#### How to Cite:

Barkat, A., Selkhine, A., Agueb, K., & Hemza, B. (2024). Academic communication in higher education institutions through digital empowerment and distance learning platforms. *International Journal of Economic Perspectives*, 18(3), 755–771. Retrieved from https://ijeponline.org/index.php/journal/article/view/1083

# Academic communication in higher education institutions through digital empowerment and distance learning platforms

#### Abdelaziz Barkat

PhD student, National Higher School of Management, Algeria

Email: a.barkat@ensmanagement.edu.dz

#### Ahmed Selkhine

Doctor, University of Tissemsilt, Algeria Email: selkhineahmed17@gmail.com

# Karim Agueb

PhD student, National Higher School of Management, Algeria

Email: k.agueb@ensmanagement.edu.dz

#### Bouraba Hemza

Doctor, University of Manar, Tunis Email: bouraba.hamaza@gmail.com

> **Abstract**—The implementation of the higher education quality system in Algerian universities focuses on reforming the education and training system in alignment with international standards. The primary goal is to elevate its institutions and research centers to the standards of developed countries. In the context of the digital university, digital empowerment plays a central role in the Ministry's visionary program aimed at transforming Algerian universities into knowledge-driven societies and economies, supported by technology. Digital empowerment refers to the use of digital technologies to provide individuals and communities with access to knowledge, tools, and resources that help them achieve their goals and enhance their capabilities. This study aims to explore the practical experience of distance education, which impacts all segments of society, particularly the academic environment, and to examine the challenges and prospects of distance learning in higher education institutions in Algeria. To achieve this, the study employed qualitative interviews as a data collection method, conducted with professors from the National Higher School of Management who have experience in distance

education via E-learning and Google Meet platforms, both of which serve as collaborative, communicative learning environments. The findings of the study revealed several key outcomes, including the enhancement of university professors' teaching skills through training in digital media. Furthermore, digital empowerment has facilitated the acquisition of scientific knowledge and competencies via distance learning, leading to increased productivity among educators through the use of modern technology in training courses. However, these initiatives were found to be insufficient in scope, with the time allocated for training being notably short.

**Keywords**---Empowerment, Digital Empowerment, University Professor, Distance Learning Platforms.

#### Introduction

The COVID-19 pandemic has highlighted the need to focus on distance learning and developing ways to advance scientific research. This includes supporting the empowerment of higher education professors to showcase their expertise and knowledge and direct them to students through distance learning platforms, in order to encourage ways to advance the future of scientific research. Because digital technology plays a pivotal role in enhancing the performance of university professors and developing modern teaching methods, by digitally empowering university professors, they can harness the most modern digital educational technologies and resources to stimulate and enhance the learning experience for students.

This type of education has spread among institutions and individuals and has become a part of cognitive and capacity development, due to the benefits it achieves and the solutions it provides for many of the problems of the educational process. Many institutions have built an advanced and integrated system for managing e-learning, which includes all the functions and services, enabling higher education professors to achieve their educational goals in a better and more effective manner.

As it is known that the university, as an educational institution, occupies a distinguished position in society due to the responsibility entrusted to it in forming generations to be the pillar of scientific, cultural, legislative and economic life, it has become incumbent upon it to consider how to benefit from what modern information and communication technology has brought, and thus keep pace with the modern developments taking place in developed countries, by exploiting all the potential provided by modern and advanced information and communication technologies in the process of modernizing the higher education and scientific research sector and achieving its quality, especially since quality in education means the ability of the educational institution to provide a service with a high level of distinguished quality (boukhalfa & abich, 2021).

The pandemic crisis that the world has been experiencing since 2019, due to the spread of the Corona pandemic, has doubled the urgent need for this form of

education based on physical distancing, as recommended by all medical and health organizations. This has led to the voluntary closure of various universities and educational institutions, and the cessation of students and pupils from physical attendance. This has been replaced by what has become known as distance learning, of which e-learning is one of the main aspects. This has led countries to seriously consider localizing this emergency form and making it a stable and permanent model so that traditional in-person education remains available. This is done by relying on a digital empowerment strategy that plays an important role in developing and improving the performance of university professors and facilitating the availability of educational resources. Digital empowerment aims to achieve quality in education, especially since the world falling under the shock of Corona or other crises and epidemics in the future is not completely unlikely. Accordingly, this study seeks to address the following research question:

What is the current state of academic communication in higher education institutions enabled by digital empowerment through distance learning platforms?

# Research Objectives:

Through this research paper, we aim to clarify and demonstrate the importance of using distance learning platforms, as they are the cornerstone of e-learning success, especially during times of crisis. Furthermore, we aim to examine the reality of academic communication via distance learning platforms as one aspect of digital empowerment for higher education professors. Through this research paper, we aim to achieve the following objectives:

- Identify the concept of digital empowerment;
- Identify the reality of using distance learning platforms;
- Understand the reality of academic communication in higher education institutions through digital empowerment via distance learning platforms.

#### Literature review

Empowerment has attracted considerable attention in the fields of psychology and social science due to its influence on individual and organizational outcomes, as well as on groups and societies at large (Ochoa & Coello-Montecel, 2023). While there are several perspectives of empowerment, key amongst them are the structural empowerment and psychological empowerment. Structural empowerment represents the social structures that organizations put in place to aid employees' task fulfilment while psychological empowerment refers to productive outcomes that employees achieve directly from tasks when their cognitions of meaning, competence, self-determination and impact are satisfied (Amor, Xanthopoulou, Calvo, & Vazquez, 2021); (Spreitzer & Quinn, 2001). As organizations provide social conditions, policies and environment that facilitate access to opportunities, information, support, and resources at the workplace (structural empowerment), it goes a long way to influence employees' psychological empowerment which ultimately influence employees' wok attitudes and behavior as well as their task accomplishment (Kanter, 1977). Thus, in a supportive working environment, employees with a sense of support feel positive about themselves and are therefore more likely express themselves and feel empowered for task accomplishment (Hsieh, Lee, & Tseng, 2022); (Amor, Xanthopoulou, Calvo, & Vazquez, 2021).

In the present era of rapid digital transformation, digital empowerment is key to competitiveness and efficiency at the workplace (Baptista, Stein, Klein, Watson-Manheim, & Lee, 2020). According to (Wu, Sun, Chang, Zhang, & Qi, 2022), digital empowerment refers to the use of and the reliance on digital technology as a means of empowering every aspect of an organizations' operation in order to ensure sustainability and competitive advantage. It is essential in achieving efficiency, motivation and overall productivity of grassroots employees in this digital age (Peng & Tao, 2022). Employee digital empowerment requires providing and enabling workers with the digital resources, skills, and tools they need in order to use digital platforms and technology in their job efficiently so as to ensure tasks accomplishment at the workplace (Lingling & Ye, 2023). Based on several studies that have found significant mediating employees role of employee empowerment between structural empowerment and work effectiveness and productivity outcomes (Amor, Xanthopoulou, Calvo, & Vazquez, (Hagerman, Högberg, Skytt, Wadensten, & Engström, 2017); (Hagerman, Skytt, Wadensten, Högberg, & Engström, 2016); (Meng, Jin, & Guo, 2016), we argue in the digital age that, as organizations put structural empowerment initiatives in place (digital skills training and access to digital platforms) as they transform digitally, employees' digital empowerment is enhanced, which ultimately translates into efficient and effective task accomplishment. Thus, employees' digital empowerment is the outcome of organizations' structural empowerment initiatives which eventually results in enhanced performance at the work place.

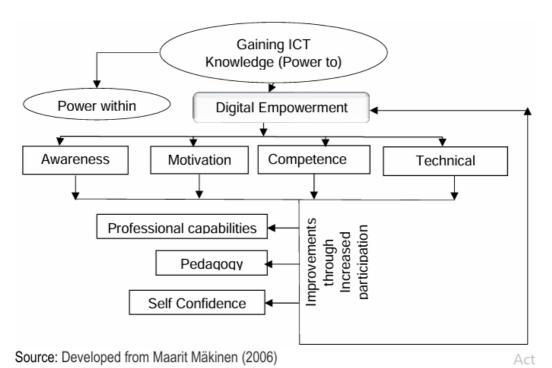
# Chapter 1: Digital Empowerment

# 1-The concept of digital empowerment

This research is built upon the idea that empowerment varies in manifestations across individuals and contexts, posing challenges in defining or explaining its nature and attainment (Nahar, 2023). Combining the concepts of power and empowerment, the researcher will explain what empowerment means in the context of empowerment through ICT. According to (Purushothaman, 2013), power in this context has a transformative sound, an implied promise of change, frequently for the better. The presence of digital competencies, knowledge, and abilities can be used to measure power. As a result, being disempowered means lacking all three of the aforementioned qualities. According to this concept of power, any improvement in the knowledge that instructors have access to is, in and of itself, an indicator of empowerment. People are becoming more self-aware and confident, or developing power within themselves, as their digital skills improve (Baden & Oxaal, 1997). Lack of digital knowledge, skills, and confidence are viewed as the main root causes of their powerlessness in the context of the current study.

Based on the concept of power, empowerment means a change from being powerless to being powerful. Digital empowerment isn't just about having or using digital tools; it's a multi-step process fostering networking and collaboration to enhance individuals' skills (Mäkinen, 2006). Awareness, motivation, technical

access, and competence are the components that enable individuals to engage in the application of new technology and play a meaningful role in the evolution of society (Mäkinen, 2006). As an ongoing process, digital empowerment begins with the acquisition and improvement of the four basic conditions required for the empowerment process. When these conditions are met, the process results in some changes to the aforementioned elements, which keep the process moving ahead and result in some improvements at the individual level through increased engagement, which are empowering for the community and its members. Continuous improvements are made throughout the process; yet the process does not come to a finish; rather, it is always evolving and demanding to be renewed.



Digital empowerment: "The individual's ability to use digital technologies effectively and proficiently to develop life skills and enhance their digital capabilities within the knowledge and information society. It is also the ability to maximize the benefit of digital competence to meet cognitive needs, keep pace with technological, social, cultural, and economic changes, and achieve digital integration into more enlightened societies. It is also the process of gaining control, power, and awareness, and making strong strategic decisions to enable the individual to maximize the benefit of digital technology and achieve technical competence and the ability to control their own learning activities." Digital empowerment is also a means to achieve comprehensive growth for individuals, institutions, and societies, technologically and informationally, in order to adapt and control life skills. Whether digital empowerment is for individuals or institutions, it is an important means to enhance self-confidence technologically and digitally, as well as enhance their competitiveness (sabih & rawaa, 2020, pp. 444-445).

Al-Haiki defined digital empowerment as a form of empowerment that aims to provide continuous training to teachers and students to enable them to employ information and communication technology in the educational process, and related and supporting processes, in a safe and responsible manner, efficiently and effectively, in order to build national competencies capable of producing digital educational content and graduating generations capable of innovation and creativity to produce competitive digital technological knowledge (al haiki & ali, 2017, p. 12).

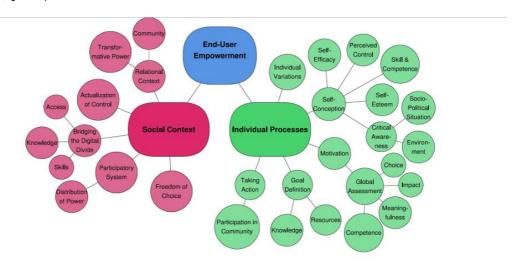


Figure 2. Two Levels of processes and contexts involved in End-User Empowerment

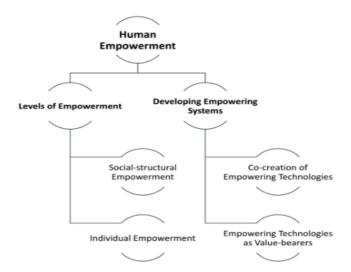


Figure 1. The categorization of concepts covered in relation to human empowerment

# 2-Digital Empowerment Goals

Digital empowerment is a modern concept that plays a significant role in developing and improving the performance of university professors and facilitating access to educational resources. Digital empowerment aims to achieve quality education and improve interaction between professors and students, while providing immediate feedback and comprehensive assessment of student performance. This enhances the teaching and learning process.

Digital empowerment seeks to create a digital institution with technologically equipped human capital, while also enabling students, teachers, and staff in educational institutions to receive continuing education on the use of information and communications technology for development, whether in education or other areas of life. This is intended to build national capacities capable of creating digital educational content. Digital empowerment also aims to achieve the following:(Akkoyunlu, 2011, p. 33):

- 1- Supporting the competitiveness of educational institutions through digital empowerment to keep pace with the development of information and communications technology (ICT) and the 'digital revolution.'
- 2- Providing students with digital skills and digital literacy information, training, and qualifications that are consistent with the requirements of society and modern technology, and equipping them with the characteristics and features of the information age, making students more aware and encouraged to embrace digital empowerment.
- 3- Responding to the expectations of the information society through the optimal use of digital technology. In addition to the above, higher education institutions are among the primary sources for building a skilled workforce and confronting the digital age society. This imposes a need for digital empowerment on universities and ensuring access to all ICTs.
- 4- Supporting the ICT infrastructure of higher education institutions.

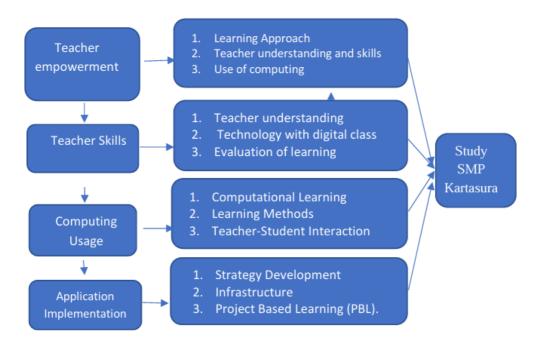
#### 3- Digital empowerment in Algerian universities

The widespread use of ICTs and the crucial role they play in peoples' professional as well as private lives suggest a multitude of relevant contexts for end-user empowerment. In light of the complexity of the issue and the various uses of the notion of end-user empowerment, we argue that it is necessary to provide a good understanding of the concept in order to make the best use of it (Gsenger, Human, & Neumann, 2020).

Digital tools, with their various characteristics, represent a fundamental pillar of the digital transformation project in Algeria and around the world. These new digital tools also emerge as true pillars for digitally empowering higher education professors to achieve quality higher education and realize the goals of the digital transformation project as a current endeavor. According to studies explaining the concept of digital empowerment of university professors, it is anything that helps universities unlock knowledge, experience, and values. It is about discovering and unleashing the power of professors in a controlled and focused manner. This brings us to the need to understand the importance of providing opportunities for

digital knowledge and expertise in digital subjects, and to strive to discover their digital skills for the purpose of investing in job positions that support digital transformation paths .(didha, 2022, p. 66).

End-user empowerment, however, has been conceptualized from different perspectives. From a social perspective, for example, ensuring access to devices and to knowledge, motivating people and teaching them skills by digital inclusion (Marien & Jernej, 2014) (Rainie & Wellmann, 2012), as well as bridging the digital divide (Peromingo & Pieterson, 2018) are important aspects of end-user empowerment. Psychological approaches, argue that empowerment is a motivational and active concept (Spreitzer, Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation, 1995), (Velthouse & Thomas, 1990). Empowerment by design assumes empowerment in participatory approaches (Celi & Rudkin, 2015), it suggests a redefinition of the relation of humans with technological objects (Bihanic & Huyghe, 2015) (Bianchini, Bourganel, Quinz, & Levillain, 2015) and conceptualizes the different roles endusers and designers can have (Vardouli, 2015).



Algerian universities have adopted distance learning as an alternative to traditional education amid the coronavirus pandemic. Distance learning is an educational system based primarily on modern technology, utilizing various modern technical means. One of the most important of these is the e-learning platform, which relies on the internet to provide educational services, along with the use of various electronic media in the learning process. This modern model of education aims to provide high-quality and efficient education for learners by creating an interactive learning environment using new and diverse electronic

technologies in terms of information sources, as well as developing university education systems.

# 4- Mechanisms for achieving digital empowerment in universities

Improving the quality of education can be done through enriching and strengthening pedagogical, personality, social, and professional competencies by using empowerment strategies. This inspires teachers to empower themselves continuously through self-taught and independent efforts and active participation in various educational and teaching activities (Widodo, 2020). Education and training are important elements in development, especially the development of Human Resources (HR). Training can also be interpreted as a method that is carried out systematically to change the systems and attitudes of Human Resources (HR) (Ramadhani & et all, 2021). The role of Teacher Working Groups and Subject Teacher Deliberations needs to be maximized and efforts to empower them continue to create a collaboration that is oriented towards teacher self-development. The Continuous Professional Improvement Program and lesson study are also optimized with the support of e-literacy as a means for teachers to expand their knowledge and insights so that they can create various learning innovations (Royani, 2020).

There is a group of actors involved in achieving digital empowerment in universities, including the state, the university, students, and the external community, as shown below: :(Gafurov, Safiullin, & Akhmetshin, p. 77):

**The State:** This includes the government, the Ministry, and the Federal Authority for Education and Science Supervision. State agencies must provide an environment conducive to the development and support of universities digitally at a competitive local and global level, by providing financial support for discoveries and inventions and developing university infrastructure

**The university:** This includes its administrative staff, faculty members, researchers, scientists, and employees. A creative environment must be provided that allows them to apply modern technology, creativity, and innovation to ensure close integration between the university and the external digital economy.

**Student:** E-learning must be made accessible to students, and its importance to their professional and future lives and careers must be explained, with care taken to provide students with training to master these technologies.

**Institutions, companies, and the external business environment:** There must be a realistic partnership between companies, business owners, and stakeholders, and between universities through joint projects and the exchange of training programs between them to ensure graduates with a high level of competence, experience, and digitization.

# **Chapter 2: Academic Communication Through Distance Learning Platforms**

# 1-The role of information technology in education

The last decade of the twentieth century and the beginning of the twenty-first century witnessed tremendous progress in the field of information technology. This development was reflected in many fields, but the field that benefited most from it was education, which relies on these technologies and is called e-learning.

As a result of this revolution in teaching methods and technologies, which provided the means to help present scientific material to students in an easy, quick, and clear manner, various forms of e-learning emerged, suited to the needs of learners and the nature of the available communication tools. Educational curricula were subjected to a review to keep pace with the modern requirements of the information society, and attention was paid to equipping individuals with the skills that qualify them to use information technology (hodaifa.mazine & al aani, 2015, p. 16).

# 2-The development of distance education

Distance education was previously limited to correspondence education, i.e. by mail, as it was the medium for transferring printed or handwritten educational materials between teacher and learner. However, over time it expanded to include many computer applications and communication media. The beginnings of this type of teaching and learning were in the 19th century, specifically at the University of London in 1858, and it was called (the external student system). This was also witnessed in the United States of America at the University of Chicago in 1891, the University of Wisconsin in 1906, and Queen's University in Canada in 1889, followed by the University of Queensland in Australia in 1911. In 1969, Britain established the first university concerned with this type of education, and it continued until the early nineties. Currently, there are (39) regular universities in the United States of America that rely on this type of education, including the University of Michigan, Stanford, Delaware, and the University of Maryland, which specialize in distance education and open education, or what is called televised education. Spain established this system in 1972, followed by Iran in 1973, Pakistan in 1978, Japan in 1981, and Nigeria in 1983. As for the Arab world, it started with Palestine in 1985, followed by Egypt with the University of Alexandria in 1990, Sudan in 1991, and finally the Arab Open University in Kuwait in 2000. Currently, due to the knowledge explosion that the world is witnessing, from technological development, especially technical development, which has helped in changing the forms of education and learning, which depends in particular on means of communication and technology such as e-mail, radio broadcasting, educational broadcasting means of sound and image via satellite, and the spread of the personal computer (khafadji, 2015, p. 17).

# 3-The concept of distance education

It includes the process of transferring knowledge to the learner at his place of residence or work instead of the learner moving to the educational institution. It is based on delivering knowledge, skills and educational materials to the learner through various technological media and methods so that the learner is far away or separate from the teacher or the person in charge of the educational process. Technology is used to fill the gap between both parties in a way that simulates the communication that occurs face-to-face (dahi & sitre el rahman, 2023, p. 36).

According to the Commission of the European Communities (2001), distance education is "the use of new multimedia technologies and the Internet, to improve the quality of learning by facilitating access to resources and services as well as exchange and cooperation by shortening distance (Oulmaati, 2020, p. 07).

Educational institutions have adopted e-learning using various distance learning tools. These tools vary depending on the goals they seek to achieve. The following figure illustrates the various distance learning tools:



Figure 01: Distance learning tools

**Source:** Muhammad Wahid Muhammad Sulaiman, Comparison between some learning management systems,

at the link: file:///C:/Users/2022/Downloads/63557439%20(1).pdf

#### 4-Academic communication through the distance learning platform

E-learning platforms provide an integrated learning environment where learners can access diverse educational content available anytime, anywhere, interact with teachers and peers, and receive the guidance and support necessary to achieve their educational goals. These platforms also help improve the quality of education and provide a personalized, diverse, flexible, and effective learning experience for learners. It is important to recognize that information and communications technology (ICT) and e-learning platforms are an important and effective addition to improving education and enabling learners to achieve their educational goals in a better and more effective manner.

There are many platforms that provide digital learning environments. They were designed on educational foundations to help teachers provide an electronic learning environment, and they are used by many educational and academic institutions around the world, including Algeria. (kouihel & snatour, p. 15).

The distance learning platform is also known as an open-source learning system. It was designed with an educational foundation to assist trainers in providing an e-learning environment. It develops and disseminates this learning environment among teachers and learners alike. platform can be used at the individual or institutional level (.(basiouni, 2008, p. 283).

The most important educational features of distance learning platforms are as follows:(farzoli & sghiri, 2021, p. 960):

- It combines individual and collective learning, creating a collaborative and integrated learning environment.
- It transforms the educational process from teaching to learning.
- It is considered one of the most important self-learning approaches, relying on construction, dialogue, production, and cooperation.
- It monitors new announcements and manages projects related to the educational process.
- It encourages creativity, as a group of students can create one or more teaching tools.
- It exchanges information, discusses, and comments, which helps activate students' skills through learning through activities.
- It treats information as a public right.
- It is based on participation and interaction, and learners contribute to the construction of knowledge.
- It involves the learner in developing educational content.

# Chapter 3: Academic communication through digital empowerment via distance learning platforms

# Case study of the National Higher School of Management (Kolea-Tipaza)

After examining the conceptual framework of digital empowerment and distance learning platforms in the theoretical aspect, this section, dedicated to the practical aspect, attempts to examine the reality of academic communication in higher education institutions through digital empowerment via distance learning platforms

# 1- Background information on the selected institution

The National Higher School of Management (ENSM), the first public higher school of management, is located at the university pole of Kolea (Tipaza). It has the infrastructure and supervision necessary to carry out its mission of training senior managers and scientific research objectives.

In terms of higher education, the school provides training for highly qualified executives, familiarizes students with scientific research methods, provides training through research to contribute to the production, dissemination, acquisition and development of knowledge, and participates in ongoing training.

The school offers Master's and Doctorate programs only and accepts all holders of a Bachelor's degree in any field, even outside the field of management and economics, provided they pass the entrance exam and oral interview.

The National School of Management was created in Algiers by executive decree no. 08-116 of April 9, 2008, in accordance with executive decree no. 05-500 of 27 Dhou El Kaada 1426 corresponding to December 29, 2005, establishing the

missions and specific rules for the organization and operation of non-university schools.

# 2- Data Collection Method:

In order to obtain data and information from the institution under study that serve the research objectives, we conducted personal interviews with professors at the school under study. The interviews took the form of an oral questionnaire. The focus was on the reality of academic communication in higher education institutions through digital empowerment via distance learning platforms. Interviews are considered a basic tool for data collection, as they are "a set of questions specifically formulated to primarily obtain information the researcher deems necessary to achieve the research objectives."

# 3- Interview analysis and results:

Through interviews with professors, conducted under normal circumstances, and containing a set of questions related to the study variables: digital empowerment and distance learning platforms, we obtained a set of answers that clarified the reality of academic communication in higher education institutions. These can be explained as follows:

- There is an application of teaching methods and techniques that provide the means to help in presenting the scientific material to the student in an easy, quick and clear manner, as it has created different forms of e-learning that are compatible with the needs of learners and the nature of the tools available for communication, and attention has been paid to providing individuals with the skills that qualify them to use information technology.
- His answer was also about what are the most important steps for optimal empowerment of the teacher through distance education?

These steps include the following:

- Providing technical services expertise.
- Developing a clear plan that includes presenting the project, defining its objectives, and the means and tools for its implementation.
- Distributing tasks among those responsible for implementation.
- Holding awareness seminars and explaining the distance learning project to students, professors, and all those targeted by this educational project.
- Providing the infrastructure for distance learning and equipping it with all its material and technical requirements.
- Training those working on the distance learning project to use computers and master the electronic applications through which educational lessons are delivered to students.
- Continuous follow-up through periodic evaluation studies to ensure quality performance and results, and to identify and address shortcomings.

The nature of academic communication in the institution under study was represented in the following:

 Academic communication represents a communication space for exchanging views on the topics presented, which increases the possibility of benefiting from the opinions and suggestions presented, and integrating them with the opinions of students, which helps in forming a solid foundation for learners, as they form strong knowledge and opinions, through the knowledge and skills they have acquired through dialogue and communication of all kinds. This space also gives the student the opportunity for educational communication with the professor as well as with the rest of the students, such as writing discussion comments, asking questions, or leaving an answer to a question posed by a colleague or professor on his account related to a specific lesson. This is an opportunity to enrich the student's scientific knowledge and the professor's evaluation of his students, as it is an opportunity to exchange knowledge and experiences between students.

– What is the importance of distance education in empowering professors in academic tasks?

Academic communication is geared toward digital empowerment of teachers through distance learning. Its importance is evident in the following:

- Using modern and contemporary communication mechanisms.
- Mastering IT skills for both teachers and learners.
- Efficient use of distance learning technologies and technical mastery of various electronic media.
- Developing teachers' skills in preparing and designing lessons.
- Positive educational interaction for learners through various educational tools.
- Delivering lessons and evaluating learners in new ways.
- Providing students with the opportunity to choose between in-person and online lessons.
- Benefiting from the information and electronic libraries available on this platform.
- Keeping pace with technological developments in education.
- Teachers' freedom to prepare lessons and deliver them to the platform in various formats.
- Continuous assessment of learners by providing them with the necessary information and resources.

#### Conclusion

The university professor is considered the main driver of the university, and a very important element in the academic process. He is also considered the leader of renewal, innovation, and modernization processes. He has a significant role and a prominent position within this institution due to the role he plays, through which he seeks to raise the level of the university to achieve quality higher education and keep pace with technological change by activating creativity and innovation in the university, which in turn is the basic foundation for research and innovation. In this study, we concluded the importance of digital empowerment for the university professor and its role in enhancing efficiency and effectiveness, especially activating organizational creativity in university institutions. Control of technologies and the administration's empowerment of professors with all means, techniques, and technological media, as well as opening the way for them to freely innovate and create, has become indispensable

to keep pace with the progress of universities, centers, and research laboratories in most countries of the world. Innovation has become a prominent feature of the academic community, due to it being a fertile and suitable environment for creativity and development. This study also concluded that a set of conditions must be available to achieve digital empowerment for the university professor to raise the level of the university to achieve quality higher education.

Through our research on this topic, we were able to reach a number of conclusions, the most important of which are as follows:

- The suitability of this type of teaching—distance learning—in some critical circumstances, such as the pandemic we previously experienced (the coronavirus), through the empowerment of university professors.
- The possibility of integrating distance learning with traditional education at the same time, where e-learning tools support traditional education.
- The digital empowerment of university professors through distance learning via electronic media contributes to enriching modern learning methods for learners.
- Distance learning via the Moodle platform provides students with the opportunity to communicate with professors outside of official working hours.

#### References

- Akkoyunlu, B. (2011). Their Information Literacy SelfEfficacy. Eurasian Journal of Educational Research, Vol. 44.
- al haiki, h., & ali, m. (2017). The Level of Digital Empowerment in Education among Middle School Teachers in the Classroom Situation in Bahraini Schools (Master's Thesis). Jordan: Yarmouk University.
- Amor, A., Xanthopoulou, D., Calvo, N., & Vazquez, J. (2021). Structural empowerment, psychological empowerment, and work engagement: a cross-country. *European Management Journal*, 39 (06), 779-789.
- Baden, S., & Oxaal, Z. (1997). Gender and empowerment: Definitions, approaches and implications for policy. *BRIDGE Institute of development studies*, 40.
- Baptista, J., Stein, M., Klein, S., Watson-Manheim, M., & Lee, J. (2020). Digital work and organisational transformation: emergent digital/human work configurations in modern organisations. *Journal of Strategic Information Systems*, 29 (02).
- basiouni, a. h. (2008). *e-learning and mobile learning*. Dar Al-Kitab Al-Ilmiyah for Publishing and Distribution, Cairo.
- Bianchini, S., Bourganel, R., Quinz, F., & Levillain. (2015). (mis)behavioral objects," in Empowering Users through Design. Dans D. Bihanic, Interdisciplinary Studies and Combined Approaches for Technological Products and Services (pp. 129-153). Cham: Springer.
- Bihanic, D., & Huyghe, P.-D. (2015). Form follows practice," in Empowering Users through Design. Dans D. Bihanic, *Interdisciplinary Studies and Combined Approaches for Technological Products and Services* (pp. 1-13). Cham: Springer.
- boukhalfa, r., & abich, s. (2021). The role of e-learning as one aspect of distance education in achieving quality university education. *Journal of Studies in Development and Society*, vol: 06 (num:02).

- Celi, M., & Rudkin, J. (2015). Towards end-user involvement in envisioning practices," in Empowering Users through. Dans D. Bihanic, *Interdisciplinary Studies and Combined Approaches for Technological Products and Services* (pp. 59-79). Cham: Springer.
- dahi, h., & sitre el rahman, n. (2023). Distance learning platforms: concepts and mechanisms. *Society and Sports Magazine*, vol:06 (num:01).
- didha, n. (2022). Digital empowerment of Algerian adolescents through the use of media applications. *Introduction Journal of Humanities and Social Studies*, vol:07 (num:01), 61-78.
- farzoli, m., & sghiri, e. m. (2021). The reality of using the Moodle e-learning platform at Algerian universities. *Journal of Social Sciences and Humanities*, vol:11 (num:02).
- Gafurov, I. R., Safiullin, M. R., & Akhmetshin, E. Change of the Higher Education Paradigm in the Context of Digital Transformation: From Resource Management to Access Control. *International Journal of Higher Education*, *Vol. 09* (N: 03).
- Gsenger, R., Human, S., & Neumann, G. (2020). End-user Empowerment: An Interdisciplinary Perspective. *Proceedings of the 53rd Hawaii International Conference on System Sciences*, (pp. 4102-4111).
- Hagerman, H., Högberg, H., Skytt, B., Wadensten, B., & Engström, M. (2017). Empowerment and performance of managers and subordinates in elderly care: a lonitudinal and multilevel study. *Journal of Nursing Management*, 25 (08), 647-656.
- Hagerman, H., Skytt, B., Wadensten, B., Högberg, H., & Engström, M. (2016). A longitudinal study of working life among first-line managers in the care of older adults. *Applied Nursing Journal* (32), 07-13.
- hodaifa.mazine, a. e., & al aani, m. c. (2015). *Interactive e-learning*. Amman, Jordan: Academic Book Center.
- Hsieh, S., Lee, C., & Tseng, T. (2022). Psychological empowerment and user satisfaction: investigating the influence of online brand community participation. *Information & Management*, 59 (01).
- Kanter, R. (1977). Men and Women of the corporation. New York: Basic Books.
- khafadji, s. (2015). *Open education and distance learning are the foundation for elearning.* (F. Edition, Ed.) Academics House for Publishing and Distribution.
- kouihel, d., & snatour, a. b. The Role of Digital Platforms in Supporting Distance Learning in Light of the COVID-19 Pandemic Journal of the Research Unit in Human Resources Development. *vol:12* (num:01).
- Lingling, L., & Ye, L. (2023). The impact of digital empowerment on open innovation performance of enterprises from the perspective of SOR. *Frontiers in Psychology* (14).
- Marien, I., & Jernej, A. (2014). Digital inclusion and user (dis)empowerment: a critical perspective. *info*, 16, 35-47.
- Meng, J., Jin, Y., & Guo, J. (2016). Mediating and/or moderating roles of psychological empowerment. *Applied Nursing Research* (30), 104-110.
- Nahar, S. (2023). Are female secondary school teachers in Bangladesh becoming digitally empowered or disempowered? An exploratory analysis of the impact of digital empowerment on professional development. *Journal of Management and Business Education*, 06 (03), 375-394.

- Ochoa, P., & Coello-Montecel, D. (2023). Does psychological empowerment mediate the relationship between digital competencies and job performance? *Computers in Human Behavior*, 140.
- Oulmaati, K. (2020). Effets de la plate-forme e-learning « Minassati » sur les pratiques pédagogiques des enseignants et des étudiants. maroc: l'Université Abdelmalek Essaadi au Maroc.
- Peng, Y., & Tao, C. (2022). Can digital transformation promote enterprise performance? From the perspective of public policy and innovation. *Journal of Innovation and Knowledge*, 07 (03).
- Peromingo, M., & Pieterson, W. (2018). The new world of work and the need for digital empowerment. *Forced Migration Review*, 58, 32-33.
- Purushothaman, A. (2013). Empowering women through learning to use the internet-An ethnographic action research project to address the second order digital.
- Rainie, L., & Wellmann, B. (2012). Networked. The New Social Operating System.
- Ramadhani, P., & et all. (2021). The Role of Digital Literacy in Efforts to Improve Human Resources in the Industrial Revolution Era 4.0. *Jurnal Implementasi*, 01 (02), 139–145.
- Royani, I. (2020). Teacher Competency Improvement Towards Industry 5.0. Prosiding Seminar Nasional Pendidikan Program Pascasarjana Universitas PGRI Palembang, (pp. 449–456).
- sabih, o., & rawaa, m. (2020). A proposed vision for digital empowerment mechanisms at Zagazig University and their relationship to the COVID-19 pandemic, in light of the Indian experience. *Journal of the College of Education*, *vol: 04* (num:44).
- Spreitzer, G. (1995). Psychological Empowerment in the Workplace: Dimensions, Measurement, and Validation. *The Academy of Management Journal*, 38, 1442–1465.
- Spreitzer, G., & Quinn, R. (2001). A company of leaders: five disciplines for unleashing the power in your workplace. San Francisco: CA: Jossey-Bass.
- Vardouli, T. (2015). "Who designs?," in Empowering Users through Design. Dans D. Bihanic, Interdisciplinary Studies and Combined Approaches for Technological Products and Services (pp. 13-43). Cham: Springer.
- Velthouse, B., & Thomas, K. (1990). Cognitive Elements of Empowerment: An "Interpretive" Model of Intrinsic Task Motivation. *The Academy of Management Review*, 15, 666–681.
- Widodo, W. (2020). Teacher Empowerment Strategy in Improving Education Quality. Faktor Jurnal Ilmiah Kependidikan, 07 (01), 07-12.
- Wu, L., Sun, L., Chang, Q., Zhang, D., & Qi, P. (2022). How do digitalization capabilities enable open innovation in manufacturing enterprises? A multiple case study based on resource integration perspective. *Technological Forecasting and Social Change*, 184.