, 2012).

### **1. Research interest:**

Education in Morocco continues to evolve in an increasingly competitive context. The use of NICTs in higher education is on the increase, with massive recourse to distance learning (e-learning). A major wave of investment in e-learning ICTE is aimed at improving learning quality, developing distance learning and, eventually, widening access to various databases and online resources Ali, H., Darusalam, U., & Iskandar, A. (2020).

As part of its university reforms, Morocco has demonstrated its commitment to change by implementing a global strategy to promote the widespread use of ICT in all educational cycles. In a bid to improve teaching methodologies, several projects have been adopted. As a result, the use of ICT by those involved in higher education has grown steadily Ali, H., Darusalam, U., & Iskandar, A. (2020).

The quality of a training program depends not only on rigorous evaluation criteria, but also on optimum communication between all those involved. Hence the importance of designing training programs in such a way as to take into account the expectations of the various players involved, and the quality indicators corresponding to these expectations. This helps to build a common understanding of different aspects of training quality.

In many cases, the development of e-learning systems causes numerous problems. The rapprochement between the various protagonists is not clearly established (F. Messaoudi, 2013).

Our research aims to support the various stakeholders in the higher education sector. Thus, this work is part of a first attempt to study the digitization of the Moroccan university and provide elements of a response to this empirical reality. The main concern behind our research is to improve the e-learning system for these users.

Through this study, we hope to demonstrate and identify the determinants and dimensions of the e-learning system. These dimensions will serve as a reference point for strategic players to ensure the success and adequacy of their training offer to the requirements of the field. Having a good grasp of the processes involved will enable the company to involve and formalize external and internal players in the delivery of its training offer.

On a practical level, we have worked on an e-learning system for foreign language and culture training at Master's level at Cadi Ayyad University, and our proposals and conclusions could be of great interest to future research in this field.

E-learning opens up a vast field of emerging research. It is a hybridization of several disciplinary fields. It offers these disciplines a wide range of e-learning experiments. E-learning is a highly topical and important research topic Al-Ajlan, A., & Zedan, H. (2008).

## **2. Digitizing the Moroccan university: presentation of an e-learning project at cadia ayyad university**

In Morocco, the "E-Maroc" strategy places a strong emphasis on training and education through the "e-education" project: increasing the number of government-sponsored FOAD (Open and Distance Learning) projects, equipping universities with computer hardware and other information technologies, programs to encourage the acquisition of computer hardware for teachers and students (NAFIDA program, INTILAKA...), the TVI project (distance education using interactive television) initiated in 1998 by the Ministry of Education, in partnership with UNESCO, which is a program built on the logic of territorial networking via transmitter and receiver sites, enabling geographically dispersed people in isolated areas to be trained Allison, C., Miller, A., Oliver, I., Michaelson, R., & Tiropanis, T. (2012).

The Moroccan Virtual Campus project, initiated by Ibn Zohr University in 2006, aims to federate and pool e-learning resources and programs in public universities, with a view to developing distance learning courses at all levels: bachelor's, master's and doctorate.

However, despite the growing popularity of e-learning in Morocco, it is still in its infancy. In fact, the Moroccan university's lag in terms of e-learning can be explained by the lack of links and coordination between the various initiatives and projects already adopted. The latter are marked by a succession of periods of trial and error, and change at the same pace as different governments and university leaders, resulting in an e-learning strategy that remains incomplete Alsabawy, A. Y., Cater-Steel, A., & Soar, J. (2011).

On the other hand, a review of the various international experiences in this field provides some lessons for a successful digital strategy in higher education. The Caisse des Dépôts report stresses, in this respect, that "implementing a digital strategy focused on teaching is not limited to the simple choice of a training platform, but is part of an overall project" Alsabawy, A. Y., Cater-Steel, A., & Soar, J. (2011).

Based on assignments carried out with higher education establishments in France during our research internship at the Laboratoire d'Économie et de la Sociologie de Travail at Aix Marseille Université, Wavestone argues that there are four non-exclusive orientations that seem representative of a digital strategy that creates value for academic establishments, namely :

- Enhance the value of content and resources: by attempting to reconcile unlimited and free access to resources on the one hand, and maintaining the quality of these resources on the other;
- Develop a training offer with a strong digital component;

➤ Be a player in the MOOC phenomenon: changes in the form of learning and the profile of learners mean that we need to rethink the content and form of courses, as well as assessments.

Added to these questions is the issue of the sustainability of the MOOC business model, given the substantial investments required, which are often underestimated by institutions;

Become a 3.0 university: by rethinking digital transformation in an integrated way, taking into account all dimensions (teaching, research, infrastructure) and putting all users at the center of strategic thinking (teachers, students, researchers, administrative staff, partners, etc.).

It is with this in mind that the CSEFRS considers the design of a digital plan for higher education by 2030 to be a key imperative if Morocco is to successfully transform its universities, consolidate its reforms and preserve the country's digital sovereignty (Bahyaoui, S., & Said, R. A. D. I. 2019).

Today, with the progress that Morocco is making in terms of information infrastructure, the increase in the number of telephone operators, the reduction in connection costs, the rise in the number of Internet users, etc., Moroccan universities must dare to embark on serious, large-scale e-learning projects, within the framework of an approach that takes account of organizational and pedagogical aspects.

In Morocco, as elsewhere in the world, there are universities whose e-learning practices are more advanced than those of their peers, even though they teach the same specialties. These include Cadi Ayyad University, Mohamed V University and Hassan II University, Ibn Zohr University... (Bouyzem & Al meriouh, 2019).

### **2.1. Cadi Ayyad University's digital strategy :**

Since its creation in 1978, Cadi Ayyad University (UCA) has acquired a wealth of experience in multidisciplinary teaching and scientific research. It continues to evolve and confirm its position at national and international level, as much through the growth of its student body as through the diversification and quality of its range of training courses, or through the great interest accorded to research and development. The UCA has also been attentive to the needs of the region in which it is located, and to national trends in higher education and development. It has embarked on a journey towards excellence, ensuring its African and international reputation (Ali, H., Darusalam, U., & Iskandar, A. 2020).

According to A. Miraoui in 2017, the former president of UCA *"Among the presidents of French-speaking universities, I'm among those who believe that we need to change the paradigm of classical teaching that we knew thirty to forty years ago is outdated, because we no longer have the same students, nor the same working conditions: before we worked with groups of 10; today we have groups of 100, even 500...Now there's digital. We can't go on pretending it doesn't exist. Young people are connected, and in lecture theaters, they record*

*teachers... So I suggest that teachers protect their image by recording in a studio, thereby making the effort to script the course. It's an effort that can do them a lot of good, because they'll be able to work in better conditions in the lecture hall, since the students have the lecture and can see it over and over again at will."*

He adds, "What interests me is being able to script courses, tutorials and practical work, and make all this available to students at the start of the semester. At the same time, we think it's inconceivable to replace the teacher with distance learning. The teacher is free to choose the teaching method, but remains the master of the situation. Our aim is to hybridize teaching methods. And introducing digital technology allows us to rethink our paradigms, because often, when teachers script their courses, they wonder how their message is going to get across to young people. And when they review their lessons themselves, they can see where they're lacking and where they're weak. Another advantage, bearing in mind that our high school students study in Arabic up to the baccalaureate, including science subjects, but that all teaching switches to French at university: the fact that students can see and review the course at will also helps them to improve their level of French." A. Miraoui 2017.

➤ **Digitization of the UCA:**

In order to achieve "Smart University" status, UCA has launched several projects aimed at creating new dematerialized services and facilitating the management of student and educational affairs through digital means, as well as administrative and financial affairs.

UCA intends to assert its choice. Its digital strategy focuses on the introduction of new pedagogical systems aimed at digitizing courses and promoting collaborative research. It has opted for the implementation of "cloud computing services" as well as a "digital security system" for infrastructures, which represent effective solutions for more modern management of the university campus Almakari, Ahmed. (2020)..

Other projects are also envisaged (flagship projects of the UCA strategy: see appendix) to perfect the bouquet of services developed for the benefit of its students and staff:

- The launch of an "alumni service" to enable university graduates to meet, assist and help each other. Alumni are an invaluable resource that institutions should develop and integrate to contribute to the integration and enhancement of their graduates.

- Pursue the digitization of courses offered by the University's various establishments (MOOCs, online assessment, etc.).

- Setting up digital platforms for e-learning

- Provision of digital documentary resources to support teaching and research (publishing platforms, digital library).

- Dematerialization of student services (Digital Working Environment, digital archiving, digitization of administrative services, quick-service terminals, Alumni online network, university portal and mobile application, etc.).
- Creation of the Digital Simulation Center: development of practical teaching via modern laboratories integrating NICTs (augmented reality, virtual visit, etc.) for several disciplines (medicine, science, engineering, etc.).
- Implementation of E-Lab scientific laboratories for practical work.

## **2.2. Cadi Ayyad University's e-learning project for foreign languages and cultures at Master's level**

Aware of the e-learning challenge, Cadi Ayyad University has set up an online learning platform, Rosetta stone intended for Master's students from all faculties in its territory. This platform has been in operation since the 2017/2018 academic year, and offers only the Foreign Languages and Cultures module. The proposed training scheme combines face-to-face teaching and teaching through a developed platform.

Pr. Abdellatif MIRAOU, former president of Cadi Ayyad University, presented the e-learning project for foreign languages and cultures for the 2017/2018 academic year at its launch: *"Over the last few years, Cadi Ayyad University has taken a number of innovative steps, particularly in terms of pedagogy, starting with the installation and implementation of MOOCs for the first time in the history of the African university. Today, we have more than 150 modules at the service of all students, and we hope to pass the 400-module mark. But the most important one is the one that will start immediately this year with the masters and professional licenses, once again for the first time in the history of the Moroccan university, the introduction of soft skills and life skills with languages and culture in everything that is masters and everything that is professional license, This will enable the university, firstly, to integrate our students in the best possible conditions, because the demand from the socio-economic world is today in these fields, and secondly, this will enable our university to support the major projects to which our country is committed"*.

Pr. Fatima-Zahra IFLAHEN, research professor in the English department of the Faculty of Letters and Humanities in Marrakech, and in charge of the creation of university language and culture centers at Cadi Ayyad University, added: *"The first innovation is the choice of integrating foreign language and culture modules into all Master's courses as compulsory modules. The second choice or innovation is that we have hybrid teaching, meaning that students will be able to take both face-to-face and distance courses. The third innovation is that all the training courses in all the establishments, whether in Marrakech, Safi, El Kelaâ des Sraghna or Essaouira, will be taught in the same way, i.e. with progressive, cross-disciplinary teaching modules that will help us achieve our objective, i.e. to bring our graduates out of their Master's program with a given level of foreign language skills, i.e. in*



*English and French, and with a general culture that we hope is sufficiently rich and varied to position them as tomorrow's researchers, tomorrow's citizens or people on the job market".*

Professor Abdellatif MIRAOUI added: *"Cadi Ayyad University always puts the student at the center of its interests and activities, precisely by setting up this foreign language and culture training. Cadi Ayyad University is also thinking about the university of tomorrow, because with the advent of digital technology, robotics and all the new technologies available today, the university is in the process of implementing a new approach, We hope that Cadi Ayyad University will continue to develop, integrating all its components to create a university that meets international standards, while at the same time being a smart university".*

Cadi Ayyad University's e-learning system for foreign languages and culture at Master's level combines both forms of teaching. Outsourcing, the most frequent form of which is the use of service providers. In this case, the university delegates training content tasks to a service provider specialized in the field (platform). In addition to internalization, which requires the creation of in-house departments and the recruitment of competent staff (face-to-face), this form aims to extend the organization's skills, enabling it to acquire the autonomy necessary for greater responsiveness and better quality monitoring, while at the same time reducing certain costs. The search for financial gains in the development of e-learning projects appears to be a driving force common to both processes.

Even if recreational universities prefer to outsource e-learning, especially when it comes to language training, as Christophe Ferrandou (2013) has clearly shown, based on case studies: *"Language training is a perfect candidate for an outsourcing project, because it is inevitably individualized and takes place over a specific and often multi-year period, it is now presented in a blended form."* And the corresponding budgets and volumes represent an opportunity to outsource these training courses.

#### ➤ **The e-learning system**

Cadi Ayyad University offers Master's students an international platform known for its innovative language learning method. Rosetta Stone is an online foreign language learning method created in 1999. The concept of this "immersion" learning method is to learn a new language in the same way as you learn your mother tongue. While this method is quite popular in English-speaking countries, it's relatively unknown in our country. Rosetta Stone boasts that it has been deployed in 12,000 companies, 9,000 public organizations and 22,000 educational establishments (Savrin, 2017).

This paid-for technology mode uses a dynamic immersion system that slowly introduces words, phrases, conversational ability and grammatical concepts with a mode that will accelerate language learning. It has 28 foreign languages through a pay-as-you-go system.

Rosetta Stone is an online learning platform that provides users with all the resources they need for a successful language learning experience. The Rosetta Stone platform can be



accessed from any computer - all you need is sufficient internet access, and the username and password sent to you by email to confirm your registration (Almakari, Ahmed.2020).

At the start of training, users must define their learning objectives, and choose the content of the training programs. The choices offered can vary according to the learning context and language:

- The first step is to choose the type of situation they wish to work on: professional or everyday situations.

- The second step concerns the level test: the program proposes that learners take an initial level test to determine their starting levels. At the end of the course, they can compare the results of the initial test with those of the progress test, and thus measure their overall progress.

The initial level test lasts between 20 and 45 minutes, depending on the rate at which each question is answered, and comprises 64 questions. The level test is adaptive, i.e. the level of the questions is adapted according to the learners' previous answers. The figure below illustrates the architecture of the level test within the Rosetta Stone platform.

### **3. Research methodology**

This research was carried out using an exploratory qualitative approach.

To this end, the technique of data collection via individual interviews was mobilized. The aim of this approach was to carry out an exploratory analysis with e-learning stakeholders, in order to explore and develop an initial understanding of the Moroccan research field. It was a means of studying the digital transformation of higher education establishments and discovering and identifying the learning conditions of the e-learning system. It was also a means of elucidating the expectations and perceptions of the various players who have a direct relationship with the training system, particularly administrators.

To this end, we conducted semi-directive interviews with ten e-learning stakeholders. The duration of the interviews varied from three-quarters of an hour to an hour and a half, depending on the profile interviewed and the density of the information gathered.

During this phase of the study, interviews were carried out between February and June 2023. The information gathered made it possible to clearly define and determine the research framework, and to refocus the studies on the salient dimensions of the interviews.

### **4. Search results**

It is necessary to study the digitization of Moroccan universities from the point of view of administrators, who have their say on this issue, insofar as they are the main actor solicited by learners throughout the learning process. For this reason, we felt it appropriate to conduct interviews with those responsible for this training at university level, and we had the opportunity to interview two administrators for our qualitative exploratory study.

In order to gain an overall view, and to benefit from the interviews with the managers and obtain the maximum amount of information, we interviewed the administrators. As a result, the administration of these interviews is characterized by non-directiveness in terms of content and semi-directiveness in terms of form; this flexibility allows us both to collect in-depth discourse and to obtain greater support from the interviewee, which will enable a richer exchange of information on his or her part (Ali, H., Darusalam, U., & Iskandar, A. 2020).

For the discourse analysis we carried out, we opted for textual analysis using Nvivo software to facilitate the analysis process, but also to exploit the wealth of information gathered from managers. The first step is to identify the concepts most frequently used by each interviewee, and the number of times they occur. This will enable us to centralize all analysis around these concepts. Next, a textual analysis query on each word is necessary, as it enables us to graphically represent all the results in the form of a "synopsis" tree. The aim is to present the context of each occurrence for further examination. The table below shows the most frequent word occurrences.

**Table 1: Word frequency query - case of directors**

<b>Mot</b>	<b>Longueur</b>	<b>Nombre</b>	<b>Pourcentage pondéré (%)</b>
<b>Plateforme</b>	<b>10</b>	<b>94</b>	<b>1,00</b>
<b>Étudiants</b>	<b>9</b>	<b>82</b>	<b>0,88</b>
<b>Niveau</b>	<b>6</b>	<b>42</b>	<b>0,45</b>
<b>Langue</b>	<b>6</b>	<b>38</b>	<b>0,41</b>
<b>Heures</b>	<b>6</b>	<b>33</b>	<b>0,35</b>
<b>Présentiel</b>	<b>10</b>	<b>26</b>	<b>0,28</b>
<b>Langues</b>	<b>7</b>	<b>23</b>	<b>0,25</b>
<b>Contenu</b>	<b>7</b>	<b>20</b>	<b>0,21</b>
<b>Cours</b>	<b>5</b>	<b>20</b>	<b>0,21</b>
<b>Travail</b>	<b>7</b>	<b>19</b>	<b>0,20</b>
<b>Formation</b>	<b>9</b>	<b>17</b>	<b>0,18</b>
<b>Trente</b>	<b>6</b>	<b>15</b>	<b>0,16</b>

*Source: our NVIVO empirical study*

As the table above shows, the most frequent concepts remain the same in all the discourses, whether those collected from learners and tutors, or even those collected from administrators, with only the context differing from one discourse to another. To follow the same logic as the other analyses we have carried out, we propose in this section to carry out an analysis by axis. In this respect, we have tried to group the responses of our interviewees by axis in order to facilitate the analysis, as the interview guides we have proposed are characterized by non-directivity, and we have relied on the analysis software to code and

group the responses in the form of pre-established themes, yourself emerging during the analysis. In what follows, we present an analysis by theme, drawing on the results of the analysis of the other actors' discourse.

➤ **University expectations and objectives**

We have analyzed the university's expectations of this distance-learning experiment, which is not the first of its kind. There have always been teachers who have voluntarily tried to improve their learning methods, using free Internet platforms, and this is an individual effort on the part of the teachers, to be welcomed, according to our interviewees. The special feature of this course is that it has been institutionalized and accredited by the Ministry of Higher Education, and is also included in the specifications for master's degree courses and professional licenses at all university establishments, which means that it is no longer voluntary, but is compulsory like the other modules.

The advantage is that when the university issues a notice to open the platform, it remains open 24 hours a day, 7 days a week, so that learners can improve their language levels. The university's objective and vision are innovative on two levels: on the one hand, the training calls on information and communication technologies and the notion of online, which is an innovation in itself; on the other, the emergence of the notion of self-learning, through which the university seeks to design a new teacher-learner relationship based on autonomous learning with partial supervision by tutors. This interview excerpt supports these remarks (Almakari, Ahmed. 2020);

*"We're changing the way we think about the teacher-learner relationship and also empowering the learner and giving them the opportunity to build their own path at their own pace, you're going to have students who are going to do the 30 hours and do 10 more, and those who are going to do the mandatory 30 hours and do 100 more... so that's the philosophy."*

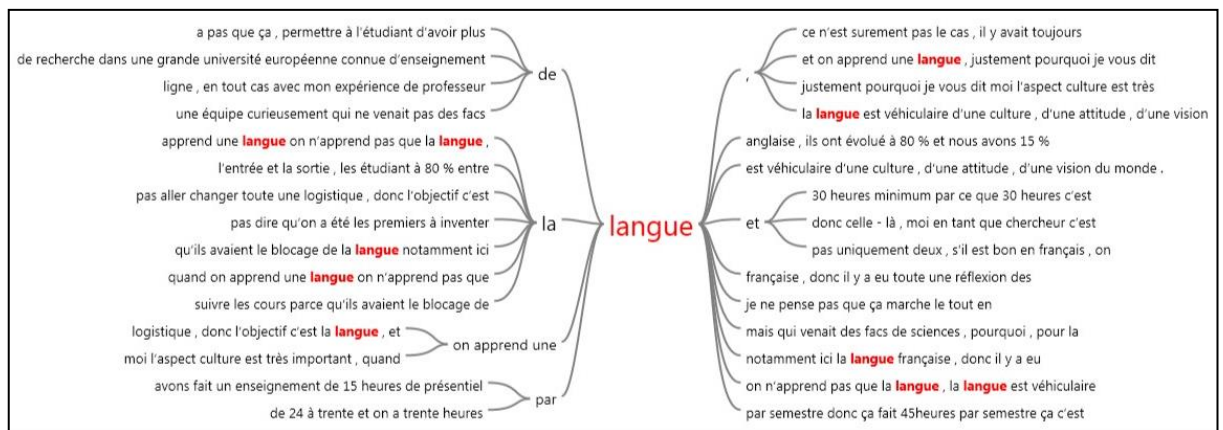
The idea of opting for this type of training stemmed from the observations that teachers had made of their students: according to them, there were students who were very good in their discipline, but they had a lot of difficulty following courses due to language blockages, particularly in French. So there was a whole process of reflection through research to be able to support these students in difficulty, making the university the pioneer and first initiator on a national scale. So the basic aim is to improve students' language skills and help them overcome this kind of difficulty, while leaving them a margin of autonomy with regular supervision and support from tutors. After market research and benchmarking in the presence of both a pedagogical and a technical team, this platform seemed to be best suited to the context, needs and resources of the university.

*"The platform for example that we opted for was the first international online platform with another name, started with two other names and then they evolved into something else,*

the other platform we had to not choose, the two that were on the list, in fact ultimately because they were the best and also international, it's a mix of an Anglo-Saxon and Francophone model".

In order to better understand its context, we launched a textual analysis query to surround it and bring out the verbatims that are related to this concept. As can be seen from the tree below, the main aim of adopting this e-learning system is to overcome the linguistic difficulties encountered by students in face-to-face courses, as well as to avoid the bottlenecks cited on several occasions by our contributors (Almakari, Ahmed. 2020);.

**Figure 1: textual analysis of the "Language" concept**



Source: our NVIVO empirical study

➤ **Organization and pedagogy**

The organization and pedagogy of the e-learning system are two factors that have a direct impact on its perceived quality. We found them in all the speeches we collected, and they form part of our interview guides for all three categories of actor. As a result, the people in charge of the platform are in the best position to tell us about the way it is organized, as well as its pedagogical organization.

Before talking about the organization of the e-learning system or its pedagogy, our interviewees raised an important point which could be considered as one of the criteria for recruiting tutors: mastery of information and communication technologies. This is one of the conditions required to ensure that the learning process runs smoothly, as tutors are called upon to answer learners' questions, which are generally of a technical nature. The university has set up a training program for teachers to familiarize them with the new platform, so that they are able to answer learners' various questions. This training also enables them to adapt the content of face-to-face courses to the content made available to learners.

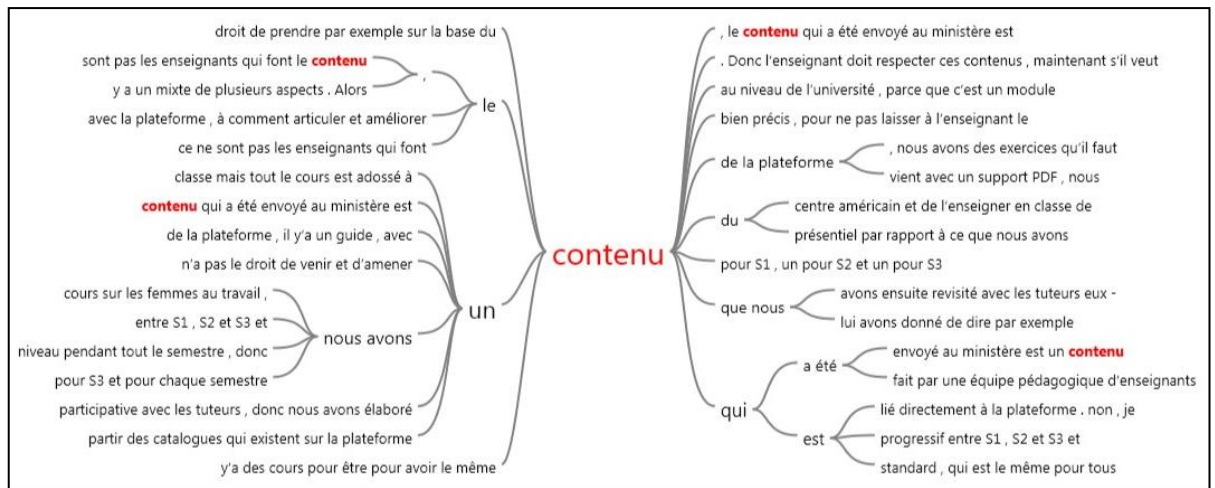
*"The first training was provided by people from the platform who came to do it, then we considered that there's nothing better than training by peers, so we selected the tutors who gave the most satisfaction in terms of student follow-up, knowledge of the platform, ability to use the platform, and who we then asked to accompany the other tutors".*

The distance learning system adopted by the university is an internationally-recognized platform, organized in such a way as to allow users a certain degree of autonomy in learning, thanks to its diversified and rich offering, students can choose the content that suits them while taking into consideration their linguistic level. It should be remembered that each learner is called upon, before starting training, to take a placement test, to enable tutors to propose suitable content. The number of hours to be respected is thirty per semester and per language, and is not capped. Students who are motivated to learn in order to improve their level are entitled to do more, but the reality is far from this: rare are the students who do more than what is required by the administrators, or even students who opt for other practices to be able to consume the totality of the hours. To cope with these practices, the platform has been designed with a In a highly developed way, it makes it possible to distinguish between those who work and those who open the session and leave it open, this interview extract explains this point further;

*"When I look and find someone who's done thirty hours with 0% of activities, I know that he's launched an application and left the questions, they think that we don't find that, a little application installed on the machine that plays the questions as if the student is working, so he counts the thirty hours to pass the exam, but he forgets that he has a mark on the platform too".*

For the pedagogy of the system, the university suggests running language courses on the basis of a program that the pedagogical team has drawn up in a participative way, involving the tutors in the process. The first stage consists of preparing a program that will be backed up by the platform, so that the tutor can use this content as a basis for preparing the content of the face-to-face courses, which are in fact courses for the learners and at the same time a reference framework for the teachers, while leaving them some leeway to choose exercises and topics for discussion in the face-to-face setting. The interest shown by training managers in course content led us to the conclusion that this concept features among the words most cited by interviewees in their speeches, which led us to carry out a textual analysis on this concept to contextualize it. The result of this analysis is presented in the figure below:

Figure 2: textual analysis of the "Content" concept



Source: our NVIVO empirical study

As shown in the diagram, the platform content has been sent to the Ministry for validation and accreditation, and is produced by a team of teaching researchers at the university whose job is to teach and research language teaching. The aim is to offer standard content for all masters courses, with content adapted for each level, to enable students to see how things are done elsewhere, and so the idea is multidisciplinary, mixity and diversity, and to break down the walls between establishments and disciplines, so that science students no longer look at literature students as if they were black sheep, as one of our interviewees explained:

*"I'm in favor of open, modern, innovative teaching, where students on a master's degree, a professional license or even a doctorate can have access to all the sciences in English and French. It's not an idea of just specializing, I'm in favor of breaking down this idea of only doing my specialty".*

### ➤ Learning strategies

In terms of this axis, we tried to assess learner engagement and self-regulation of learning based on the opinions of the training managers we interviewed. As far as commitment and involvement are concerned, we noted from the interviewees' speeches that some students leave work on the platform until the last minute, when they are just looking to validate the thirty hours so they can take the final exam, But this category only represents 20%, according to the statistics generated by the platform. The remaining 80% are committed and involved in the program, and that's more than enough for a first experience (Almakari, Ahmed. 2020).

*"They can sometimes react and say that there's too much work, they find that the 30h hours a lot per semester, because they stay until the end, they don't start at the beginning, at a certain point, they see that they don't stay much time, that's when they start working just to*



*do the 30 hours, but not all, there are some who have done 90 hours, we shouldn't generalize."*

For those in charge, it's no longer a question of motivating learners, but rather an obligation that doesn't give the student the choice of working or not, as for the other modules indicated in the specifications. To deal with any problems that may arise during the learning process, the university has put in place the human and technical resources needed to ensure that the training runs smoothly. For example, the university has set aside a room for students who do not have the means to access the platform, a well-equipped room with wifi coverage and computers available to students, and a team responsible for supporting both learners and tutors, to avoid technical problems (Almakari, Ahmed. 2020).

Despite these efforts by the university to ensure that the course runs smoothly, there are still a number of students who are not happy, because every absence, whether in class or on the platform, will be counted, and beyond the number of absences set out in the specifications, the student will be sanctioned and will not be allowed to take the final test before settling his or her situation with the administration, something that can create problems for him or her, for example an extra year for the validation of the language module.

In general, the results of a satisfaction survey of Master's students showed that 65% of them were very satisfied with the course, with 80% between "very satisfied" and "satisfied". The survey questions concerned the organization of the training scheme, the difficulties encountered, and also open-ended questions for suggestions, proposals and the nature of problems (Almakari, Ahmed. 2020).

*"So the criteria we adopted once again was that between S1 and S2 we asked students to answer a free, anonymous online questionnaire to assess the face-to-face training, distance learning, the quality of the trainers, the content... we gave them the opportunity to interact and react to it themselves".*

There's also another form of evaluation, based on student results, which the training manager handles in a quantitative way, and which should also be supplemented by qualitative aspects through interviews, always maintaining direct contact with all the students, which enables him to gather their expectations, needs and also their dissatisfaction with certain things to which the administrators are trying to find solutions, especially as this is a new experience in these early phases. The idea and the vision are perfect, but the field and everyday life have their say. For this reason, and using a strategy of anticipation, the university has thought of several plans to ensure and guarantee the continuity and success of this experiment.





The aim is to find out how administrators perceive the organization of this training system and its pedagogy. This perception will enable us to draw conclusions on how organization and pedagogy impact the digitization of universities. For Following the same sequence, we'll start with the first point, namely the organization of the e-learning system.

The aim is to explore how this training has been organized at university level. It is, in fact, the integration of a new form of teaching into university activities, which differs from one context to another. This is still a relatively recent issue, and a choice imposed by the current world situation, which is moving towards the computerization of processes and digitalization. In a study carried out for four universities in 2009, Thierry Garrot points out that: "The organization chosen for the implementation of e-learning in universities is often more a matter of choices dictated by the economic climate than of genuine organizational design".

In this respect, this new work organization may be perceived as a structuring change that will overturn traditional learning methods; better organization will undoubtedly contribute to improving perceived quality, and acceptance of the tool, or even its appropriation, whereas poor organization may lead to resistance to a change that may be perceived as a change imposed by the university (Almakari, Ahmed. 2020).

In this case, it is necessary to take this organizational dimension of the system into account. Let's recall that the e-learning system adopted by the university is an international platform, offering a fairly diversified range of courses with the possibility of adapting content, and enabling regular monitoring of learner behavior on the platform. Thirty hours per semester and per language are imposed by the university, and considered one of the primary conditions for validating the language and culture module.

With regard to the pedagogical dimension of the training system, it should be remembered that pedagogy encompasses the teaching methods and practices specific to a subject or discipline, with the aim of transferring knowledge in its three forms (knowledge, know-how and interpersonal skills).

In our literature review, we concluded that platform-based pedagogy touches on several aspects, including assessment, personalized teaching, content optimization and interactivity. As a result, in addition to the advantage of the platform as an individualized training, it also enables the emergence of the concept of self-learning in the university environment, which proposes to the learner to be an actor of his learning, because by making him responsible, the learner feels involved in the process and consequently, his commitment becomes stronger and stronger towards the training device, and certainly the improvement and development of these skills.

The training proposed by the university is a hybrid course, with one part being classroom-based and the other on the platform, which already gives us an idea of the pedagogical organization of this course. For work on the platform, learners are required to liquidate a certain number of hours, in order to be able to take the final test. A placement

test at the start of the course is compulsory, as it enables us to identify the level of each learner, with a view to proposing personalized content to match their language level (Bahyaoui, S., & Said, R. A. D. I. 2019).

As for face-to-face courses, the aim is to guide learners and manage complexities so as to overcome difficulties that hinder the learning process, all of which fall within the remit of the tutor, who is called upon to implement the university's teaching strategy. For their part, tutors are expected to have a minimum knowledge of information and communication technology, so as to be able to respond to questions posed by learners. To this end, training managers are responsible for providing support training on the use of the platform for foreign language teachers.

Admittedly, the university is mobilizing teaching and technical teams who are in the best position to implement this project, but as we have mentioned on several occasions, it involves a change in the organization of work that affects all players and requires them to be involved in order to gain their support.

All these elements have enabled us to understand how administrators perceive the determinants of the e-learning system identified in our literature review. This qualitative exploratory study confirmed the close relationship between all these determinants.

## **Conclusion**

Among the various aspects of daily life, the COVID-19 pandemic has had a significant impact on education worldwide (Mailizar, Almanthari, Maulina and Bruce, 2020). The pandemic led to the closure of schools and higher education establishments around the world, in order to preserve the safety of citizens and stem the spread of the virus (Toquero, 2020). That said, the transition from conventional to contemporary teaching methods could not take place overnight. However, the responsiveness of Moroccan universities, which quickly made technical resources available to teachers, enabled us to overcome this limitation.

However, it should be remembered that the main aim of this transition to digital was to digitize courses, without guaranteeing interactive learning spaces from which students could derive the same benefits as from face-to-face learning. With the exception of some secondary schools and technical training establishments, learning was provided mainly via seminars and courses recorded in video and audio formats. Many academic institutions focus primarily on transferring educational content to the digital world, and not specifically on online teaching and delivery methods (Adnan and Anwar, 2020).

Socialization became absent in times of pandemic due to the scarcity of interactive e-learning devices in the Moroccan educational sphere, so the real-time sharing of ideas, knowledge and information has been partially absent from the world of digital learning (Britt, 2006). Educational institutions are points of social interaction; when educational

activities are suspended, students miss out on this interaction, which is a source of growth and learning.

In addition to the lack of learning it entails, it should be remembered that restricting interaction would produce a decrease in student motivation. In conventional learning situations, students actively participate in learning activities, albeit to varying degrees, due to face-to-face interaction with instructors and fellow students. This finding casts doubt on the effectiveness or, better said, the superiority of e-learning over face-to-face learning, particularly in developing countries like Morocco where a large proportion of students cannot access the Internet for technical or financial reasons. This observation is backed up by our field study, which shows that 22% of respondents do not have an Internet connection.

To make e-learning training effective in the Cadi Ayyad University context, those in charge of the system need to take into account the technical and financial constraints of students, as well as the interaction handicap that the system implies. An effective remedy would be to enrich the system with functionalities enabling face-to-face discussions, and rapid response to students' questions and queries. As e-learning has become an obligation imposed by the current context, the stakeholders responsible for managing this tool should also ensure that they accompany the student through observations and suggestions on learning, to facilitate self-regulation of learning by students.

In line with WHO instructions, we now need to adapt our daily activities with COVID-19, for a while at least, which means that educational establishments need to design appropriate and effective content, set up an efficient delivery system and provide digital literacy training to their current faculty in order to achieve better learning outcomes.

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