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## Challenges Encountered by Algerian Master Students in Conducting Research on Digital Public Relations: A Descriptive Study

### Défis rencontrés par les étudiants algériens en master dans la conduite de recherches sur les relations publiques numériques : Une étude descriptive

Khalida ELBACHARI<sup>1</sup>

College of Media and Communication Sciences - University of Algiers3 | Algeria  
elbachari.khalida@univ-alger.dz

**Abstract:** This study seeks to elucidate challenges encountered by students during the research process, with a particular focus on the current landscape of scientific research among graduate students. The significance of this study lies in its exploration of a novel research domain. Employing a survey methodology, we utilized a comprehensive set of research instruments including questionnaires, observations, and interviews. The research community comprised 747 individuals, with a targeted sample of 116, and was facilitated through a network of observations. Our findings indicate a discernible absence of a well-defined methodological framework for research endeavors, coupled with a deficiency in substantive field oversight.

**Keywords:** Scientific Research, Universities, Digital Public Relations, Students, Research Challenges

**Résumé :** Cette étude vise à élucider les difficultés auxquelles sont confrontés les étudiants lors de la réalisation de leurs recherches, en mettant l'accent sur l'état actuel de la recherche scientifique chez les étudiants diplômés. La portée de cette étude réside dans son exploration d'un domaine de recherche novateur. À l'aide d'une méthodologie par enquête, nous avons utilisé un ensemble complet d'instruments de recherche, notamment des questionnaires, des observations et des entretiens. La communauté de recherche comprenait 747 individus, avec un échantillon ciblé de 116, et a été facilitée par un réseau d'observations. Nos résultats indiquent une absence perceptible d'un cadre méthodologique bien défini pour les travaux de recherche, conjuguée à une insuffisance de surveillance sur le terrain

**Mots-clés :** Recherche scientifique, Universités, Relations publiques numériques Etudiants, Difficultés de la recherche scientifique.<sup>2</sup>



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<sup>1</sup> Corresponding author: KHALIDA EL BACHARI | elbachari.khalida@univ-alger.dz

Engaging in scientific research within the Arab countries prompts contemplation of the foundational premises from which certain academic disciplines have emerged. The contextual landscape plays a pivotal role in delineating the contours of academic inquiry and streamlining the research endeavor. It serves as the crucible for shaping research methodologies and epistemological underpinnings—a fundamental touchstone for comprehending the evolution of any knowledge domain. In our contemporary epoch, research in the field of media and communication sciences has undergone a transformative trajectory, concurrently espousing specialization and remaining attuned to the seismic shifts transpiring within the digital milieu and the realm of artificial intelligence. Consequently, the exploration of Digital Public Relations now presents a substantive challenge to universities, researchers, and specialized students who harbor aspirations of unravelling the intricacies of this dynamic and pivotal domain.

The realm of Public Relations emanates from the precincts of media and communication sciences. It is taught at the master's level. This specialization is offered by a majority of faculties within the ambit of media and communication sciences nationwide. Notably, the Faculties of Media and Communication Sciences at the University of Algiers 3, the University of M'sila, and the University of Médéa are among the vanguard institutions that have long embraced communication and Public Relations as specialized disciplines at the master's level. The researchers' vested interest in this subject stem from an extensive engagement with the field of research in Public Relations, spanning numerous years in their roles as supervisors. The researchers's concerted efforts have been directed toward guiding students and mitigating the challenges entailed in conducting research within the sphere of Digital Public Relations.

The saliency of this study lies in its inquiry into contemporary issues, including research within Algerian universities which harbor significant reservoirs of potential for scientific inquiry, with lofty expectations that research will catalyze the nation's development and fortify its institutions. Moreover, this study resides within the pedagogical and scholarly ambit of student learning. Multiple objectives underpin our inquiry, chief among them being the elucidation of the cognitive bedrock upon which the discipline of Public Relations is erected. This endeavor is occasioned by the formidable array of intricate and interwoven epistemological paradigms that students encounter. Additionally, the study seeks to fathom the inclinations of second-year master's students within the Faculties of Media and Communication Sciences at the University of Algiers 3, the University of M'sila, and the University of Médéa regarding their foray into research within the domain of Digital Public Relations. It also endeavors to pinpoint the principal impediments they confront within the hallowed precincts of university institutions and affiliated bodies when embarking on their research projects.

The research methodology leveraged both survey and comparative approaches. The survey methodology was instrumental in gathering quantitative data that unveiled salient commonalities among the analytical units. It proved to be an apt method for impartially amassing data. In tandem, the comparative methodology enabled us to discern the variances and correspondences inherent in the study of research challenges within the university landscape. It is noteworthy that the comparative facet within the research was somewhat circumscribed due to the close alignment of quantitative indicators, prompting

us to pivot toward an analysis of fundamental variables without extensively embarking on comparative endeavors. For data collection, the study relied upon the deployment of electronic questionnaires, disseminated during the practical research phase undertaken by master's students, precisely during the months of April and May, 2023. Additionally, interviews were conducted to glean a richer trove of information, supplemented by the observational method through active participation.

The research encompassed a study population comprised of 747 second-year master's students specializing in communication and Public Relations, spanning across three institutions: The University of Algiers 3 (comprising 518 students), the University of M'sila (comprising 160 students), and the University of Médéa (comprising 69 students). Employing a purposive sampling method, the study sought to obtain insights from students with antecedent or ongoing exposure to research within the realm of Digital Public Relations, whether during the preparatory phase of research in guided studies or in the formulation of their master's dissertations. Consequently, the survey sample size stood at 30, while the actual sample size encompassed 86 individuals.

#### **The Study's Main Question:**

In the academic year 2022/2023, what challenges do second-year master's students, specializing in "Communication and Public Relations" at the universities of Algiers 3, M'sila, and Médéa, encounter in their research endeavors within the domain of digital public relations?

#### **Study Questions**

- a. What constitutes the foundational theoretical framework supporting the field of Public Relations, and to what extent is it clearly defined, encompassing a comprehensive knowledge base conducive to facilitating research within the domain of digital public relations?
- b. What are the inclinations of students toward engaging in empirical research within the field of digital public relations?
- c. To what degree does research in digital public relations present challenges within the academic environment and the institutional framework of study?
- d. Are there statistically significant variations in students' inclinations for empirical research in digital public relations based on the university of enrollment?
- f. Do statistically significant differences exist in the perceived level of difficulty encountered in conducting research in digital public relations within the academic and institutional contexts, attributed to the university variable?

#### **Study Hypotheses**

- a. Students demonstrate statistically significant positive inclinations towards engaging in field research within the realm of digital public relations.
- b. Students exhibit a positive and statistically significant inclination towards empirical research in the domain of digital public relations.
- c. The challenges encountered in conducting research within the academic and institutional contexts of digital public relations are substantial and yield statistically significant findings.
- d. The university of enrollment contribute statistically significant differences in students' inclinations towards empirical research in the field of digital public relations.

f. Statistically significant disparities attributed to the university do not exist concerning the perceived level of difficulty encountered in conducting research in digital public relations within the academic and institutional contexts.

## **1. Digital Public Relations Research : Concept and Challenge**

**1.1. Defining Digital Public Relations :** Digital Public Relations embody a strategic approach to managing a company's reputation, necessitating a reevaluation and restructuring of conventional Public Relations practices. On a global scale, these practices have transitioned into the digital realm, where they currently yield market influence and profits, not solely through brand identity or other conventional means but primarily through the impact of Digital Public Relations initiatives. Therefore, the realm of Digital Public Relations demands a continual mastery of the Internet and its capabilities, executed with the utmost efficiency and remarkable outcomes. It entails the adept management of Public Relations within the digital sphere through creative ingenuity, swift execution, results-driven strategies, and cost-effectiveness (Gregory, 2005).

Among the pivotal pillars and dimensions within the sphere of Digital Public Relations research, the researchers encounter the realm of data, which provides a robust methodological foundation for orchestrating Public Relations endeavors within the digital landscape, as elucidated by Lydia Andoh (2015): Facilitating access to vast datasets, Profound comprehension of the public, coupled with the ability to conduct ongoing and precise studies about them, and securing access to their data on a permanent basis, and the dual perspective of presenting data is essential, as the public inherently tends to adopt a critical stance.

**1.2. Defining Research in Digital Public Relations:** Research in Digital Public Relations involves institutions conducting investigations to understand public trends and factors related to services, perception, and the broader socio-economic and legal context. Less frequently explored are research efforts by scholars and students delving into the fundamental aspects of public relations activities. Consequently, we identify two distinct levels of research in the Digital Public Relations sphere:

**The first level** holds paramount importance for institutions and organizations as it sets the strategic course for engaging with the public, guaranteeing institutional success, and mitigating potential losses during crises and adversities. "When discussing research in the realm of Public Relations, we typically allude to initial studies, such as opinion surveys and both quantitative and qualitative research, which enable us to refine relationships with segments of the public and monitor the evolution of those relationships" (Schmitz, 2012). In the broader field of communication, which serves as the foundational precursor to various sub-disciplines such as Digital Public Relations, several digital strategic elements necessitate careful consideration. These include the rise of online transactions, diverse payment systems, and a plethora of applications. These variables introduce complex issues into communication research, including ethical dilemmas associated with the dissemination of falsehoods, identity misrepresentation, and crisis simulation. Furthermore, the field grapples with the ambiguity of terminology and theoretical frameworks that inform analytical investigations. As a response to these challenges, researchers have begun exploring novel concepts that seek to amalgamate human interactions with the machine-driven aspects introduced by technology within the communication sphere. One such concept is Cybernetics (O'Neill, 2021). It is reasonable to

infer that future research in Digital Public Relations will gravitate towards cybernetic studies and inquiries pertaining to artificial intelligence.

**The second level** is characterized by a focus on the foundational elements that govern Digital Public Relations activities. This level garners the attention of researchers and students who are preparing for careers in the field of Public Relations. Research undertaken at this level serves as a training ground for the execution of research activities at the first level. Hence, a notable deficit exists in research endeavors related to the first level, and this study aims to identify and surmount these challenges.

### **1.3 Characteristics of Second-Level Research: Objectives and Significance**

**Student Training and Research Methodology Development:** to train students in conducting research and to advance the methodologies used in scientific research within the field of Public Relations.

**Advancing Theoretical Research:** to advance theoretical research that contributes to the creation of intellectual, cultural, and human knowledge within the domain of Digital Public Relations.

**Informing Institutions and Experts:** to provide institutions and Public Relations experts with global studies, and to add a human dimension to the technical aspects of the field. **Bridging Theory and Practice:** to strengthen the relationship between theoretical and practical aspects, and to foster collaboration and connections between academic institutions and professional organizations, ultimately contributing to the development of Public Relations, addressing challenges, and supporting the growth and advancement of institutions.

### **1.4 Understanding the Challenges of Research in Digital Public Relations**

Conducting research in Public Relations, especially in the digital age and the era of artificial intelligence, presents several inherent challenges. Public Relations is a multifaceted field intricately intertwined with cultural, material, and non-material factors. Its operations necessitate adaptability to a myriad of emerging developments, crises, contradictions, and evolving trends dictated by the surrounding environment. Public Relations, at its core, is closely tied to human thought and behavior, imbuing it with inherent flexibility. This very flexibility can sometimes bewilder researchers, as the field is inherently difficult to control and define. According to Bourne (2022), “the adaptability and utility in analyzing professional discourse within this field respond to the imperative to deconstruct insular perceptions regarding the profession of Public Relations and its various responsibilities. This involves adopting a methodological approach geared towards exploring the intersections of Public Relations with other domains. Digital Public Relations is particularly susceptible to hybridization and fragmentation into sub-specializations”.

Williams argues that all practical practices are underpinned by an underlying idea or theory. Public Relations, as a practical discipline embedded within various campaigns, encompasses empirical data that can be subject to scrutiny. This data can take various forms, including video content, speeches, press releases, or documentation, all intrinsically linked to the values of communities, individual identity, gender dynamics, ethnicity, and authoritative structures. The cited book strongly advocates for an approach rooted in cultural studies when investigating Public Relations (Mickey, 2003:4)

Undertaking research in the realm of Digital Public Relations represents a complex endeavor that requires familiarity with emerging methodological paradigms. It might also necessitate a departure from conventional management practices. This complexity arises from the intertwined nature of Digital Public Relations with crisis management, the need to track and respond to evolving public opinions and trends, and the democratization of the marketing mix due to the influence of Web 2.0 technologies. Consequently, the process of researching Digital Public Relations trends and foundations is fraught with complexity and challenge, further compounded by the unique demands and opportunities presented by the digital environment and the growing authority of artificial intelligence (Whatmough, 2018:38).

**1.5 Table1: Challenges in Research Conducted in Several Arab Countries**

Exploring the hurdles faced in research endeavors across multiple Arab countries, this section delves into the distinctive challenges encountered within the research landscape of these nations. By examining the commonalities and unique aspects, we gain insights into the complexities researchers navigate in various Arab contexts

Region	Main Challenges in Research	Suggested solutions
Egypt	A significant gap exists between researchers and the academic elite, particularly concerning the absence of a well-defined research plan for students. The lack of a culture that embraces the application of communication research in media and societal development, coupled with restricted freedom for students to choose their research topics. Haphazard relationships between students and researchers due to the absence of communication standards.	Providing support for researchers by offering training programs to enhance their research capabilities. Allocating financial resources to support research endeavors in the field of media and communication. Cultivating a research-oriented culture within society to facilitate the work of researchers (El-Shirbini, 2015:189)
Jordan	Students pursuing humanities face more challenges than those in scientific disciplines when it comes to crafting study titles, defining research problems, and handling data collection, analysis, and clustering.	Equipping students with essential scientific research skills and establishing research centers, study facilities, and statistical resources within universities to aid students in statistical analysis (Kanaan, 2018:26)
Iraq	Local journals in Iraq suffer from inadequate strength and presence. Insufficient financial resources allocated to research and the diminishing influence of the scientific and administrative leadership within Arab universities	Establishing a comprehensive national digital database to assist researchers. Prioritizing the overhaul of the higher education system by appointing competent individuals and earmarking an adequate budget for research initiatives (Qasim, 2021)

<p>According to a study conducted in Jordan</p>	<p>Certain research fields lack independence from others, notably in terms of theories and methodologies: Media and Communication Sciences, Sociology, Psychology, just to name a few. Inadequate researcher qualifications. A divide exists between researchers and educational practitioners. Modern information systems that facilitate information flow, indexing, and dissemination are lacking. Researchers are often inclined to address peripheral issues primarily to obtain academic degrees. Contradictions may emerge between research findings and the preferences and desires of supervisory authorities, especially in evaluation research linked to decision-making.</p>	<p>Encouraging collaboration and cooperation among researchers in various scientific endeavors (Atoui, 2021:5)</p>
<p>Other regions in the Arab World</p>	<p>Difficulties may arise in accessing specific fields of information. Brain drain and the emigration of scientific expertise are ongoing challenges. Weak publication records, limited references, and budget constraints are evident, with the total research spending budget across Arab countries amounting to \$1.7 billion in 2019, compared to \$174.7 billion in European countries during the same year. Higher education and research institutions sometimes adopt foreign models, even in translating research topics and problems. Research efforts may become fragmented. Administrative obstacles and technological resource shortages can impede research. A deficiency in cultivating a research culture. Failure to establish an enabling research environment (Kandilji, 2014:27)</p>	<p>Transitioning the perception of universities from individual projects to collective societal endeavors. Staying abreast of evolving scientific developments. Investing in research infrastructure and ensuring the availability of ample knowledge resources to support research efforts (Faraj, 2019:53).</p>
<p>The Western World</p>	<p>The field of media and communication sciences faces challenges in identity and lacks clarity in terminologies and concepts. Outside the French-speaking region particularly, the term “media and communication sciences” is less used compared to the English-speaking countries. This specialization encompasses various sub-disciplines, and Jean Meyriat, the first president of the Information and Communication Sciences Committee in 1972, highlighted their significance for political, economic, and symbolic systems (Dacheux, 2015). Communication and media studies are</p>	<p>Emphasizing that research in the field of media and communication sciences should not only meet educational engineering requirements but also remain open to addressing broader social and ethical matters. Promoting civic education and creating opportunities for a well-informed and engaged public, with research focusing on the transformative impact of remote digital education tools. Recognizing that communication and information are subjects of mediation, as these tools are far</p>

	rooted in cultural studies and discourse analysis, resulting in complex interdependencies between disciplines, especially in bridging human and technological aspects.	from being completely transparent and impartial (Walter, 2019: 186).
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## 1.6 Constraints in Building upon Previous Studies

### Theoretical and Methodological Challenges

Researchers in the field of Digital Public Relations face significant challenges due to the rapid evolution in the digital era. This dynamic environment creates uncertainty in research methodology, making it challenging to establish appropriate research approaches. Additionally, there is a lack of coordination among researchers and research centers regarding a unified research methodology. Furthermore, there's a shortage of international knowledge accumulation and scholarly contributions when it comes to the direction of research in Digital Public Relations. Essential references linking this field to specific research domains are also missing. Some subjects taught in Public Relations may overlap with other areas like marketing, advertising, management, and administration. It's worth noting that research efforts in communication and journalism in Western countries are often ideologically driven. Public Relations, as a field, is broad and diverse and evolves with the digital landscape. Researchers must continually adapt and update their knowledge due to digital advancements. Many researchers rely on theoretical and methodological foundations from the fields of media and communication sciences when conducting research in Digital Public Relations.

**Applied Challenges:** The table provided above indicates that addressing the topic of "challenges of scientific research in Arab countries" is a general study rather than a specialized one in specific fields. This is particularly relevant because research related to digitization is relatively recent in Arab universities and institutions. Therefore, research in scientific fields and identifying its obstacles are crucial for researchers in general and, specifically, for professors supervising students. Training students in the field of Public Relations, both theoretically and practically, enables them to gain practical experience for future work in the field of Digital Public Relations. Public Relations is a dynamic field that adapts to digital developments and responds to digitization and artificial intelligence challenges, which will reshape economic relations. We are currently experiencing the second era of machines driven by artificial intelligence, relying on technologies such as machine learning, deep neural networks, big data, the Internet of Things, and cloud computing. It's essential to recognize the importance of technological training in educational institutions, as it will form the basis for work in future economic institutions (Al-Dubaisi, 2022:204).

### 1.7. Main Challenges Faced by Students During Research in Digital Public Relations

**Institutional-Level Challenges:** These challenges primarily arise from the general lack of interest in Public Relations within Algerian institutions. There are no specialized departments or designated individuals responsible for guiding students in their research or internships within these institutions. This leaves student researchers uncertain, as there is no office or specific individuals tasked with providing research guidance. Furthermore,



there are no contracts or commitments binding institutions to facilitate students' research or provide suitable conditions for their studies. It's worth noting that students' research often benefits the institution, making this situation particularly problematic. In such cases, students typically seek guidance from individuals involved in Public Relations activities within the institution, as there is no dedicated department or office.

**University-Level Challenges:** These challenges revolve around students' limited ability to communicate and interact with various parties involved in scientific research, such as their academic supervisors and relevant personnel within universities and institutions where they study. Often, communication is haphazard, especially in the context of digital communication. Moreover, there is a lack of digital research and internship platforms specifically designed for students of communication and Public Relations. Additionally, there is an absence of a clear and enforced legal framework within institutions to facilitate students' research activities.

**Challenges in Dissertation Preparation:** Algerian students encounter challenges in preparing their dissertations, including difficulties accessing current academic resources, a lack of effective mentorship, and navigating bureaucratic processes. These obstacles highlight the distinctive difficulties in dissertation preparation within the Algerian academic environment, emphasizing the importance of identifying and addressing support needs.

**Table2: Utilizing the Observation Network through Research Participation**

Role, Time and Place	Dissertation Title and Student Researchers	Remarks addressed by the jury
<p>Relationship theory A Researcher as a Supervisor On June 16, 2023, At the Faculty of Information and Communication Sciences, University of Algiers 3.</p>	<p>The Role of Digital Public Relations in Crisis Management: Case Study of the General Directorate of Telecommunications in Algeria The Cybersecurity Breach from May 15 to 25 2023. <b>Sabrina Mettiche and Yasmin Slimani</b></p>	<p>Lack of clarity in theoretical framework utilization. Difficulty sourcing theoretical information for Digital Public Relations and cybersecurity. Overly general theoretical chapters concerning Public Relations concepts. Challenges in establishing effective communication with institutions. Limited analysis capability due to information scarcity. Weak linkage between study variables and overreliance on general Public Relations concepts. Neglect of specialized research theories. Inadequate time allocation.</p>
<p>A Researcher as an Examiner on June 10, 2023, At the Faculty of Information and Communication Sciences, University of</p>	<p>The Role of Electronic Public Relations in Customer Relationship Management: A Case Study at the National Social Security Fund Directorate for Wage Earners in the Algiers Province, February to</p>	<p>-Overly generalized theoretical approach. Underutilization of Theoretical Framework. Scarcity of Arabic references for defining digital and electronic concepts. Insufficient integration between study variables and specific Public</p>

Algiers .	June2023. Chahinaz Mhemedi	Relations theories. Did not employ specialized research theories. -Inadequate timeframe for conducting comprehensive research.
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## 2. Survey Study: Psychometric Properties of the Questionnaire

In this study, the electronic questionnaire served as primary tool, Following the initial pre-questionnaire phase, the exploratory sample was employed, succeeded by the application of the real sample.

### 2.1 Reliability Assessment Using Cronbach's Alpha

This section delves into the assessment of reliability using Cronbach's Alpha, a crucial statistical measure for gauging the internal consistency of research instruments, particularly in surveys or questionnaires.

Table 3: Questionnaire Reliability Assessment Using Cronbach's Alpha

Dimension	Number of statements	Size of survey sample	Cronbach's Alpha value	Statistical decision
Students inclinations towards research in Digital Public Relations	04	30	0.819	reliable
University-Level Challenges of research	05	30	0.845	reliable
Institutional-Level Challenges of research	04	30	0.849	reliable
Overall score	13	30	0.872	reliable

Looking at Table3, we observe that the Cronbach's Alpha value exceeds (0.7) for all dimensions of the questionnaire, including its overall score. This signifies a high level of reliability for the questionnaire, making it suitable for collecting data. To ensure the credibility of our data, we had previously administered a pilot questionnaire to students, as evident from the tables assessing validity and reliability.

### 2.2. Assessing Reliability through the Split-Half Method

This segment focuses on evaluating reliability using the Split-Half Method, a statistical technique employed to measure the internal consistency of research instruments.

Table 4: Reliability of the Questionnaire Using the Split-Half Method

Dimension	The split-half correlation coefficient	The correction value using the Spearman-Brown	Statistic al decision
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		formula	
-Students inclinations towards research in Digital Public Relations	0.689	0.816	reliable
-University-Level Challenges of research	0.660	0.795	reliable
-Institutional-Level Challenges of research	0.732	0.845	reliable
Overall score	0.563	0.720	reliable

By examining Table4, it becomes evident that the correction value, as per the Spearman-Brown formula, for the split-half correlation coefficient exceeds (0.7) for all dimensions of the questionnaire, as well as its overall score. This signifies a strong level of reliability for the questionnaire, making it suitable for data collection purposes.

**2.3 Validity, Internal Consistency Validity:** This section centers on Internal Consistency Validity, exploring its significance and application as a key aspect of assessing the overall validity of research instruments.

Table 5: Internal consistency validity of the questionnaire

The statement	Correlation with its dimension (R)	Significance level (Sig)	Statistical decision
<b>Dimension 1: Students' inclinations towards research in Digital Public Relations</b>			
S1: Is the field of this research important?	0,852**	0.000	significant
S2: Is it sought-after and modern?	0,755**	0.000	significant
S3: Does it motivate continuity?	0,808**	0.000	significant
S4: Does it meet an economic need?	0,837**	0.000	significant
<b>Dimension 2: Challenges of research in university</b>			
S1: A challenge in methodology	0,814**	0.000	significant
S2: A challenge in guiding and supervising	0,718**	0.000	significant
S3: A challenge in digital communication	0,874**	0.000	significant
S4: A challenge in finding references	0,761**	0.000	significant
S5: A challenge in follow-up and achievement	0,784**	0.000	significant
<b>Dimension 3: Challenges of research in institutions</b>			
S1: A challenge in reception and guidance	0,857**	0.000	significant
S2: A challenge in communicating with	0,841**	0.000	

parties			
S3: A challenge in information availability	0,886**	0.000	significant
S4: A challenge in applying theoretical knowledge	0,791**	0.000	significant

Based on the findings from Table5, it is evident that all the statements within the questionnaire exhibit statistically significant positive correlations with the overall score of their respective dimensions. This underscores a robust internal consistency validity across all questionnaire dimensions, affirming the questionnaire's suitability for data collection.

**Construct Validity: Table 6: The construct validity of the questionnaire**

This segment examines Construct Validity, delving into its importance and utilization as a crucial element in the evaluation of the overall validity of research instruments.

Dimension	Correlation with the questionnaire (R)	Significance level (Sig)	Statistical decision
Students inclinations towards research in Digital Public Relations	0,856**	0.000	Significant
University-Level Challenges of research	0,818**	0.000	Significant
Institutional-Level Challenges of research	0,655**	0.000	Significant

Examining Table6, it becomes evident that every dimension of the questionnaire exhibits a statistically significant positive correlation with its overall score. This observation underscores the robust construct validity of the questionnaire, affirming its suitability for data collection.

**3. The Basic Study: 3.1 Sample Distribution by Demographic Characteristics**

This section analyzes the distribution of the sample based on demographic characteristics, providing insights into the representation and diversity within the research participants.

**Table 7: Sample distribution based on demographic characteristics**

Variables	Sub-variables	Number	Percentages
Gender	Male	31	36 %
	Female	55	64 %
Age	Less than 23	46	53.5 %
	24 - 27	25	29.1 %
	More than 27	15	17.4 %
University	Algiers 3	46	53.5 %
	Médéa	16	18.6 %

	M'Sila	24	27.9 %
Job	No	63	73.3 %
	Yes	23	26.7 %
Owning a PC	No	18	20.9 %
	Yes	68	79.1 %
Total	The total sample	86	100 %

Analyzing Table 7 and Figure 1 reveals several noteworthy characteristics of the study's sample. Notably, the University of Algiers 3 boasts the largest number of participants in the sample, indicating a higher student population. This suggests a greater potential for exploring various less-explored topics, including Digital Public Relations. Students and faculty often seek fresh research areas to avoid academic redundancy and stay current. It's important to highlight that the University of Algiers 3 introduced the field of Public Relations several years ahead of the universities of M'sila and Médéa. As a result, previous studies should encourage students, professors, and research committees to select novel and contemporary research subjects that align with ongoing developments. Additionally, it's worth mentioning the strategic institutions surrounding the University of Algiers 3, which play a pivotal role in Digital Public Relations. These institutions facilitate students' access to vital field information, offering a significant advantage compared to students at the more distant universities in M'sila and Médéa. This geographical proximity can make the research process more accessible and practical for students and researchers alike.

**Table 8: Statistical analysis results of students' inclinations toward field research in Digital Public Relations using a one-sample t-test**

Dimension	Hypothesized average	Arithmetic average	One-sample t-test			Statistical decision
			Test value (T)	Degree of freedom (DF)	Significance level (Sig)	
Students inclinations towards research in Digital Public Relations.	08	10.47	15.001	85	0.000	significant

Analyzing Table 8, we observe that the test value (T) equals 15.001, and the significance level of the test (Sig) equals 0.000, which is less than the significance level of 0.05. This indicates a statistically significant result, demonstrating that there are significant differences between the arithmetic average and the hypothesized average.

Upon comparison, it becomes evident that these differences favor the arithmetic average, as the test value is positive. These results reveal statistically significant distinctions between the arithmetic average and the hypothesized average in favor of the former,

particularly concerning the studied aspect. This suggests that the survey participants' responses exhibit a positive inclination or a higher tendency.

Consequently, the first hypothesis, which posits that "Students hold statistically positive inclinations toward field research in Digital Public Relations," is confirmed. This outcome can be attributed to the students' desire to explore research within the digital era, recognizing it as a fundamental requirement in the contemporary job market. Engaging in such research can open doors to future employment opportunities in various organizations, remote work options, or the acquisition of valuable research skills, facilitating further academic pursuits, including pursuing a Ph.D., where the majority of topics revolve around contemporary issues.

We will now present and analyze the results related to the second hypothesis, which posits that "The Degree of Research Difficulty in Digital Public Relations at the University and Studied Institutions is Statistically High."

**Table9: Statistical Analysis Results for the Level of Research Difficulty in Digital Public Relations at University and Institutions Using a One-Sample t-test**

Dimension	Hypothesized average	Arithmetic average	One-sample t-test			Statistical decision
			Test value (T)	Degree of freedom (DF)	Significance level (Sig)	
University-Level Challenges	10	12.60	10.468	85	0.000	significant
Institutional-Level Challenges	08	10.53	11.978	85	0.000	significant

From the data presented in Table9, the following findings emerge:

- **Concerning research challenges at the university**

The test value (T) equals 10.468, with a significance level (Sig) of 0.000, which is less than the significance threshold of 0.05. This indicates statistical significance, implying that there are significant differences between the arithmetic average and the hypothesized average. These differences favor the arithmetic average, as evidenced by the positive test value. The quantitative analysis highlights a consensus among the study's participants regarding the existence of research difficulties within the university context. Survey responses reveal that students face notable communication challenges, including a lack of pedagogical support from the university and unclear research-related guidance. Additionally, there is a practical and digital communication network that streamlines administrative processes for selecting research topics and accessing relevant institutions.

- **Concerning research challenges at the institution**

The test value (T) equals 11.978, with a significance level (Sig) of 0.000, which is lower than the significance threshold of 0.05. This confirms the statistical significance of the test, indicating notable differences between the arithmetic average and the hypothesized average in favor of the arithmetic average.

These results demonstrate statistically significant differences in favor of the arithmetic average for both research challenge dimensions. In essence, the responses from the study participants exhibit a positive trend, thereby the second hypothesis is **confirmed**.

**Figure 2: Discrepancy between the arithmetic average and the hypothesized average for research challenges**

Will now present and analyze the results related to the third hypothesis, which posits that "There are No Statistically Significant Differences in Students' Inclinations Toward Field Research in Digital Public Relations Attributed to the Variable of University"

**Table10: statistical differences in students' inclinations toward field research in Digital Public Relations based on the variable of university using analysis of variance test**

Dimension	Variable (University)	Arithmetic average	Analysis of Variance (ANOVA)			Statistical decision
			Test value (F)	Degree of freedom (DF)	Significance level (Sig)	
Students' inclinations toward field research in Digital Public Relations	Algiers 3	10,3261	2.296	83	0.107	insignificant
	Médéa	10,0625				
	M'Sila	11,000				

From Table 10, it can be observed that the test's value (F) is 2.296, and the test's significance level (Sig) is 0.107, which exceeds the significance threshold of 0.05. This indicates the absence of statistical significance in the test, implying that there are no statistically significant differences in students' inclinations toward field research in Digital Public Relations based on the variable of the university.

These results suggest the absence of statistically significant differences in students' inclinations toward research in Digital Public Relations based on the university where they study. Consequently, the third hypothesis is **confirmed**. The study's sample, as a whole, appears to have a keen interest in researching within the domain of Digital Public Relations, recognizing its significance in the context of contemporary developments and its potential for future career prospects.

**Figure 3: Disparities in the arithmetic averages of Student Inclinations Toward Research in Digital Public Relations Based on the University**

- We will now present and analyze the results related to the fourth hypothesis, which posits that "No Significant Differences in the Challenges of Research in Digital Public Relations Across Universities and Institutions"

**Table 11: Statistical variations in the challenges of research in Digital Public Relations across universities and institutions using analysis of variance test**

Dimension	Variable (University)	Arithmetic average	Analysis of Variance (ANOVA)			Statistical decision
			Test value (F)	Degree of freedom (DF)	Significance level (Sig)	
University-Level Challenges	Algiers 3	13,3913	16.823	83	0.000	significant
	Médéa	13,3125				
	M'Sila	10,625				
Institutional-Level Challenges	Algiers 3	11,2391	13.551	83	0.000	significant
	Médéa	10,8125				
	M'Sila	9,000				

From Table 12, the following observations are made :

**Concerning University-Level Challenges:** The test value (F) equals 16.823, with a significance level (Sig) of 0.000, which is less than the significance threshold of 0.05. This indicates a statistically significant test, signifying that there are indeed statistically significant variations in research challenges within universities, attributed to the variable of "university".

**Concerning Institutional-Level Challenges:** The test value (F) equals 13.551, with a significance level (Sig) of 0.000, also below the significance threshold of 0.05. This implies a statistically significant test, suggesting that there are statistically significant differences in research difficulties within the studied institution, attributed to the university's location as the study site.

These results reveal significant disparities in research challenges, both at the university level and within the institution. Consequently, Hypothesis Four is **not confirmed**. To delve deeper into these differences and identify beneficiaries, the Scheffé test is a valuable tool.



Table 12: Statistical variations in research difficulty in Digital Public Relations across universities and institutions using the Scheffé test

Scheffé test				
Dimension	University	University	Difference in averages	Significance level
University-Level Challenges	Algiers 3	Médéa	0,0788	0,991
		M'Sila	2,7663*	0.000
	Médéa	Algiers 3	-0,0788	0,991
		M'Sila	2,6875*	0.000
	M'Sila	Algiers 3	-2,7663*	0.000
		Médéa	-2,6875*	0.000
Institutional-Level Challenges	Algiers 3	Médéa	0,42663	0,696
		M'Sila	2,23913*	0.000
	Médéa	Algiers 3	-0,42663	0,696
		M'Sila	1,8125*	0,007
	M'Sila	Algiers 3	-2,23913*	0.000
		Médéa	-1,8125*	0,007

Based on the data presented in Table 12, the following observations can be made :

**University-Level Research Challenges**

There are no statistically significant differences in the degree of research challenges between the University of Algiers 3 and the University of Médéa. However, statistically significant differences exist between the University of Algiers 3 and the University of M'sila in favor of the former regarding research difficulties at the university level. Similarly, statistically significant differences are found between the University of Médéa and the University of M'sila, favoring the former regarding research difficulties at the university level.

**Institutional-Level Research Challenges:** No statistically significant differences in research challenges exist between the University of Algiers 3 and the University of Médéa at the institutional level. Likewise, there are no statistically significant differences between the University of Algiers 3 and the University of M'sila in terms of research challenges at the institutional level, favoring the University of Algiers 3. However, statistically significant differences are evident between the University of Médéa and the University of M'sila, favoring the former, in research difficulties at the institutional level.

These quantitative findings suggest that various factors contribute to the complexity of the research process, particularly at the university level. One prominent factor is the student population, with the University of Algiers 3 having a significantly larger number of students (518) compared to the University of M'sila (160) and the University of Médéa (69). This disparity can pose challenges related to academic supervision and pedagogical

support. Furthermore, the nuanced variations among these universities regarding research difficulties highlight the significance of institutional support and teaching methodologies. Students at the University of M'sila appear to face fewer research challenges, possibly due to a more comprehensive theoretical foundation in research methodologies. This can be attributed to the university's proactive approach in enhancing its academic content through digital platforms, which has facilitated students' access to digital resources and learning materials. Concerning field research in Digital Public Relations, this area is relatively new for both students and universities. Students typically seek theoretical concepts, and field research projects in this domain are limited, often undertaken by high-achieving and distinguished students (Hamdini, 2023)

**Study Findings:** The study has yielded the following key insights:

**1. Confirmation of Hypothesis One - Existence of Various Challenges:** The research supports the first hypothesis, which focuses on theoretical aspects. These challenges encompass cognitive elements, such as methodological and theoretical frameworks, as well as contextual factors. Some challenges are tangible, involving human resources, financial capabilities, and available technologies. Inadequate strategies to adapt to evolving trends in diverse fields contribute to a shortage of resources, references, prior studies, training opportunities, and knowledge coordination. These limitations hinder scientific research in the digital age and the era of artificial intelligence, which is expected to introduce new research domains like cybernetics and cyborgs. One of the most significant hurdles faced by researchers is the absence of a comprehensive theoretical framework, often derived from different Western contexts.

**2. Confirmation of Hypothesis Two - Obstacles in the Digital Public Relations Research Process:** The perspective of students, both at the university and institutional levels, aligns with the second hypothesis, indicating the presence of obstacles in the Digital Public Relations research process.

**3. Confirmation of All Hypotheses:** The study has successfully confirmed all hypotheses. Consequently, it is incumbent upon Algerian institutions of higher education to enhance the research landscape in the field of Digital Public Relations.

**Enhancing Scientific and Methodological Coordination:** Promote enhanced collaboration and knowledge-sharing mechanisms between universities and institutions. This collaborative effort will provide student researchers with deeper insights into research strategies within Digital Public Relations. The active involvement of research centers and academic institutions is instrumental in this regard.

**Transition to Experiential Learning:** Shift from didactic teaching to experiential learning by engaging students with industry professionals through various academic events and digital platforms. Universities should promptly adopt this approach to ensure a robust academic foundation, especially given that Digital Public Relations often requires skills and knowledge more aligned with the digital environment than a specific time or place.

**Strengthening Legal and Digital Relationships:** Foster stronger relationships, both legal and digital, among universities, institutions, and various stakeholders in the Digital Public Relations research domain, including research centers.

**Promoting Collaboration and Knowledge Exchange:** Encourage increased collaboration and knowledge exchange among universities, particularly in terms of specialization. Organize coordination meetings, update programs, and reshape perspectives on Digital Public Relations research. Prioritize the dissemination of significant master's research findings and consider establishing a prestigious award for the best master's thesis across universities. Institutions should also take the initiative to establish national digital research platforms, providing access to a wide array of references, books, translations, and expert professors and supervisors. In today's digital age, where research increasingly incorporates digital dimensions, emphasis should be placed on digital communication within the research domain.

**Supporting Digital University Libraries:** Allocate resources to bolster digital university libraries and make them more accessible to students. These libraries should provide both physical and digital resources to enhance the research process and equip students with the necessary skills in the digital domain. Consider extending the research period for master's degrees from a semester to a year or more to allow for more comprehensive research.

**Revising Research Topics and Plans:** Review and update research topics, plans, and objectives within the Digital Public Relations field. Implement various applications and tools in universities to monitor students' work and ensure academic integrity.

These recommendations aim to enhance the research landscape in Digital Public Relations, contributing to both student development and the advancement of Algerian institutions in the digital era.

## Conclusion

The study aimed to reveal the most important difficulties facing master's students while conducting research in the field of Digital Public Relations. We concluded through this study that there are methodological difficulties related mainly to the study of digital phenomena, including Digital Public Relations. There are also field difficulties related to the guidance process in universities. Especially in the field that was studied, i.e. the universities of Algeria<sup>3</sup>, the University of M'sila and the University of Medea. In the future, we must think about more research that supports the university's presence in society by strengthening the research process among graduate students through many of the mechanisms that we proposed in this study and through research. Future in this field.

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