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E-Publishing and the Quality of Scientific Research according to the Algerian National Reference for Internal Quality Assurance in Higher Education Institutions: A Perspective from Faculty Members of the Faculty of Social Sciences, Amar Thelidji University, Laghouat.

النشر الالكتروني وجودة البحث العلمي وفقا للمرجع الوطني لضمان الجودة الداخلية لمؤسسات التعليم العالي، من وجهة نظر أساتذة كلية العلوم الاجتماعية جامعة عمار ثليجي بالأغواط

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ABSTRACT:

The objective of this study is to investigate the impact of e-publishing on the improvement of scientific research quality, as outlined in the national reference for internal quality assurance in higher education institutions. The study will focus on the viewpoints of faculty members at the Faculty of Social Sciences, Amar Thelidji University in Laghouat. From the perspective of Systems theory, which views phenomena as interconnected systems with inputs, outputs, and feedback loops, e-publishing acts as a catalyst that impacts every aspect of the research process. By examining the following question: Can electronic publishing help raise the caliber of scientific research, from the viewpoint of the professors at the Faculty of Social Sciences at Amar Thelidji University Laghouat?

In order to answer these questions, a descriptive approach was employed, utilizing a questionnaire including 39 items to gather essential data from the study sample, which was approximated to consist of 161 professors. The findings of the study indicate that e-publishing has a significant role in improving the caliber of scientific research through its contributions to its advancement, organization, establishment of scientific networks and collaborations, and recognition of the value of scientific research.

Keywords: Scientific research quality, National reference, E-publishing, Faculty members.

الملخص:

تهدف هذه الدراسة إلى التعرف على دور النشر الالكتروني في تطوير جودة البحث العلمي وفقا للمرجع الوطني لضمان جودة الداخلية بمؤسسات التعليم العالي من وجهة نظر أعضاء الهيئة التدريسية بكلية العلوم الاجتماعية بجامعة عمار ثليجي الأغواط من خلال عدسة نظرية النظم، التي تنظر إلى الظواهر على أنها أنظمة مترابطة مع المدخلات والمخرجات وحلقات التغذية الراجعة. يكون النشر الإلكتروني بمثابة المحفز الذي يؤثر على كل عنصر من عناصر عملية البحث.. وذلك من خلال الإجابة على التساؤل التالي: هل يمكن للنشر الإلكتروني أن يساعد في زيادة جودة البحث العلمي، من وجهة نظر أساتذة كلية العلوم الاجتماعية في جامعة عمر ثليجي بالأغواط؟

وللإجابة على هذه التساؤلات تم استخدام المنهج الوصفي بالاعتماد على الاستبيان المكون من 39 عبارة في جمع البيانات اللازمة من عينة الدراسة والمقدر عددهم 161 أستاذ، لتخلص الدراسة إلى وجود أثر للنشر الالكتروني في زيادة جودة البحث العلمي، من خلال تطويره وهيكلته وتنظيمه، وإرساء العلاقات والشراكات العلمية، وكذا تثمين البحث العلمي.

كلمات مفتاحية: جودة بحث علمي، مرجع وطني، نشر الكتروني، أعضاء هيئة التدريس.

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1- Introduction:

Universities worldwide strive to enhance the quality of scientific research within the context of quality assurance and academic certification systems. Nations allocate significant resources to the development and education of research professors with the aim of advancing scientific knowledge. Given its significance, society at large relies on higher education institutions and their research skills to promote development, address problems, and drive progress, especially in response to the various transformations occurring in different aspects of life in the contemporary world.

In an effort to emulate other countries, Algeria sought to establish the National Committee for Quality Assurance in Higher Education, with the aim of implementing a higher education quality assurance system. In 2014, the committee released the official guideline for internal quality assurance in higher education institutions. This manual contains references that exemplify the objectives that universities want to accomplish, specifically in regards to their activities and future strategies. In order to build mechanisms for continuous improvement with the goal of reaching predefined targets, it is necessary to undertake self-assessment to identify the strengths and shortcomings in each area.

We are currently seeing the emergence of a novel society that has been brought into existence using state-of-the-art machine technology. Alvin Toffler argues that the primary cause of conflict in the post-industrial era is the ability to regulate, distribute, and obtain knowledge. (Josef, 1991, p. 81)

Therefore, he predicts that information will be of utmost importance throughout this era, bringing to mind Francis Bacon's famous saying from the sixteenth century, "Knowledge is power." (Garcia, 2001, p. 109)

In a world where global progress and technical innovation are happening at a rapid pace, these proverbs still hold water. Some of these recent changes, along with the light and dark they cast, are completely new to us. This is where the concept of electronic distribution over the internet first arose in the realms of culture, civilization, and philosophy. "Toward Paperless Information Systems," Lancaster's 1978 book, predicted the emergence of a paperless society. It is surprising and perplexing that the demand for technological transformation has grown across all areas of life.

By appending the letter "E" to terms such as "E-learning," "E-publishing," and "E-commerce," Shakespeare's famous statement "To be or not to be" has been altered to "E or not to E," symbolizing the immense transformation in society and culture.

As citizens of the information or digital society, we are not surprised by the development of E-Publishing, a new offspring of electronic culture. Computers, communications, and networks—and most notably the internet—are foundational to this new kind of publication. The internet has swiftly and dramatically altered every area of human existence.

2- Research Problem:

Electronic publishing is a vital subject for researchers in scientific research since it has made significant progress in distributing and sharing information and knowledge with those who benefit from it. The publication approach is highly effective and significantly influences information services

and scientific comprehension. The research problem is formulated as follows: can electronic publishing help to raise the caliber of scientific research, from the viewpoint of the professors at the Faculty of Social Sciences at Amar Thelidji University Laghouat?

*Sub-Questions:

- Is there a role for electronic publishing in structuring and developing scientific research, according to the viewpoint of faculty members at the Faculty of Social Sciences at Amar Thelidji University Laghouat?
- Is there a role for electronic publishing in forming scientific relationships and partnerships between the university and its external environment, according to the viewpoint of faculty members at the Faculty of Social Sciences at Amar Thelidji University Laghouat?
- Is there a role for electronic publishing in valorizing scientific research, according to the viewpoint of faculty members at the Faculty of Social Sciences at Amar Thelidji University Laghouat?

3- hypotheses:

3-1- Main hypothesis:

- There is a role for electronic publishing in enhancing the quality of scientific research, from the perspective of the faculty members at the Faculty of Social Sciences at Amar Thelidji University in Laghouat.

3-2- Sub-hypotheses:

- Electronic publishing plays a role in structuring and developing scientific research, according to the faculty members at the Faculty of Social Sciences at Amar Thelidji University in Laghouat.
- Electronic publishing contributes to establishing scientific relationships and partnerships between the university and its external environment, as viewed by the faculty members at the Faculty of Social Sciences at Amar Thelidji University in Laghouat.
- Electronic publishing plays a role in valorizing scientific research, as perceived by the faculty members at the Faculty of Social Sciences at Amar Thelidji University in Laghouat.

4- Importance of the Study:

The study is significant due to the importance of the subject matter, which is electronic publishing and its impact on the quality of scholarly research. There is no doubt that scientific research is essential to higher education since it propels advancement and strengthens the transmission of information. Academic institutions place a premium on research because it helps to bridge the gap between the academy and the public. These establishments strive to improve and progress different fields through thorough research. With the fast development of information technology allowing for the broad distribution of ideas and applications, the quality of scientific research has become an important differentiator for universities in the modern environment.

Electronic publishing has had a significant impact on university-based scientific research. Given the scarcity of theoretical research on electronic publishing and its potential to enhance the quality of scientific research publications, this work is of utmost importance.

5-Study Objectives:

The study seeks to accomplish the following objectives:

- Emphasize the significance of scientific research, its distinguishing features, and advantages.
- Examine the national standard for ensuring quality within higher education, specifically in relation to the quality of scientific research.
- Assess the level of electronic publication usage by faculty members of Social Sciences faculty at Laghouat's University.

The objective is to assess the influence of electronic publishing on the caliber of scientific research, as perceived by the faculty members of Social Sciences faculty at Laghouat's University.

6- Study's key concepts:

6-1- Scientific Research:

Hill and Weiss define scientific research as the process of solving a given problem by a thorough and precise analysis of all relevant data and information. According to Macmillan and Schumacher, research is an orderly procedure of gathering and examining data or information for a certain objective. Tokman defines research as a systematic endeavor aimed at discovering answers or solutions to challenges encountered by individuals or groups in various aspects of their lives and environments. (Abdelhadi, 2005, pp. 45-50)

It is a research procedure that is carried out by a researcher or a team of researchers to investigate information and facts or unearth fresh connections that aid in resolving issues and providing meaningful answers.

6-2- Quality of Scientific Research:

In general terms, defining the concept of research quality is challenging, but three fundamental drivers encompass this concept:

- Generating superior knowledge and creativity in the scientific and technical fields;
- Transmitting and disseminating this new knowledge to users and society;
- Marketing and investing in that knowledge. (Heddar, 2012, p. 182)

The presence of standards and indicators in theoretical or applied scientific research, both in the research process and its findings, is referred to as the quality of scientific research from a procedural perspective. This makes it possible for scientific research to withstand arduous review, adjudication, and scrutiny by specialists in the field. Additionally, it influences the growth of scientific knowledge and, whether directly or indirectly, advances society in the short term.

6-3- Electronic Publishing:

As per the ODLIS dictionary, electronic publishing is described as the dissemination of works in a digital format that can be read and accessed by the public through electronic means. In addition, it encompasses digital versions of physical publications. (ODLIS, 2004).

Electronic publishing is the process of disseminating and accessing information using electronic means. Users receive electronic information from a variety of online sources, such as websites, digital libraries, academic journals, and similar platforms.

6-4- The Algerian National Reference for Internal Quality Assurance in Higher Education Institutions:

On May 31, 2010, Ministerial Decree No. 167 established the National Reference for Internal Quality Assurance in Higher Education Institutions. Committee for improving university and research standards (CIAQES), which is made up of professionals and university professors, was given official status by the decree. (Baroush & Barkan, 2012, p. 218)

Its primary goals are to assist and support institutions of higher learning, enhance their institutional capabilities, and foster a culture of quality. The committee's initial actions included adopting tools and procedures at all academic institutions, which involved setting up quality assurance cells, choosing leaders for these cells, and providing them with training.

The committee's efforts led to the creation of a quality reference document, which was released for the first time in 2014 and contains a number of standards and criteria for quality assurance. (CIAQES, 2016, p. 4)

The National Reference for Internal Quality Assurance in Higher Education Institutions places a strong emphasis on the value of scientific research in its procedures. To gauge the degree of comprehension and application of the theoretical underpinnings of scientific research in academic institutions, the committee has developed three main fields that include various criteria. These include:

- Developing and structuring scientific research;
- Value placed on scientific research;
- Scientific partnerships and relationships between the university and its surrounding community.

6-5- Faculty Members:

John Dewey defines a faculty member or university professor as someone who instructs their students in the utilization of scientific tools, rather than someone who acquires knowledge on their behalf. In addition, a faculty member motivates students to develop personally and apply that development to their lifestyle. (Hamdaoui & Djaber, 2018, p. 100)

Universities are highly dependent on faculty members and researchers. Their specialized knowledge drives the university's purpose and enhances scientific comprehension. In order to succeed in these positions, faculty members must possess robust educational backgrounds and comprehensive preparation.

This encompasses proficiency in pedagogy and scientific inquiry, along with cognitive and vocational aptitudes, principles, perspectives, and encounters that empower learners to make significant contributions to the holistic advancement of society.

7- Related previous studies:

A- Bilal Heri and Yasser Abdelrahman (2022), "Evaluation of the Quality of Scientific Research in Light of the National Reference for Internal Quality Assurance in Higher Education: A Study of the Views of a Sample of Faculty Members at Algerian Universities"

With reference to the National Reference for Internal Quality Assurance in Higher Education, this study sought to evaluate the adoption of quality standards for scientific research in Algerian universities. 175 permanent faculty members were given questionnaires to complete in order to gather data. The study found that Algerian universities only moderately adhere to quality standards for scientific research, particularly when it comes to the application of standards for organizing, structuring, developing, and valuing such research. Furthermore, the study discovered that personal and professional factors were responsible for statistically significant differences in the sample members' assessments of the standard of scientific research conducted in Algerian universities. (Heri & Yasser, 2022)

B- Mansouri Houari and Bendin Ahmed (2018), " An examination of the research quality of faculty members in Algerian universities: A case study focusing on Adrar University and the implementation of the new national quality standards."

The purpose of this study was to assess the degree of adherence to the new National Guide for Internal Quality for scientific research in Algerian universities from the viewpoint of the teaching staff. 31 university professors at Adrar University were given questionnaires as part of the study to get their thoughts on the availability of standards for good scientific research. Based on the opinions of the sample, the study came to the conclusion that there is a weak adherence to the elements of ensuring the quality of scientific research in Algerian universities. (Mansouri & Ben dine, 2018)

C- Messif Aisha (2019), "Electronic Scientific Communication and Its Role in Activating Scientific Research at Algerian Universities: A Field Study at Constantine Universities"

The study aimed to investigate the opinions and attitudes of faculty researchers at Algerian universities towards electronic scientific communication, including its significance and impact on academic and research activities, in view of the widespread influence of information and communication technology. The study examined the utilization of electronic scientific publishing and communication among Algerian academic members, namely 297 professors, through a survey methodology. Although internet communication is extensively utilized for the purpose of sharing research, it does have certain drawbacks. Although there are advantages, some faculty members still have reservations owing to personal factors and practical considerations associated with subscriptions and publishing procedures. (Messif, 2019)

7-2- Review of literature

The aforementioned studies jointly provide insights on the current status of scientific research and the extent to which Algerian universities adhere to quality standards. The significance of enhancing compliance with quality standards is emphasized, encompassing both conventional research methodologies and the integration of contemporary communication technology. The results of this study offer significant implications for policymakers, university administrators, and faculty members in their efforts to improve the quality of research and cultivate a culture of excellence throughout Algerian higher education. Additional investigation and focused interventions may be necessary to tackle the highlighted obstacles and foster ongoing enhancement in research methodologies.

The research gap in our study is the absence of a special emphasis on the impact of electronic publishing on enhancing research quality. The suggested study seeks to fill this gap. By placing emphasis on this particular component, it offers specific perspectives on utilizing technology to improve the quality of research in accordance with national benchmarks, namely within the realm of social sciences at Amar Thelidji University, Laghouat.

8- Concept of Electronic Publishing:

Generally, "publishing" refers to broadcasting, announcing, making something known to people, or making information widely accessible.

Technically, "publishing" is the process of creating or preparing copies of a book, pamphlet, printed sheet, or its equivalent for public consumption. Publishing in this context aims to spread the author's intellectual message to the readers and recipients of that message.

In order to produce, manage, and distribute information to the intended audience, electronic publishing involves the use of electronic devices. It is similar to traditional publishing, but the content is not printed on paper before being distributed. Instead, it is disseminated online via electronic media. (Zine, 1999., p. 38)

The definition of electronic publishing is "converting printed vessels into digital vessels that can be accessed via the World Wide Web." (Firame , Bourabah, & Gairaa, 2019, p. 355)

Additionally, it is described as "transferring information via electronic computers from the publisher to the ultimate beneficiary directly and through quasi-communications."

Academic electronic publishing describes content on electronic media, particularly files shared online, that is written by experts and intended for other experts. (Firame , Bourabah, & Gairaa, 2019, p. 355)

9- Introduction to the National Reference for Internal Quality Assurance in Higher Education and its Components:

Ministerial Decision No. 167, which established a national committee to carry out the quality assurance system in higher education and scientific research, was released on May 31, 2010, as part of the reforms made by the Ministry of Higher Education and Scientific Research. The committee's objective is to aid in the development of quality assurance procedures within higher education

institutions. It is made up of experts and university professors. The committee develops a national reference manual that contains quality assurance standards in order to monitor and implement quality assurance practices. This manual was created with the assistance of quality control representatives from academic institutions and debuted in 2014.

The national reference for quality assurance in higher education includes standards that outline the qualitative or quantitative work that must be done in order to implement this reference. The evidence used to assess and gauge the degree of achievement for each standard completes this framework. Additional explanatory remarks known as "interpretation rules" are added to the bases of the fields and references to aid in understanding. (CIAQES, 2016, p. 5)

Table 1. Fields of Scientific Research According to the National Reference (Prepared by Researchers)

Fields	References	Criteria	Evidence (Proofs)
Organization, structuring, and development of scientific research (B1)	09 B11 to B91	17	28
Scientific relations and partnerships (B2)	04 B12 to B42	11	18
Valorization of scientific research (B3)	04 B13 to B43	05	09
Total	17	33	55

By defining various criteria that assess the depth of knowledge and application of scientific research principles in academic institutions, the overseeing ministry has clearly given the field of scientific research significant importance as can be seen from reading this reference's content. Three areas or fields are used to accomplish this:

- Organization, structuring, and development of scientific research: This has to do with the creation of organizations within institutions in charge of developing research.
- Scientific partnerships and relationships: This imply that the institution should specify the terms of cooperation with different partners.
- Valorization of scientific research: For the institution, this entails developing strategies to promote understanding and use of research.

10- The Role of Electronic Publishing in Enhancing the Quality of Scientific Research:

10-1- Factors Driving the Transition to Electronic Publishing:

The utilization of electronic publishing in scientific research is justified by its significance and efficacy in promoting the research culture among academic communities. Researchers disseminate their findings via university websites and internet channels, adhering to rigorous research protocols. Electronic publishing facilitates the unrestricted sharing of research articles among authors, reviewers, and editors, while guaranteeing a just and transparent procedure.

In addition, electronic publishing enhances the effectiveness of scientific research by using the capabilities of computer networks and the internet, which offer new options for high-quality, efficient,

and rapid scientific communication. Specialized readers can evaluate and make judgments on research and articles submitted for publication, using predetermined criteria. (Makhlouf & outhaldja, 2019, pp. 320-321).

10-2- The Advantages and Disadvantages of Electronic Publishing as a New Challenge in Improving the Quality of Scientific Research:

Electronic publishing advantages in improving the quality of research:

- Electronically published sources are characterized by their accuracy, thoroughness, and quick accessibility. They also offer the advantage of saving time and effort while searching for specific information.
- Information obtained from electronic sources is very up-to-date, providing readers with the latest advancements in science throughout a wide range of human understanding.
- Electronic publishing generally exhibits superior quality in comparison to traditional publication.
- Once the publishing committee gives its permission, scientific knowledge can be swiftly put to the World Wide Web in a matter of minutes or even seconds.
- The reduction in publication expenses has resulted in the rise of exclusively digital scientific journals, providing a viable answer for many journals that rely on financial backing.

Drawbacks of Electronic Publishing:

- The exorbitant expense of electronic devices required to access digital documents;
- The concern regarding internet speed and accessibility, especially in underdeveloped countries;
- One of the foremost concerns stemming from electronic publishing is the protection of intellectual property rights;
- Challenges in implementing copyright laws effectively;
- The possibility of data alteration, duplication, and reuse, which raises concerns about control and dependability. (Thabet & Yasir , 2013, p. 52)

11- Study Fields:

11-1- Spatial Field:

This research was carried out at Amar Thelidji University's Faculty of Social Sciences in Laghouat, Algeria.

11-2- Temporal Field:

This research was conducted from April 15, 2023 to August 7, 2023. The exploratory research and the final study were both conducted during the study period.

12- Exploratory study:

We did a preliminary investigation on a sample of 30 individuals from the study population. The goal was to enhance the tools utilized for scientific investigation. Prior to implementing them in the comprehensive study population, the researcher may develop the measuring instruments for the

phenomena being investigated on a sample of approximately 30 individuals. (Pranas , Jolita , & Regina , 2018)

13- Methodology:

The study utilized a descriptive approach, which has been demonstrated to be beneficial in previous research, to address the research topics. This methodology entails the gathering and examination of data using scientific methodologies and instruments to explore phenomena and verify established theories.(Angers, 2006, pp. 106-107).

14- Data Collection Instrument:

In order to create the study questionnaire, we undertook the following steps:

- Determined the dimensions of each variable by considering the study's objectives, hypotheses, prior research on each variable, and the theoretical literature on the variables.
- Every variable comprised a collection of axes, with each axis consisting of a group of elements. The study involved the following variables and their corresponding axes:
- Electronic Publishing: Originally included 16 items, which were reduced to 14 items in the main study.
- Quality of Scientific Research: This variable comprised three axes as follows:
- Organization, Structuring, and Development of Scientific Research: This axis included 10 statements.
- Scientific Relationships and Partnerships: This axis included 9 statements.
- Valorization of Scientific Research: This axis included 6 statements.

The decisions on the items were based on the theoretical literature of the variable and previous studies.

The questionnaire for each variable was designed with choices rated from 1 to 3 according to the Likert method, as shown in the table:

Table 2. presents the questionnaire key for the study variables (by researchers):

Choice	Degree
Disagree	1
Neutral	2
Agree	3

Table 3. Estimated Response levels: (by researchers):

Choice	Estimated Level
Disagree	1-1,66
Neutral	1,67-2,32
Agree	2,33-3

The values were derived by subtracting the minimum value (1) from the maximum value (3) on the adopted scale and then dividing the outcome by the number of possibilities (3). The outcome is 0.66, which is subsequently combined with 1, and this procedure is iterated until reaching the maximum value on the established scale, which is 3.

15- Psychometric Properties of the Study Instrument:

* Study of the Reliability and Self-Validity of the Research Instrument:

The instrument's validity corresponds to how effectively the instrument corresponds to measuring the component it is designed to measure. Conversely, questionnaire reliability pertains to the degree of consistency in the results obtained while administering the same survey to the same individuals on separate occasions. The questionnaire's reliability was determined by calculating Cronbach's alpha, and the self-validity coefficient was derived as the squared root of Cronbach's alpha.

The results are shown in the following table:

Table 4. Shows the stability and self-reliability coefficients for the study instrument (prepared by the researchers)

Axis	Sample Size	Number of Statements	Cronbach's Alpha	Self-Validity
Organizing, Structuring, and Developing Scientific Research	30	10	0.822	0.906
Scientific Relations and Partnerships	30	09	0.833	0.912
Valorization Scientific Research	30	06	0.629	0.793
Quality of Scientific Research	30	25	0.886	0.941
Electronic Publishing	30	14	0.711	0.843

The above table shows that the stability coefficient for all axis exceeds the minimum threshold, with a value of 0.886 for the Quality of Scientific Research axis, while ranging from 0.629 to 0.833 for the axis of quality. This indicates that the questionnaire items are characterized by stable results, and the findings can be generalized within the study.

As estimated, the self-reliability coefficient for the axis of scientific research quality was 0.941 and for electronic publishing was 0.843, indicating a high level of accuracy, even though it may be considered weaker than other forms of reliability. (Nunnally, 1994, pp. 264-265)

Table 5. demonstrates the values of stability for the study variables using the Split-Half method (prepared by the researchers).

Axis	Items	Cronbach's Alfa	Spearman brown Coefficient	Variance	Gutman split Half coefficient	Correlation between Forms
Electronic Publishing	7	0.546	0.696	3.00	0.670	0.533
	7	0.584	0.696	5.95		
Quality of Scientific Research	13	0.819	0.820	21.75	0.820	0.695
	12	0.804	0.820	22.28		

From the above table, it is observed that there is a difference between the stability coefficients in the first and second halves of various study variables and axis. Additionally, the variance does not equate in both halves of the variables. The study employed the Guttman coefficient to assess the stability of these variables, which involves dividing the questionnaire into two parts. (Guttman, 1945, pp. 258-259)

This coefficient was estimated to be 0.820 for scientific research quality and 0.670 for electronic publishing.

Note: The Split-Half results for the variables of scientific research quality cannot be relied upon in this case where the halves do not have equal numbers of items. This is due to the problems

associated with the Split-Half method for estimating reliability. Contemporary researchers tend to use Cronbach's alpha coefficient, which avoids some of these problems. However, Split-Half reliability has played an important role in the development of reliability theory and applied measurement. (Salkind, 2010, pp. 1412-1413)

16- Population and Sample of the Study:

16-1- Study Population:

The study population consists of 275 male and female professors and assistant professors registered at the Faculty of Social Sciences at Ammar Thelidji University in Laghouat.

16-2- Final Study Sample:

To determine the size of the final study sample, the researchers relied on Stephen Thompson's equation, as follows: $n = \frac{N\ x\ p\ (1-p)}{[N-1x(d^2/z^2)]+p(1-p)}$

Where: n = Sample size N = Population size Z = Critical value corresponding to the significance level of 0.05 (equal to 1.96) d = Error rate, set at 0.05 p = Proportion of the characteristic, set at 0.50 . (Sahrawi & Bousalb., 2016, p. 73)

By applying the above equation, the study sample size (n) is calculated as:

$$n = \frac{275\ x\ 0.50\ (1-0.5)}{[275-1x(0.05^2/1.96^2)]+0.5(1-0.5)} = 160{,}51$$

Thus, the final sample size of our study is 161.

16-3- Characteristics of the Study Sample:

Table 6. presents the distribution of the study sample individuals based on social characteristics (prepared by the researchers).

Gender	frequency	Percentage
Male	98	60.9%
Female	63	39.1
Total	161	100.00%
Academic Rank	frequency	Percentage
Temporary Professor	82	50.9%
Lecturer/Assistant Professor	52	32.3%
Higher Education Professor	27	16.8%
Total	161	100.00%
Laboratory Membership	frequency	Percentage
Not a member	76	47.2%
Research Team Member	74	46.0%
Research Team Leader	9	5.6%
Laboratory Director	2	1.2%
Total	161	100.00%

From the above table, it is evident that the number of males in our sample is greater than females, with 98 male professors accounting for 60.9% and 63 female professors accounting for 39.1% of the total sample. As for the academic rank, temporary professors constitute the majority with 82 professors accounting for 50.9%, followed by 52 lecturers and assistant professors, accounting for 32.3%, and 27 higher education professors, accounting for 16.8%. And the study participants were categorized into groups according to their level of research participation. Approximately 47.2% (n=76) of individuals were not associated with a research laboratory. Furthermore, a substantial proportion (46%, n=74) consisted of individuals who were part of the research team. Team leaders accounted for 5.6% (n=9) of the sample, whereas lab directors made for a lesser proportion at 1.2% (n=2).

16-4- Statistical Methods:

A variety of statistical tools were utilized to determine the characteristics of the study sample and analyze the responses of the individuals to the study variables. It involves the computation of percentages, averages, and measures of variability. In addition, it utilized basic regression techniques and appropriate statistical tests within the regression model.

17- Presentation, Analysis, and Interpretation of Hypotheses Results:

17-1- Presentation, Analysis, and Discussion of the First Hypothesis:

Table 7. demonstrates the role of electronic publishing in improving the quality of scientific research from the viewpoint of the sample individuals (prepared by the researchers).

R	0.371a	R Square	0.138	Adjusted R Square	0.133
Variance Anova a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.651	1	2.651	25.456	0.000b
Residual	16.556	159	0.104		
Total	19.207	160			
Coefficients a					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.069	0.248		4.303	0.000
e_publish	0.491	0.097	0.371	5.045	0.000

The results presented in the table above confirm the validity of the hypothesis as follows:

The regression coefficient is 0.49, indicating a positive relationship between electronic publishing and the quality of scientific research from the perspective of the sample individuals. This means that an increase in the use of electronic publishing is associated with an increase in the level of scientific research quality, as perceived by the participants. In other words, an increase of one unit in the rate of electronic publishing leads to a positive change in scientific research quality by 0.49 units.

The correlation coefficient is 0.37, indicating that the relationship between electronic publishing and scientific research quality from the perspective of the sample individuals is positive and has a strength of 0.37, which is significant at a 5% level.

The t-value is 5.04, which is significant at a level less than 5%, confirming the existence of a relationship between electronic publishing and scientific research quality.

The F-value is 25.45, which is significant at a level less than 5%, indicating that the independent variable, electronic publishing, is a valid predictor of the dependent variable, scientific research quality.

The determination coefficient (R2) is 0.138, which means that the variable of electronic publishing explains 13% of the variation in scientific research quality, and 87% is attributed to other variables not considered in the study.

Based on the above statistical analysis results, the validity of the first hypothesis can be accepted.

17-2- Presentation, Analysis, and Discussion of the second Hypothesis:

Table 8. illustrates the role of electronic publishing in structuring and developing scientific research from the perspective of the sample individuals (prepared by the researchers).

R	0.421a	R Square	0.177	Adjusted R Square	0.172
Variance Anova a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.771	1	4.771	34.250	0.000b
Residual	22.151	159	0.139		
Total	26.922	160			
Coefficients a					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	0.676	0.287		2.355	0.020
e_publish	0.659	0.113	0.421	5.852	0.000

The results in the table above confirm the validity of the second hypothesis as follows:

The regression coefficient is 0.65, indicating a positive relationship between electronic publishing and the structuring and development of scientific research. This means that an increase in the use of electronic publishing leads to a corresponding increase in the level of structuring and development of scientific research from the perspective of the sample individuals. Specifically, a one-unit increase in the use of electronic publishing results in a 0.65-unit increase in the level of structuring and development of scientific research.

The correlation coefficient is 0.42, indicating a significant positive relationship between electronic publishing and the structuring and development of scientific research from the perspective of the sample individuals at a 5% level of significance.

The t-value is 5.85, which is significant at a level below 5%. This confirms and supports the existence of a relationship between electronic publishing and the structuring and development of scientific research.

The F-value is 34.25, significant at a level below 5%, indicating that the independent variable, electronic publishing, is a valid predictor of the dependent variable, the structuring and development of scientific research.

The coefficient of determination (R-squared) is 0.177, meaning that the variable of electronic publishing explains 17% of the variance in the dependent variable, the structuring and development of scientific research. The remaining 83% is attributed to other variables not considered in the study.

Based on the results of the statistical analysis above, the second hypothesis is accepted.

17-3- Presentation, Analysis, and Discussion of the third Hypothesis:

Table 9. illustrates the role of electronic publishing in establishing scientific relationships and partnerships from the perspective of the sample individuals (prepared by the researchers).

R	0.186a	R Square	0.035	Adjusted R Square	0.028
Variance Anova a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.160	1	1.160	5.687	0.000b
Residual	32.436	159	0.204		
Total	33.596	160			
Coefficients a					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.462	0.348		4.206	0.000
e_publish	0.325	0.136	0.186	2.385	0.018

The results in the table above confirm the validity of the third hypothesis as follows:

The regression coefficient is 0.32, indicating a positive relationship between electronic publishing and the establishment of scientific relationships and partnerships. This means that an increase in the use of electronic publishing leads to a corresponding increase in the establishment of scientific relationships and partnerships from the perspective of the sample individuals. Specifically, a one-unit increase in the use of electronic publishing results in a 0.32-unit increase in the establishment of scientific relationships and partnerships.

The correlation coefficient is 0.18, indicating a significant positive relationship between electronic publishing and the establishment of scientific relationships and partnerships from the perspective of the sample individuals at a 5% level of significance.

The t-value is 4.20, which is significant at a level below 5%. This confirms and supports the existence of a relationship between electronic publishing and the establishment of scientific relationships and partnerships.

The F-value is 5.68, significant at a level below 5%, indicating that the independent variable, electronic publishing, is a valid predictor of the dependent variable, the establishment of scientific relationships and partnerships.

The coefficient of determination (R-squared) is 0.035, meaning that the variable of electronic publishing explains 3% of the variance in the dependent variable, the establishment of scientific relationships and partnerships. The remaining 97% is attributed to other variables not considered in the study. Based on the results of the statistical analysis above, the third hypothesis is accepted.

17-4- Presentation, Analysis, and Discussion of the second Hypothesis:

Table 10. illustrates the role of electronic publishing in valorizing scientific research from the perspective of the sample individuals (prepared by the researchers).

R	0.390a	R Square	0.152	Adjusted R Square	0.147
Variance Anova a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.333	1	2.333	28.596	0.000b
Residual	12.973	159	0.082		
Total	15.306	160			
Coefficients a					
Model	B	Std. Error	Beta	t	Sig.
(Constant)	1.132	0.220		5.150	0.000
e_publish	0.461	0.086	0.390	5.348	0.000

The results in the table above confirm the validity of the fourth hypothesis as follows:

The regression coefficient is 0.46, indicating a positive relationship between electronic publishing and the valorization of scientific research. This means that an increase in the use of electronic publishing leads to a corresponding increase in the valorization of scientific research from the perspective of the sample individuals. Specifically, a one-unit increase in the use of electronic publishing results in a 0.46-unit increase in the valorization of scientific research.

The correlation coefficient is 0.39, indicating a significant positive relationship between electronic publishing and the valorization of scientific research from the perspective of the sample individuals at a 5% level of significance.

The t-value is 5.15, which is significant at a level below 5%. This confirms and supports the existence of a relationship between electronic publishing and the valorization of scientific research.

The F-value is 28.59, significant at a level below 5%, indicating that the independent variable, electronic publishing, is a valid predictor of the dependent variable, the valorization of scientific research.

The coefficient of determination (R-squared) is 0.152, meaning that the variable of electronic publishing explains 15% of the variance in the dependent variable, the valorization of scientific research. The remaining 85% is attributed to other variables not considered in the study.

Based on the results of the statistical analysis above, the fourth hypothesis is accepted.

18- Conclusion

Electronic publishing, according to faculty members at Amar Thelidji University's Faculty of Social Sciences in Laghouat, has a number of advantages that can improve the quality of scientific research.

- Improved accessibility: Electronic publications are more accessible to researchers and other interested parties all over the world, which can help to promote knowledge dissemination and the exchange of ideas.

- Faster publication: Because electronic publications can be published more quickly than traditional print publications, researchers can share the results of their work with others more quickly.
- Lower costs: Because electronic publishing is less expensive than traditional print publishing, researchers can publish their work without incurring high costs.
- Regular evaluation: Electronic publications can be evaluated on a regular basis based on reader comments and feedback, which can help to improve the quality of the research.
- In addition to these advantages, faculty members on the Faculty of Social Sciences believe that electronic publishing can improve scientific research quality by:
- Establishing collaboration: Electronic publishing can facilitate collaboration among researchers from various institutions and countries, promoting the exchange of expertise and ideas and improving research quality.
- Promoting innovation: Electronic publishing provides a platform for the publication of new and distinct research, which can help in the growth of innovation and knowledge development.
- Improving transparency: Because electronic publishing makes research more accessible, it can help to improve transparency in the research process.

Overall, the faculty members at the Faculty of Social Sciences believe that electronic publishing has a positive impact on the quality of scientific research. They believe that electronic publishing can help to promote the dissemination of knowledge, the exchange of ideas, and the improvement of research quality.

19- Suggestions:

Here are some specific examples of how electronic publishing has been used to improve the quality of social science research:

- The Journal of Social Science and Humanities: Published by Amar Thelidji University's Faculty of Social Sciences, is an open access journal that publishes high-quality social science research. The journal is entirely electronic, making it more accessible to researchers worldwide.
- The Social Science Research Network (SSRN): is a website that contains a large collection of social science research papers. Researchers value SSRN because it allows them to easily find and access research papers from a variety of sources.
- The Open Science Framework (OSF): is a platform that allows researchers to share their research data and code. OSF is a valuable tool for researchers, as it allows them to make their research more transparent and reproducible.

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