

Remote work and digitalization in Algeria: a socio-psychological reading of the challenges of professional integration

العمل عن بُعد والرقمنة في الجزائر: قراءة سوسيو-نفسية لتحديات الاندماج المهني

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Abstract:

This study explores digital transformation and remote work in Algeria through a socio-psychological lens, combining quantitative and qualitative methods using official data (CNES, 2023) and a field study at the University of Algiers 2 (2022). Rather than limiting itself to technical aspects, the research examines how employees and institutions perceive and experience digitalization. Findings indicate that digital transformation is constrained by multiple barriers: technical limitations, entrenched cultural norms, psychological resistance, and institutional weaknesses. A central obstacle is the persistence of physical presence as the dominant standard of discipline, alongside widespread distrust within organizations. Moreover, the research uncovers sharp digital divides across gender, age, and geography, resulting in

symbolic and psychological exclusion. Women in rural areas, older adults, and those with limited education are particularly vulnerable. Psychologically, individuals often struggle with low digital self-efficacy, fears of losing professional identity, and anxiety toward change, all of which reduce readiness to adopt new work models. The study calls for an inclusive digital policy that integrates social and psychological dimensions by promoting trust, offering training in digital and emotional skills, and creating tools to assess genuine integration. Ultimately, digital transformation is framed as a societal project requiring equitable and sustainable integration.

Keywords: Digital transformation, remote work, professional identity, psychological representations, digital justice.

1. Introduction

The world is undergoing profound transformations in work patterns driven by accelerated digitalization. Work is no longer a purely technical or productive activity; rather, it has evolved into a complex sphere where the social intersects with the psychological and the symbolic converges with the material. Within this context, remote work emerges as an alternative model that redefines the relationship between individuals and institutions, between discipline and creativity, and between physical presence and symbolic belonging. Yet, these transformations unfold unevenly across societies. In Algeria, cultural and institutional resistance persists, shaped by deeply ingrained conceptions of “serious work” and “direct supervision.” Such resistance exposes the complex psychological and social dimensions that accompany this transition.

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This article examines these dimensions through a socio-psychological analysis of digital transformation and remote work in Algeria. Specifically, it seeks to capture the representations and emotional responses associated with this new mode of work, while identifying the psychological and cognitive barriers that hinder authentic integration into the digital era. Employing a dual methodology that combines quantitative and qualitative approaches, and grounded in sociological and socio-psychological frameworks, the study explores how professional identity is being reshaped, the sources of anxiety and resistance, and the prospects for empowerment or exclusion within this evolving landscape.

Despite the global shift toward digital transformation and remote work, Algeria faces challenges that extend beyond the realm of technical infrastructure. The transition to flexible professional models raises critical questions about their psychological and social implications. In particular, the capacity of digitalization to transform long-standing representations of work historically anchored in physical presence as the marker of discipline and identity remains uncertain.

Cultural norms and emotional barriers, including resistance to change, anxiety over professional identity, and the persistence of direct supervision as a criterion of “serious work,” further complicate this transition. At the same time, there is a pressing need to reconcile technological change with individuals’ fundamental needs for security, belonging, and trust within organizational environments. How can Algeria advance toward authentic digital integration while addressing the socio-psychological dimensions that shape acceptance, resistance, and the lived experience of work in a rapidly evolving context? How do employees and institutions in Algeria perceive and emotionally respond to digital transformation and remote work? What socio-psychological factors act as barriers to adopting flexible digital work models? In what ways do cultural conceptions of discipline, supervision, and “serious work” influence resistance or acceptance? To what extent can digital transformation foster empowerment and inclusion while mitigating risks of exclusion and anxiety?

The significance of this analytic study lies in its attempt to go beyond a purely technical understanding of digitalization and remote work by addressing their socio-psychological dimensions, which remain largely underexplored in existing literature. Its importance can be summarized as follows: Scientific originality: The study fills a knowledge gap by examining how employees and institutions in Algeria perceive and experience digital transformation, while uncovering the psychological and social representations that shape this process.

2. Digital transformation

Digital transformation is a profound and accelerating transformation of business activities, processes, competencies, and models to fully leverage the changes and opportunities brought by digital technologies and their impact across society in a strategic and prioritized way. It goes beyond mere digitization

(converting analog to digital) or digitalization (using digital technologies to change business processes) and represents a fundamental rethinking of how an organization uses technology to create value and deliver it to its stakeholders (Vial, 2019, pp.118-144).

3. Remote work

Remote work is a work arrangement whereby employees perform their core job tasks and responsibilities from a location other than a central, employer-owned workspace. This alternative location is typically the employee's home and relies heavily on information and communication technologies (ICTs) for coordination, communication, and task completion. It represents a shift from the traditional co-located, office-centric model of work. (Gajendran & Harrison, 2007, pp.1524–1541).

4. Professional identity

Professional identity is a multi-dimensional, dynamic construct that refers to an individual's self-concept in the context of their profession. It is formed and refined through a process of socialization where individuals internalize the values, norms, knowledge, and practices of their professional community. This identity shapes how professionals perceive themselves, interpret their work experiences, and present themselves to colleagues, clients, and the broader society (Ibarra, 1999, pp.764-791).

5. Psychological representations

Psychological representations are internal, cognitive constructions or models that individuals form to symbolize, organize, and make sense of external reality, objects, events, or relationships. These mental models, which can include schemas, scripts, and mental imagery, guide perception, interpretation, memory, and behavior. They are central to social cognition, allowing individuals to navigate and interact with their social and physical environment. (Markus & Zajonc, 1985, pp. 37-230).

6. Digital Justice

Digital justice (or digital equity) is a concept concerned with ensuring fairness, equity, and inclusive participation in the digital realm. It addresses the distribution of the benefits and burdens of digital technology, focusing on issues such as equal access to digital tools and infrastructure (the digital divide), freedom from algorithmic bias and discrimination, data privacy rights, and the right to participate in the governance of digital spaces and technologies (Benkler, 2006).

7. Socio-psychological theoretical analysis

The study adopts a socio-psychological analytical approach combining concepts from sociology and social/organizational psychology to understand how individuals and institutions represent remote work.

From a sociological perspective, the study mobilizes concepts such as symbolic capital (Bourdieu, 1986), bureaucratic control (Weber, 1978), and the network society (Castells, 2010) to analyse the cultural and organizational structures framing work.

From a psychological perspective, it draws on concepts such as professional identity, self-efficacy, and cognitive control to explore mechanisms of resistance and psychological adaptation to digital transformation in the workplace.

This combined approach allows for the observation of the interplay between symbolic and emotional dimensions in dealing with digitalization as a technological, social, and psychological phenomenon.

8. The Reality of Digital Transformation in Algeria: Between Opportunities and Constraints

Technical Indicators: Limited Progress and Regional Disparities

According to data from the Postal and telecommunications regulatory authority (Autorité de Régulation de la Poste et des Communications Électroniques, 2023), internet penetration in Algeria stands at 72%, and the number of smartphone users reaches 35 million. However, these figures conceal stark disparities between regions.

Table 1 Distribution of internet speed by region (Mbps)

Indicator	Major Cities	Rural Areas	Source
Internet penetration	85%	48%	ARPT, 2023 – National Authority for the Regulation of Post and Telecommunications (ARPT)
Average Internet speed	16 Mbps	4.2 Mbps	National Authority for the Regulation of Post and Telecommunications (ARPT), 2023
Internet use for professional purposes	38%	14%	United Nations Development Programme (UNDP), 2023

Source: Data from the National Authority for the Regulation of Post and Telecommunications (ARPT). 2023

A. Inequalities in Internet Speed and Penetration: Between Psychological Exclusion and Symbolic Belonging

The data indicate that Internet penetration in major cities has reached 85%, compared to only 48% in rural areas, with a significant disparity in Internet speed (16 Mbps versus 4.2 Mbps). This gap does not only reflect material inequalities, but also lays the groundwork for chronic psychological exclusion among populations in marginalized areas.

From a social psychology perspective, the feeling of deprivation from digital resources generates perceptions of injustice and inequity, which in turn weaken motivation and reinforce feelings of marginalization and learned helplessness-especially when individuals compare themselves to others in more connected and dynamic urban environments. This persistent sense of digital exclusion undermines the individual's positive identity and deepens the feeling of not belonging to the national technological project.

B. Low Use of the Internet for Professional Purposes: Psychological Alienation in the Workplace

The use of the Internet for professional purposes does not exceed 38% in urban areas and drops to 14% in rural regions. This indicator highlights that the professional sphere has not yet integrated the digital dimension as a productive tool.

Psychologically, the lack of digital empowerment in the workplace fosters a sense of professional alienation, where employees do not perceive their skills as valuable, nor do they experience meaning or control within their work environment. Furthermore, the absence of digital infrastructure strips works of its dynamism, reinforcing monotony and repetition, which in turn increases occupational stress particularly within traditional bureaucratic administrations.

C. Psychological Representations of Remote Work: Defensive Resistance Stemming from a Threat to Professional Identity

Survey results reveal that most employees associate remote work with laziness and lack of discipline. From a psychological perspective, these representations reflect collective defense mechanisms aimed at preserving the traditional work model, which constitutes an integral part of the individual's professional identity.

Resistance to remote work is also linked to uncertainty anxiety, where individuals feel that digitalization threatens the skills they have invested in over the years. This aligns with the theory of "generational predispositions," which posits that older generations tend to cling to the professional model that shaped their psychological and social frames of reference.

D. Physical Surveillance and Institutional Trust: A Psycho-Organizational Crisis of Confidence

The emphasis placed by institutions on physical presence as a measure of discipline reveals a weakness in what organizational psychology refers to as mutual trust. These dynamic fosters work relationships characterized by suspicion and surveillance, which in turn heightens psychological stress and undermines creativity and initiative.

From a psychological standpoint, the absence of trust generates a professional environment marked by what is known as silent coercion, in which employees comply behaviourally but experience feelings of alienation and restriction at the psychological level.

E. Gender and Spatial Divide: Psychological Shocks and Cognitive Vulnerability Among Women

Data indicate that women in rural areas are the least likely to use digital tools (22%), compared to 56% of men in urban settings. This disparity is not merely a social fact; it reflects women's loss of psychological control over spaces of knowledge and communication, producing a form of cognitive vulnerability that may evolve into diminished digital self-esteem.

Cultural norms that perceive technology as suspicious further generate internalized self-restriction among women seeking digital empowerment, driven by feelings of guilt or fear of social stigmatization.

F. Generational and Class Divide: Divergent Representations of Digital Time and Future Anxiety

Educated youth tend to integrate digitally with ease (68%), whereas older and less-educated groups (11%-19%) remain largely excluded from this dynamic. Psychologically, this disparity reflects a fundamental divergence in the perception of time: youth live in the "digital present" and actively engage with their future, while older generations remain anchored in the "familiar past," perceiving the future as uncertain and threatening. This fosters a form of digital existential anxiety, making them more resistant to transformative change.

9. Algerian institutions: delay in digital transformation

A recent study by the National Center for Statistics (Conseil National Économique, Social et Environnemental, 2023) revealed that the state of digitalization within Algerian institutions remains at low levels, as shown by the following:

67% of small and medium-sized enterprises (SMEs) do not have an official website;

72% of them do not use digital systems for human resources or accounting management;

Only 28% of employees regularly use digital tools in their work environment.

Socio-Psychological Reading:

Absence of Official Websites in 67% of Institutions.

This indicator does not merely reflect a communicational or technical shortcoming but also highlights an organizational-psychological resistance to digital presence. In organizational psychology, openness to technology is viewed as a form of cognitive adaptation, which indicates mental flexibility within administrations. However, the lack of an official website suggests:

Anxiety about transparency, as some actors perceive digital presence as exposing them to accountability or external scrutiny;

Resistance to change, since administrations prefer the familiar paper-based system out of fear of losing control or having to learn new tools;

An institutional identity centred on physical presence, implying that digitalization threatens deeply ingrained perceptions of administrative “prestige,” traditionally based on face-to-face interactions.

72% of Institutions Do Not Use Digital Systems for HR or Accounting Management.

This finding not only reflects the absence of supportive technological infrastructure but also carries hidden psychological dimensions linked to organizational culture: In traditional organizations, information is power, and the lack of digitalized processes allows “individual control” and the non-transparent flow of knowledge to persist. This corresponds to what organizational psychology terms a knowledge monopoly culture.

Reliance on paper-based management fosters routine and cognitive rigidity, thereby weakening employees’ initiative and innovation.

In the absence of digitalization, administrative relationships remain bound to hierarchy and direct supervision, reinforcing traditional psychological control mechanisms and hindering the development of trust based on results and performance. Only 28% of Employees Regularly Use Digital Tools. This figure indicates a weakness in professional psychological empowerment. The limited use of digital tools is not necessarily due to a lack of resources, but rather to:

Low digital self-efficacy, as many employees lack training or support in using technology, which leads to anxiety about failure or making mistakes.

Reduced sense of control and autonomy in the workplace, as employees perceive technology as imposed or unclear, turning interaction with it into a source of stress rather than a means of empowerment.

Absence of psychological and institutional incentives that encourage the use of digital tools, such as recognition of efforts or career development opportunities based on digital competencies.

10. The sociological dimension of work: professional culture and resistance to change

10.1. Professional bodily culture

In the Algerian context, physical presence at the workplace is still considered a fundamental indicator of commitment and professional seriousness. A field study conducted by the University of Algiers (2022) on a sample of 600 public sector employees revealed the following indicators:

Table 2. Professional bodily culture in the algerian context

Statement	Agreement Rate
"Remote work reduces team spirit"	64%
"Remote work encourages laziness"	58%
"Successful work requires physical presence"	71%
"Employees cannot be supervised remotely"	69%

Source: University of Algiers (2022, p. 2)

These indicators reflect the presence of collective mindsets shaped by traditional assumptions, where values such as physical presence, direct supervision, and formal discipline are emphasized at the expense of self-efficacy, mutual trust, and tangible results. In organizational psychology, this phenomenon is referred to as negative anticipatory assumptions, in which absence from the workplace is automatically interpreted as negligence, regardless of actual performance. These representations do not only express cognitive resistance but also an existential professional anxiety about losing occupational identity within a digital environment that remains unclear for many.

Understanding these attitudes should not be reduced to mere "rejection of technology," but rather as a reflection of unmet psychological needs, particularly regarding feelings of security, belonging, and self-worth within the workplace. This suggests a deep-rooted belief that direct interaction is essential for building effective professional relationships. From a social psychology perspective, this stance can be explained by:

Interactional dependency: Professional relationships in the Algerian context are often established through informal interactions, such as daily office conversations, which add an emotional dimension to team cohesion.

The absence of such interactions in remote work environments creates a sense of social disconnection, leading to individual anxiety about losing belonging and collective identity, especially within hierarchical institutions.

Hence, the digital transformation of Algerian institutions must be reframed as a collective psychological process that requires addressing fears, fostering a culture of trust, and providing both psychological and training support to employees and managers alike.

10.2. Hierarchy and institutional trust

In Algerian institutions, institutional trust is often based on the direct visibility of employees rather than on the actual outcomes of their work. In many cases, management only places trust in employees

when they are under visual supervision, thereby reinforcing a model of bodily surveillance and hindering the adoption of flexible or remote work arrangements.

This model reproduces power relations within a rigid bureaucratic logic and prevents the realization of genuine professional autonomy. Furthermore, the absence of a clear and explicit legal framework regulating remote work despite the issuance of Executive Decree 21-24 reinforces the legal precariousness of employees and weakens their ability to claim protection of their rights within a changing digital environment.

This imbalance between trust and control demonstrates that digital transformation does not only face technical or logistical challenges but also encounters deeply rooted cultural and organizational resistance. Overcoming these challenges requires a fundamental revision of prevailing administrative models.

11.Social and gender inequalities: who is excluded from the digital era?

11.1. Gender and spatial gaps

Data from the United Nations Development Programme (UNDP, 2023) indicate a clear disparity in access to digital tools between genders in developing countries, particularly between urban and rural areas:

Table 3 Gender and spatial gaps in digital access

Category	Rate of Access to Digital Tools
Men (Urban)	56%
Women (Urban)	41%
Men (Rural)	32%
Women (Rural)	22%

Source :Based on data published in a United Nations Development Programme (UNDP) report (2023). Full details regarding the sample, methodology, and country are available in the original report.

The digital divide between genders, particularly in rural settings, reflects a structural imbalance in women's psychological and social empowerment, where cultural barriers intersect with cognitive and emotional constraints, resulting in a dual form of digital exclusion both material and symbolic.

a. Social Fear and Self-Censorship

In many rural contexts, digital technologies are often perceived as "suspicious tools," generating in women a sense of guilt or fear of independent use. This perception is not only externally imposed but also internally reproduced through what social psychology terms social self-censorship, whereby women internalize community norms even when such norms constrain their autonomy.

b. Deprivation of Digital Self-Efficacy

The low rate of digital access among women (22% in rural areas compared to 56% among men in urban settings) reflects not merely a lack of resources but also a deficit in perceived digital self-efficacy. Women often feel unqualified to use digital tools or view the digital sphere as “not for them,” which fosters a state of learned helplessness. According to Bandura’s (1997) theory, self-efficacy is a key determinant of behavior adoption. Its absence here explains women’s disengagement or silent resistance to digital training and remote work, even when technical opportunities exist.

c. Symbolic Marginalization and Loss of Recognition

Exclusion from the digital sphere also entails exclusion from symbolic and cognitive presence in society. In environments where social value is increasingly constructed through digital visibility and networked interaction, digitally disconnected women become “invisible,” weakening their sense of worth and belonging, and reinforcing dependency and withdrawal.

d. Burden of Traditional Roles and Compounded Psychological Stress

Women, particularly in rural areas, face a dual psychological burden: fulfilling traditional household roles while simultaneously confronting the “idealized” digital discourse that celebrates individual success and entrepreneurial achievement. This contradiction produces cognitive dissonance between lived realities and new expectations, often leading to psychological withdrawal or a persistent sense of failure.

11.2. Generational and class gaps

Statistics from the United Nations Development Programme (UNDP, 2023) reveal significant disparities in digital use based on age and educational attainment in developing countries:

Table 4 Generational and class gaps in regular digital use

Category	Percentage of Regular Digital Use
Age group 18–35	68%
Age group 50+	19%
University degree holders	61%
Non-degree holders	11%

It is assumed that these figures are derived from a field report or survey conducted by UNDP in 2023; however, the specific country, methodological details, and sampling information are not identified. Therefore, it is recommended to consult the original report in order to verify the geographic scope and study population, ensuring academic reliability.

The disparities in regular digital use between age groups and educational levels (68% among youth versus 19% among those above 50 years old, and 61% for degree holders versus 11% for non-degree holders) highlight inequalities in psychological and cognitive empowerment. They further reveal multiple forms of psychological and social exclusion in the digital era.

a. Youth: Strengthening Psychological Agency and Digital Identity

The high rates of digital use among individuals aged 18–35 reflect active integration into the digital sphere, granting young people a strong sense of self-efficacy and control over their social and professional environments.

According to Bandura's (1997) self-efficacy theory, regular use of technology enhances perceptions of competence and worthiness, serving as a key resource in constructing a contemporary digital identity centered on autonomy, speed, and networked interaction.

In this sense, the digital space becomes an extension of the self, offering a platform to assert one's identity in dynamic professional and social contexts

B. Older Adults: Technological Anxiety and Symbolic Withdrawal

The notably low rate of digital use among individuals over 50 years old (19%) points to a psychological form of digital anxiety, manifested in feelings of inadequacy in keeping pace with technological developments.

This phenomenon, commonly referred to in psychology as technological anxiety, often leads to avoidant or resistant behaviors within professional and social environments.

Moreover, it contributes to a perceived threat to professional identity, as older individuals may feel that their accumulated skills and experiences have lost relevance in the digital marketplace generating feelings of deficiency, frustration, or symbolic exclusion.

C. Non-Degree Holders: Cognitive Deficit and Loss of Control

The very low rate of digital use among those without educational qualifications (11%) illustrates a digital literacy gap that translates into a form of acquired cognitive helplessness. Such individuals perceive technology as being beyond their intellectual and cultural reach.

This deficit stems not only from a lack of training, but also from the absence of genuine participation opportunities and diminished self-confidence in interacting with the digital environment. Without institutional and educational support, these individuals are unable to bridge the knowledge gap, thereby reinforcing and perpetuating patterns of psychological and social exclusion.

12. Towards a socially inclusive digital model

In light of the challenges highlighted in this paper, digital transformation should not be regarded merely as a technical or economic issue. Rather, it must be embraced as a comprehensive social model where the digital intersects with the cultural, and the technological aligns with the institutional. From this perspective, we propose an integrative framework built around five reform pillars:

12.1. Establishing a comprehensive legal framework

Legal ambiguity remains one of the structural barriers hindering the mainstreaming of remote work. To overcome this challenge, the following measures are suggested:

Enacting a dedicated law regulating remote work, defining the contractual relationship and safeguarding the rights of both parties, including working hours, access to tools, and professional evaluation.

Recognizing remote work as a form of “decent work,” in line with the International Labour Organization (ILO, 2021) definition, thereby restoring professional dignity beyond institutional walls.

Embedding social protection mechanisms, particularly health coverage, occupational accident insurance, and compensation for personal resource usage (electricity, internet, etc.).

12.2. Expanding digital infrastructure

Spatial inequalities continue to limit the benefits of digitization for large segments of the population. To reduce this divide:

Fiber-optic networks should be extended to remote areas within a comprehensive national digital strategy.

Public–private partnerships should be strengthened through digital public service contracts.

A national fund for rural digital connectivity should be created, supported by diversified financing sources (public, international, and community-based).

12.3. Transforming professional culture

The greatest obstacle to digitization is not the absence of technology but entrenched mind-sets regarding work. There fore:

Awareness campaigns should be launched targeting employees and administrations to highlight the benefits of flexible work in improving productivity and quality of professional life.

Managers and supervisors should be trained in remote management techniques, thereby reducing reliance on physical oversight and fostering professional trust.

Hybrid models (on-site + remote) should be encouraged in both public and private sectors, accompanied by experimental evaluation of their outcomes.

12.4. Ensuring equal digital opportunities

To prevent digitization from becoming a new mechanism for reproducing social inequalities, the following measures are recommended:

Free digital training programs should be provided for marginalized groups, including women, the elderly, and rural populations.

Digital entrepreneurship projects should be supported through financial and training incentives, particularly targeting young women in rural and inland regions.

“Digital grants” should be allocated to vulnerable groups, covering devices and training.

10.5. Strengthening Socio-Psychological Research on Digital Work

For more equitable and in-depth digital policies, it is essential to support scientific research that integrates both social and psychological dimensions in studying transformations of work in the digital era. This can be achieved through :

Establishing university research units or independent centers specialized in socio-psychological studies of digital work, within Maghreb and African cooperation networks, with the aim of understanding the interaction between digitization, professional identity, and mental health within organizations.

Encouraging field studies that explore the psychological and social perceptions of remote work, analyse patterns of adaptation and resistance, and examine technostress and anxiety among individuals and institutions, using both qualitative and quantitative tools.

Developing socio-psychological indicators to measure the degree of functional digital integration, taking into account feelings of belonging, self-efficacy, and psychological stress resulting from digital transformation, alongside technical and economic indicators.

Based on the findings of this study, which reveal profound socio-psychological and institutional barriers to digital transformation and remote work in Algeria, the following recommendations are proposed for policymakers, institutions, and future research:

For Policymakers and Government Bodies: Develop a Comprehensive Legal and Regulatory Framework :

Enact specific legislation for remote work that clearly defines employment rights, responsibilities, working hours, performance evaluation metrics, and data protection protocols. This legal clarity is crucial to reduce ambiguity and build trust among both employers and employees.

Launch a National Digital Inclusion Strategy: Formulate a strategy that explicitly targets the reduction of gender, generational, and geographical digital divides. This should include subsidizing internet access and digital devices for vulnerable groups (e.g., women in rural areas, low-income families, and the elderly) and investing in robust digital infrastructure in underserved regions.

Integrate Socio-Psychological Dimensions into Digital Policies: Move beyond technical indicators and incorporate metrics for digital well-being, self-efficacy, and professional identity into the national digital

agenda. Policies should aim not only to provide access but also to foster a sense of digital competence and belonging.

For Organizations and Institutions :Foster a Culture of Trust and Results-Based Evaluation :

Organizations should transition from a model of supervision based on physical presence to one focused on output and achieved objectives. Implementing training programs for managers on remote leadership and trust-building is essential to shift the organizational culture.

Implement Targeted Upskilling and Psychological Support Programs: Develop mandatory digital literacy and skills training programs tailored to different employee demographics, with a special focus on older employees and those with lower educational attainment. Couple this with workshops that address technostress, digital self-efficacy, and strategies for maintaining work-life balance and professional identity in remote settings.

Adopt a Phased and Hybrid Work Model: To mitigate resistance, institutions can pilot hybrid work models that combine remote and on-site work. This allows for a gradual psychological and organizational adaptation, helping to dismantle negative perceptions and demonstrate the viability of flexible work arrangements.

For Future Research :Conduct Longitudinal Studies. Future research should employ longitudinal designs to track the evolution of psychological representations, professional identities, and institutional trust as digital transformation progresses in Algeria.

Deepen the Interdisciplinary Approach: Further studies should continue to bridge sociology, psychology, and organizational studies to explore under-researched areas such as the impact of remote work on collective identity, informal workplace learning, and mental health in the Algerian context.

Investigate the Role of Digital Leadership: Research is needed to identify the characteristics of effective "digital leadership" in Algerian institutions and how leaders can proactively manage the socio-psychological transition to new work models.

By adopting these multi-level recommendations, Algeria can navigate its digital transformation not merely as a technological upgrade but as a holistic societal project that promotes digital justice, psychological well-being, and sustainable professional integration.

13. Conclusion

As our analysis has shown, digital transformation is not merely a shift from paper to digital tools; it represents a transition from one cognitive paradigm to another, and from a traditional social logic to a new symbolic order that reshapes both actors and institutions. In the Algerian context, delays in adopting digitization are not solely due to infrastructural deficits, but also to cognitive fragility and socio-psychological resistance rooted in fears of losing professional identity and in collective anxiety about an unfamiliar future.

Gender, generational, and spatial disparities reflect more than differences in access to resources; they reveal unequal psychological capacities for adaptation and the uneven formation of a stable digital identity. Groups excluded from digitization are not only deprived of technology, but also denied symbolic participation and existential agency in a world that is being digitally reshaped.

Building a just digital project in Algeria requires more than technical connectivity or administrative equipment; it demands rebuilding trust, fostering self-efficacy, and providing psychological and community support. Digital transformation is not merely a political or economic choice, but a collective exercise in redefining the self and the other, in confronting shared anxieties that call for careful psychological accompaniment, inclusive policies, and interdisciplinary scientific research capable of addressing the depth of this transformation.

References

- Autorité de Régulation de la Poste et des Communications Électroniques. (2023). Annual report on telecommunications indicators. <http://www.arpce.dz>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. Yale University Press.
- Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241-258). Greenwood.
- Castells, M. (2010). *The rise of the network society*. Wiley-Blackwell.
- Conseil National Économique, Social et Environnemental. (2023). National economic and social report. <https://www.cnes.dz/>
- Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting. *Journal of Applied Psychology*, 92(6), 1524–1541. <https://doi.org/10.1037/0021-9010.92.6.1524>
- Ibarra, H. (1999). Provisional selves: Experimenting with image and identity in professional adaptation. *Administrative Science Quarterly*, 44(4), 764–791. <https://doi.org/10.2307/2667055>
- International Labour Organization. (2021). *Decent work and the digital economy*. <https://www.ilo.org/>
- Markus, H., & Zajonc, R. B. (1985). The cognitive perspective in social psychology. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed., Vol. 1, pp. 137–230). Random House.
- Office National des Statistiques. (2023). Digital activity indicators in Algeria. <https://www.ons.dz/>
- United Nations Development Programme. (2023). Regional report on digital development in the Arab world. <https://www.undp.org/publications>.
- University of Algiers. (2022). Field study on professional culture in public institutions [Unpublished raw data].
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118-144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Weber, M. (1978). *Economy and society*. University of California Press.