

Digital Work: Societal Transformations and the Stakes of the Future

العمل الرقمي : تحولات المجتمع ورهانات المستقبل

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Abstract:

This study examines the impact of the digital world and modern technological media on individuals and society. It analyses the emergence of a parallel digital society characterized by its own language, norms, authority, and modes of interaction, which increasingly shape social behavior. The study argues that such integration occurs through the adoption of new cultural patterns and alternative values that may challenge or displace traditional ones, contributing to their gradual social normalization. Furthermore, it highlights the role of digital practices in transforming social and family relationships through the expansion of virtual interactions.

The research also underscores the growing investment by governments in digital institutions, platforms, and cloud infrastructures across vital sectors, including services, education, healthcare, and agriculture, with the aim of enhancing productivity and overcoming structural and developmental challenges.

Keywords: technological media, digital society, virtual relationships, Artificial Intelligence, Digital infrastructure.

ملخص:

سنحاول من خلال بحثنا هذا ان نركز على الدور الذي يمارسه العال الرقمي عبر الوسائط التقنية المستحدثة وتأثيراتها على الفرد والمجتمع من حيث فسخ المجال ال ظهور مجتمع يوازي مجتمعنا (مجتمع رقمي) له لغته ويفرض أطره وضوابطه وسلطته، و يبني علاقات تنتهي اليه اذ تفرض على الفرد الاندماج فيه، وذلك من خلال اكتساب ثقافة جديدة، او قيم بديلة تنافي او تزيج القيم التقليدية ومحاولة تعميمها وتطبيعها اجتماعيا.

ونبرز اهمية العمل الرقمي بناء عالما له مريدوه من خلال نسج علاقات افتراضية لصيقة بالشاشات عوضت روابط اجتماعية وأسرية ، ومن أهم نتائجه ان كل الحكومات والدول رفعت التحدي للاستثمار في العمل الرقمي وإنشاء مؤسسات رقمية تعاضم تأثيرها من خلال توفير وسائط وسحائب رقمية في العديد من المجالات الحيوية كقطاع الخدمات (التلف والاتصال والمواصلات) والتعليم والصحة وابتكار نماذج زراعية متطورة بهدف تكثيف الانتاجيات، وتذليل الصعوبات والمعوقات .

كلمات مفتاحية: الوسائط التقنية، مجتمع رقمي، علاقات افتراضية، الذكاء الاصطناعي، البنيات الرقمية.

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1. Introduction

The contemporary world's need for change, as it advances toward development, has become closely associated with technological innovations and media technologies. This

convergence has opened access to numerous digital application programs that the average individual could scarcely have imagined. Through these developments, individuals have been granted access to information, knowledge, and news, and communication has been greatly facilitated. However, many generations that were not accustomed to engaging with this sudden transformation have struggled to fully comprehend it. Consequently, within a single society, two distinct categories emerge: the first consists of digital or technological societies that continuously follow and adapt to technological advancements, while the second comprises classical societies that observe these developments with caution, carefully monitoring their outcomes and the directions toward which they may lead.

Public life is governed by norms, customs, and values, and human actions are shaped by societal frameworks, whether in social and familial interactions or in economically established practices. Furthermore, the process of acculturation—rooted in social structures and foundational systems—produces individuals who align with inherited social legacies, values, ethics, customs, and practices. Digital action, as a formative process, constitutes a universal force capable of either constructing or dismantling these structures. Accordingly, digital work remains a subject that warrants focused study and in-depth understanding through tracing the cumulative outcomes of its impact across all spheres of life. From this standpoint, the central research question of this study is formulated as follows:

Can digital work, through its technological mechanisms, produce new forms of knowledge that bring about major societal transformations?

From this core question emerge the following subsidiary inquiries:

- How has digital work been employed as a new strategy in its adoption as a technological practice?
- What is the nature of the role assigned to governments in establishing digital infrastructure?

The significance of this study lies in the fact that digital work plays a vital and effective role in developing many aspects of social and economic life, a role that is directly reflected in development processes and societal advancement. This study examines the trajectory and evolution of digital work and sheds light on governmental strategies in adopting reliance on technology and its various media.

The methodological approach adopted in this research is a descriptive-analytical methodology, which includes a review of previous literature and relies on data produced by certain research centres, international organizations, and global institutions.

Many countries and societies have encountered substantial obstacles and challenges in activating digital work in their efforts to catch up with nations that have achieved scientific and technological advancement. Digital work has become a necessity and a key instrument of transformation indicative of progress and alignment with the requirements of the digital and technological era. However, opportunities related to technology in many countries have not been distributed equally, often due to the lack of technological availability. As a result, such opportunities remain largely confined to major urban centres rather than rural areas. One of the primary responsibilities of states is to ensure equal opportunities for all citizens, thereby providing balanced educational, cultural, and economic levels.

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This underscores the “importance of human capital through investment in information and communication technology infrastructure, including networks, devices, software, applications, and well-trained and qualified human expertise aimed at development rather than mere operation or production; ensuring universal Internet access with high quality and affordable cost; attempting to eliminate technological illiteracy by promoting digital awareness; integrating informatics into educational curricula; reducing Internet subscription fees; and striving to develop and encourage Arabic-language software through legal protection and continuous legislative and regulatory updates related to information, communication, and technological sectors (Ghani, 14 april 2022)

Digital work may be defined as the use of electronic media and the expertise acquired through them, whereby such expertise is practically employed to generate productivity that benefits society across multiple domains, including education, communication, the labor market, the economy, and wealth creation. Accordingly, digital work refers to the management or provision of the necessary capacities for the effective use of technology. (Ali)

Human preparation occupies a position of paramount importance, with the primary objective being the formation of a modern society capable of aligning with the requirements of its era. This necessitates understanding how to interact with digital and technological media, thereby fostering both cognitive and practical awareness. Such awareness can then be directed toward software development and related fields, alleviating cognitive apprehension, building a healthy relationship with technology, and cultivating intellectual curiosity. In addition, it contributes to the acquisition of professional competencies and encourages discovery and innovation. (Ghani, 14 april 2022)

In contemporary society, there is a widespread fascination with technology, largely because most daily interactions are scarcely free from a “click,” “double click,” or “tap.” Writing messages depends on keystrokes, sharing images requires similar actions, and numerous other activities are conducted digitally. Users of digital technologies on global visual platforms are often referred to as “YouTubers,” as if they belong to a distinct global community. These individuals often enjoy wide popularity, with the aim of introducing audiences to content that may be scientific, touristic, entertaining, or historical in nature.

2. Digital Work as a Personal Experience

For many beginners, access to and engagement with digital technology represents a leap into the unknown, insofar as individuals provide personal information that reflects their private circumstances. Consequently, the use of digital platforms and interaction with them requires a degree of psychological trust, so that individuals feel secure regarding their data and the content they exchange. When discussing digital work at the individual level, it can largely be confined to the educational dimension, as it constitutes “a process of educating people about potential risks on the Internet, such as phishing and misinformation, as well as concerns related to data privacy. Such awareness enables individuals to make informed decisions, and as awareness increases, individuals become more prepared to identify and avoid threats, thereby ensuring their safety and well-being in the digital space. Awareness transforms users into vigilant digital citizens, reducing their vulnerability and enhancing

public security through increased transparency in newly implemented technologies. By strengthening digital literacy, individuals can gain confidence in using technology effectively and open opportunities for education, employment, and personal growth. It is also important for people to understand clearly how technology can affect their minds.” (Dabbagh, 2011)

Accordingly, the process of awareness begins with identifying what we seek from digital work and clarifying the nature of the activity we are about to undertake, while acquiring basic preliminary knowledge and avoiding the risks that may arise from fraudulent or deceptive websites.

Modern technology has not merely imposed a new reality and mindsets aligned with its era. If modern physics speaks of time travel, this notion is almost mirrored in the experience of many individuals who spend extended periods in front of screens and digital platforms. Social media has “changed the way people communicate; online connections can help them form meaningful relationships. However, direct interactions must be balanced to maintain meaningful relationships—particularly for young children and adolescents—given the potential impact on the development of their social skills.” (Ghani, 14 april 2022)

Digital work platforms emphasize legal and regulatory frameworks grounded in values in order to ensure proper functioning and to delineate safe boundaries between individuals, whether within their immediate environment or across neighboring countries. This confers global dimensions upon digital work. Digital technologies have altered the ways in which people interact with one another, and the development of these technologies within social communication has been widely discussed. Accordingly, “the use of digital technologies implicitly entails respecting others’ freedom of expression while avoiding hate speech or discrimination based on sexual orientation, ethnic origin, or any other grounds on personal social media platforms. At the same time, while connecting communities and amplifying voices, digital technologies may, for example, create echo chambers that reinforce bias and spread misinformation.” (Ghani, 14 april 2022)

Moreover, the diversity of fields and methods of digital work has contributed to the creation of expansive domains that have generated numerous employment opportunities for creative and innovative individuals, such as the establishment of social, commercial, or scientific websites, which have in turn acquired global reach. As a result, many individuals have been absorbed into these domains. For instance, according to the McKinsey Global Institute, “up to one-third of jobs in the United States—approximately 50 million positions—were expected to be affected by automation by 2020. The study also estimates that nearly half of all paid activities could be automated using existing robotics and artificial intelligence technologies.” This indicates that jobs created through technological media reach staggering figures when compared to those provided by the state through its institutions. (Muhleisen, jue 2018)

Through individuals’ personal initiatives, numerous projects based on digital work have emerged, such as electronic merchants who rely on the Internet as a marketing tool by adopting advertising strategies and disseminating content across wide networks. This process led to the emergence and spread of e-commerce, which initially took the form of

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individual efforts. Similarly, some university instructors have engaged in online teaching by creating YouTube channels and sharing their work with students and followers. The concept of distance education thus emerged, and governments subsequently adopted and invested in these initiatives by establishing platforms containing citizens' data, including information related to health insurance, medical records, and other services.

Many individuals frequent technological platforms with the aim of improving their intellectual and professional levels. This is achieved through selectively acquiring information and knowledge that serve their academic and practical lives, enabling them to develop their talents, acquire competencies, and facilitate engagement with these globally open spaces. One of the major challenges that emerged in this context is what is known as personalized learning, wherein "the use of social media as platforms for collecting assignments is considered more suitable for students because it saves time and money. This approach is also convenient, as students can learn in the space they prefer, at any time and from anywhere with Internet access. Social media has become part of their daily lives, making this approach a supportive tool for learning architecture in large classes of more than 20 students. However, the use of social media as an educational platform should be effectively integrated with lectures and classroom presentations in smaller classes. Therefore, digital learning must be applied and developed inevitably for millennial students in higher education, as recommended by COVID-19 health protocols. By using appropriate and convenient methods, instructors can stimulate the interest of twenty-first-century students, allowing students' intentions and efforts to learn to emerge naturally." (author, 1 February 2021)

Digital work has thus created numerous digital spaces that have woven new relationships in the field of education, facilitating the transfer of ideas and expertise from instructors to students, and enabling the sharing of lessons, seminars, and intellectual forums. This has removed administrative barriers between administrations and faculty members, as well as between students and instructors. The widespread daily use of technological media has rendered many archives, documents, and administrative records burdensome to institutions due to their large volumes. Consequently, methods of receiving, processing, and preserving knowledge and information represent a revolution in this domain and within educational program systems. In this regard, "in the field of e-learning, personal learning environments have become more effective in addressing issues of learner control and personalization that are often absent in institutional learning management systems. Although learning management systems were initially designed to provide a flexible framework for advanced learning approaches, they have always remained under the control of institutions, faculty, and administrators, leaving limited space for learners to manage and maintain a learning environment that facilitates their own educational activities, peer connections, and social networks across time and space. Web 2.0 technologies now provide similar opportunities through social media. As a result, personal learning environments can be viewed as manifestations of learners' informal online learning processes or as individualized e-learning platforms that enable collaboration with other learners and instructors and the coordination of these connections across a wide range of systems." (Dabbagh, 2011)

In many cases, digital platforms conduct opinion polling by posing questions across various platforms. While ordinary users may perceive such comments as insignificant, from the perspective of statisticians and analysts, they constitute valuable databases upon which individuals' orientations and convictions are built. These opinions represent sets of ideas with social, cultural, and political references, and they also form databases linked to the individuals associated with those comments or reactions.

Through these opinions, it becomes possible to understand various aspects of a given issue, identify its causes, and assess its outcomes. Evidence of this can be found in experiments conducted with students, who "viewed the use of blogs as an outlet for reflecting on course topics outside weekly meetings, either individually or collaboratively through blog comments. The results revealed that blogging helped students direct their self-learning, increased their engagement with course material, and contributed to the development of informal learning communities. Similarly, a study conducted with university students by Churchill (2009) demonstrated that a blog-based environment can help foster a learning community in which learners feel they are an important part of the class and that their needs and opinions are valued. The findings also showed that blogs are more effective when designed to facilitate students' access to course materials, publish reflections on products created through learning tasks, and comment on peers' contributions." (Ghani, 14 april 2022)

Based on the premise that knowledge is shared and accessible to all, it suffices to possess an Internet connection to access knowledge, the latest news, articles, newspapers, downloadable books, and electronic libraries for browsing, reading, and downloading. "Thanks to globalization, education no longer requires travel to academic centers that are often far from one's place of residence, nor does it necessitate physical presence in lecture halls; instead, it can be pursued from home. In the era of globalization, gathering learners in a designated physical space loses its significance, as education in the twenty-first century has shifted from the 'physical' classroom to the 'virtual' classroom." Moreover, partnerships and agreements between universities and affiliated faculty members have ensured that scientific meetings, knowledge exchange, and research activities are conducted through electronic media and digital platforms.

Whereas self-reliance in earlier eras was an inherent trait cultivated over time, personalized learning based on digital work and its tools has produced a new generation of self-made individuals. Through these platforms (such as YouTube and Telegram), many individuals have succeeded in building broad audiences and facilitating services that have helped countless people meet their needs with ease.

3. Digital Work New Strategy

Here, we seek to highlight the uses of digital work as an alternative to many traditional means in social life, and to explain how governments have adopted it and how societies have invested in it across multiple domains, including the following:

3.1 The Reality of Electronic Communication Media

Means and modes of communication have undergone major developments. Our era has moved from a time in which only voice was transmitted via the telephone to an era in which

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both voice and image are transmitted simultaneously. Distance is no longer a decisive obstacle to the seriousness or effectiveness of communication, due largely to the spread of satellite-based technologies in the second half of the twentieth century. This was followed by the emergence of new techniques—such as wired and wireless communications—in the 1990s. Subsequently, the mobile-phone revolution transformed the twenty-first century into an age of communication and connectivity, coinciding with the Internet as a technological infrastructure. This convergence opened the way for innovators and telecommunications companies to propose a global project to provide Internet coverage through Starlink satellites by 2030, thereby creating a global “Internet cloud.” (Ghani, 14 april 2022)

Within this context, Algeria’s strategy for providing a guaranteed-quality communication network has only barely reached the foothills of mountainous regions and the depths of the desert, whether through coverage provided by the well-known national telecommunications company, through the installation of trans-African fiber-optic cables, the spread of this technology in Algerian cities, or through the creation of high-speed fiber Internet networks. Ensuring coverage across the entirety of Algeria’s territory is by no means an easy undertaking; rather, it reflects a very strong political will on the part of the state. This is consistent with the view that: Providing basic connectivity in remote and low-income areas is essential to ensure that the most marginalized groups benefit from digital technologies. We will work to strengthen international cooperation to support affordable and sustainable connectivity in underserved communities, by improving policies and regulations, adopting scalable technology and business models, and supporting local solutions such as community networks—including through our current partnership with the International Telecommunication Union and by leveraging the UN Global Digital Compact process.

a-Digital Infrastructure

Digital infrastructure consists of the devices, software, and facilities that establish information technology within administrations and institutions. Digital work is important for any country, as its purpose is to reduce difficulties and obstacles in service provision, while also enabling flexibility in the state’s interaction with citizens through the creation of platforms—whether in education, ministries, public bodies, judicial institutions, and other domains. Digital work is therefore not confined to the state alone; it extends beyond national borders to neighboring countries, as it constitutes a tool used in transportation (for example, booking flights electronically), hiring taxis within cities, paying installments and banking obligations remotely, and other services. In this regard, “digital services at the societal level, such as e-government and national payment systems, are a key factor in enabling digital transformation for both government and the private sector.”

Digital electronic cards also represent a model of social policy, through which identities are regulated and enumerated by means of coding systems—a highly important foundation within digital work. Through such systems, it becomes possible to identify the number of individuals who are employed, the number who are unemployed, and personal-status categories (married/unmarried; healthy/unhealthy).

b- Cloud Computing

Cloud computing refers to a set of “computing resources and systems available on

demand via the Internet, capable of providing integrated computing services without being constrained by local resources, for the purpose of facilitating the user's experience. These resources include data storage space, backup services, and automatic synchronization.” (Ali) This feature is used across multiple services, including access to Google applications for search processes and various applications installed on computers that are used daily and widely in administrations, institutions, and universities—such that scarcely any administrative body is without an electronic cloud component.

c-Artificial Intelligence

Artificial intelligence constitutes a digital revolution that has cast its shadow over the information society, generating intense debate regarding its credibility and reliability. This technology has assumed many cognitive tasks related to research, text translation from other languages, article writing, and answering questions. Although such platforms have played an effective and positive role in reducing burdens and costs in research and other fields, there is no implicit consensus among official institutions—such as universities and similar bodies—granting full legitimacy to its use as an instrument that replaces human intellect. As stated: “The rapid development of artificial intelligence presents opportunities and challenges simultaneously, especially for developing countries that face the risk of falling behind due to weak digital infrastructure and their inability to fully benefit from AI solutions to address development problems or prevent AI threats.” (Ali). This technology has also been employed across multiple domains, including the environment, medicine, economics, education, and public life.

Within these domains, developers affirm the necessity of broad dissemination: it should not remain confined to advanced countries, but should have an enabling foundation across all continents. As one expert states: “We will help expand this alliance, especially among developing countries. We also recognize that the impact of AI will increase and change during the implementation of this strategy; therefore, we will continue monitoring new tools and models as they emerge, and we will adapt our work to leverage their benefits and mitigate their risks.” (Muhleisen, jue 2018)

The mediation of artificial intelligence has enabled individuals to dispense with visits to public libraries, sever their connection with printed books, and adopt electronic portals as references for their ideas and scholarly work. It also points toward the hypothesis that the role of the teacher-professor may be diminished or even eliminated.

d- Digital Democracy

Democracy is grounded in the concept of freedom; accordingly, it holds that digital work and technological techniques must align with the principles of personal liberty as manifested in engagement with modern technologies. This requires an Internet that is free and secure—a reality reflected in some technologically advanced countries where citizens are granted the right to vote electronically, enabling them to choose their leader from any location without the need to travel to polling stations. As an example: “The United Kingdom supports inclusive participation in democracy through a free, open, secure, and inclusive Internet. We will work to strengthen the design, development, and use of digital solutions that support fundamental freedoms and democratic values, consistent with the rule of law

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and human rights, with a focus on Internet shutdowns and the role of digital in governance, mis/disinformation, elections, censorship, and surveillance. We will actively contribute to the Freedom Online Coalition and key international processes related to digital democracy. We will seek to continue as a member of the steering committee of the Freedom Online Coalition and as co-chairs of the working group on Internet shutdowns during 2024–2030.” (Ghani, 14 april 2022)

Among the practical models of this democracy are social platforms built upon the sharing of opinions, news, and images within an open world structured around acquaintance, entertainment, and talent development. These platforms constitute a virtual space that simulates reality: everyone expresses their ideas and presents them in content that may receive approval from followers. The freedom they provide has enabled the communication of social and humanitarian issues, as well as global causes.

e- Cybersecurity

Although governments have invested in the Internet of Things and digital work, this investment is not sufficient on its own. At the threshold of developing digital platforms, it became necessary to develop a digital security system that preserves documents and archives. To ensure the existence and continuity of digital work, secure foundations must be established. As stated: “Safe and trustworthy digital infrastructure is critically important to make digital transformation work well for everyone and to resist threats. We will continue to support the cyber capacities of governments, companies, and users in developing countries. We will invest in a comprehensive campaign linking cyber hygiene with gender, social inclusion, and democratic values. We will also advocate for change in the multilateral arena and encourage development banks to help partner countries increase their own investments in cybersecurity.

f- Green Digitization

Green digitization is a new concept that emerged from linking technology with environmental issues. Its aim is to develop an environmentally friendly digital generation that protects the environment from pollution and excessive industrial exploitation, while seeking alternative economic models—in other words, safeguarding the planet. Its manifestations include reliance on solar energy; generating power through wind, dams, and green hydrogen; and recycling waste. In agriculture, it involves reducing the use of pesticides and fertilizers and improving productivity. Among its applications are the use of satellites for data generation, the adoption of batteries and new digital technologies, and the use of bioinformatics computing. As stated: “Digital technology has a climate and environmental cost; nevertheless, it can also be used to mitigate and adapt to climate change and nature loss. We will develop a new digital sustainability program, including a focus on digital platforms for a sustainable economy, e-waste management, and renewable energy solutions for connectivity models in remote areas. We will also strengthen a multi-stakeholder community of interest around digital sustainability.” (Mitchell, match 2024)

3. Digital Work and Its Future Prospects

a-Selecting the Physician /Remote Diagnosis and Prescription

Digital work is reshaping medical care in a manner fundamentally different from

previously prevailing models, through the creation of medical platforms that enable physicians to communicate with patients, assess their health conditions, and prescribe treatment remotely. Smart applications can digitally diagnose medical conditions and recommend appropriate medication, thereby transforming healthcare delivery through intelligent digital systems.

b- Medical Implant Technologies

Artificial intelligence and its innovations have transcended classical diagnostic methods, opening the possibility of implanting medical or neural chips in patients' bodies—particularly within the brain. Through such technologies, the human body effectively becomes a living laboratory, transmitting precise health data (via Bluetooth, mobile devices, and wireless networks) directly to physicians. This represents a reality currently under development, with extensive research investment aimed at the eventual full realization of these technologies.

c- Unified Global Health Record

The objective of this initiative is to establish a unified global healthcare system based on individuals' health data, enabling the documentation and monitoring of disease cases and symptoms worldwide. Such a system would facilitate disease management and control through advanced laboratories capable of developing targeted treatments based on comprehensive global health data.

d-Technological Agriculture

Technological agriculture represents a qualitative transformation, relying on advanced technological techniques to achieve high productivity. It is based on the Internet of Things, including the use of drones, modern irrigation techniques such as vertical farming, and smart irrigation systems controlled via mobile devices. It also employs monitoring systems that assess plant health and growth conditions, robotic technologies for planting and harvesting, and automated systems for removing weeds. Through the use of such machinery, it becomes possible to manage and control large agricultural areas efficiently.

e-Electronic Tourism

Electronic tourism is based on the integration of service systems across transportation, hotels, and aviation. Supervisory authorities are also required to incorporate virtual advertising through available digital platforms and to adopt mapping systems as navigational tools for identifying tourist sites. Digital security must be embedded within tourism-related digital operations, alongside the development of smart hotel rooms in which services are delivered via robots to enhance tourist comfort. Additionally, smart banking services enable currency exchange without direct contact with banks, while digitally regulated taxi services help address transportation challenges within and beyond cities. (Éva Happ, 2018)

Tourism offerings—namely, all services that meet tourists' needs—can be interpreted within digital tourism at both micro and macro levels. In developing tourism products, digital goods or services, or services accessible via digital devices, become central. For example, informational materials about hotels can be accessed via tablets or smartphone applications that display tourist destinations. Through digital assets, tourists can access a

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wide range of offerings. Moreover, value outcomes are often co-produced with service providers through participation and co-creation, or through customer involvement in product development. Technological advancement also facilitates the dynamic distribution of self-organized travel packages (dynamic packaging). (Éva Happ, 2018)

f-Smart Universities

The emergence of digital universities has been driven by an urgent necessity imposed by the realities of digital work and information and communication technologies, as well as by the availability of numerous digital platforms that enable remote engagement without physical presence. Contemporary educational realities and institutions' desire to keep pace with societal transformations have led to the adoption of distance education, defined as the creation of global learning environments accessible to students worldwide, often relying on a single instructor.

These universities emerged as a result of widespread Internet access and the dominance of virtual interaction. Educational technologies and digital platforms are no longer mere concepts but have become practical applications within teaching and learning processes. The role of the university, therefore, lies in harnessing this development to serve its educational structure and in stimulating motivation toward engagement in this direction.

As stated:

“The digital or virtual university has no campus, offices, or physical infrastructure. It exists solely in cyberspace and uses the Internet and the World Wide Web as educational media. It is characterized by interactivity, adaptability, and integration. It is a university of the digital society that requires reciprocal cooperation among computer scientists, educators, and innovators. Its aim is to offer suitable courses for online teaching and learning. Online course delivery is not new; institutions such as the University of Phoenix and DeVry University have offered such courses for a long time. The relationship between e-learning and the virtual university is illustrated in the figure.” (Matthew N. O. Sadiku, Digital University. International Journal of Trend in Research and Development, University, Prairie View, Texas , USA., Jun 2020.)

From the digital university emerged electronic lectures, virtual lessons, and online examinations, transforming education into training-based learning delivered via the Internet and platforms such as Google Meet, Moodle, and other educational systems available both in Algeria and internationally. These lectures segment educational content and share it with students through electronic links or via Internet and satellite transmission.

However, a general consensus across countries indicates that the full institutionalization of digital universities has not yet been achieved. Most universities remain hybrid institutions, operating between classical and digital systems: some programs and courses are conducted face-to-face, while others are delivered remotely.

4. Conclusion

What can be inferred from this study is that the impact of digital work on societies cannot be confined or narrowly defined. The scale of technological development directly reflects on individuals and society alike. Investment in technological and digital tools generates a wide range of digital services, (Banking and electronic payment systems, document extraction

applications, digital surveys that support scientific research and studies, e-commerce platform "electronic services for fuel stations, and the management of numerous financial and accounting operations via smartphones.) while extensive engagement with digital work has produced an "informational individual," and consequently, an "information society." This transformation extends beyond individual behavior to encompass urban development, schools, universities, factories, and the overall organization of public life

Digital work will increasingly shape the thinking patterns of future generations, as its applications expand across medicine, industry, environmental studies, and research in physics, chemistry, and biology. It has also enabled the creation of diverse digital platforms that facilitate rapid and seamless communication, enhance knowledge dissemination, and empower individuals to develop skills through active use.

There is no doubt that digital work constitutes a foundational pillar of the modern knowledge economy. It represents a technological transformation that reconstructs many prevailing concepts and ideas, contributing significantly to redefining education, economics, and development, while generating new employment opportunities that were absent in previous eras. Consequently, the future of digital work is intrinsically linked to addressing challenges of regulation and security, as it remains continuously exposed to threats such as cyber sabotage and electronic theft.

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