The Use of the Internet by Master's Students as an Information Source for Scientific Research and the Achieved Intellectual and Scientific Gratifications

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Abstract

This study aimed to explore the use of the internet by master's students as a source of information for scientific research. It examined the use of electronic research sources and information available online, investigated the motivations behind such use, and identified the advantages and disadvantages of the internet as an information source for scientific research. Additionally, the study sought to understand the most significant intellectual and scientific gratifications achieved through this usage. The study employed the media survey method, which aligns with the descriptive nature of the research and is best suited to answer its questions. Field data were collected through a questionnaire distributed to a purposive random sample of master's students enrolled in the College of Arts at King Faisal University, comprising 135 participants. The study reached several findings, the most notable of which are: E-books and electronic references rank first among the electronic sources of information on the internet used by master's students for scientific research- Google is the most frequently used search engine by master's students to find information for their research-The motivations for using the internet as an information source in scientific research align with the intellectual and scientific gratifications achieved.

Keywords: Internet, scientific research, postgraduate studies, gratifications, information sources, search engines

المستخلص

استهدفت هذه الدراسة التعرف على استخدام طلبة مرحلة الماجستير للإنترنت مصدراً للمعلومات في البحث العلمي عبر استخدام مصادر البحث والمعلومات الموجودة بشكل إلكتروني على شبكة الإنترنت، والوقوف على دوافع ذلك الاستخدام، والتعرف على إيجابيات شبكة الإنترنت وسلبياتها باعتبارها مصدرا للمعلومات في البحث العلمي، ومعرفة أهم الإشباعات المعرفية والعلمية المتحققة من ذلك. .اعتمدت الدراسة على منهج المسح الإعلامي لتوافقه مع طبيعة الدراسة الوصفية كونه الأنسب للإجابة عن تساؤلاتها. وتم جمع بيانات الدراسة الميدانية من خلال أداة الاستبيان من عينة عمدية أسلوبها عشوائي من طلبة الماجستير المسجلين بكلية الآداب جامعة الملك فيصل قوامها (135) مفردة . توصلت الدراسة إلى عدد من النتائج من أبرزها: تعد الكتب والمراجع الإلكترونية في المرتبة الأولى من المصادر الإلكترونية للمعلومات في الإنترنت التي يستخدمها طلاب الماجستير في البحث العلمي- يعد محرك Google أكثر محركات البحث التي يستخدمها طلبة الماجستير في البحث عن المعلومات للبحث العلمي- تتناسب دوافع استخدام طلبة الماجستير للإنترنت بوصفه مصدرا للمعلومات في البحث العلمي مع الإشباعات المعرفية والعلمية المتحققة.

الكلمات المفتاحية: : الإنترنت - البحث العلمي - الدراسات العليا- الإشباعات - مصادر المعلومات – محركات البحث

Introduction:

Research and scientific activities are among the key areas that highlight the importance of the internet in today's world. The internet provides researchers with an expansive information space, offering a wide range of sources and tools necessary for preparing scientific research, thus saving time and effort while providing diverse and up-to-date information.

Academic studies on internet users in the Arab world indicate that the majority of users are young people working in the private sector and pursuing postgraduate studies (Al-Sayed, 2012, p. 237). The postgraduate stage holds special significance for universities, as scientific research has become one of the university's primary roles in serving society, with its results being utilized across various fields. Moreover, scientific research serves as a benchmark for the progress of nations.

Conducting scientific research is one of the most prominent academic tasks for master's students. Access to reliable information sources is among the most crucial elements that master's students need to complete assignments, papers, and scientific studies.

This study aims to:

1/ Examine the extent to which master's students use the internet as a source of information for scientific research compared to traditional libraries.
2/ Investigate the motivations behind their use of the internet as an information source for scientific research.
3/ Identify the main internet-based sources of information utilized by master's students in their research.
4/ Highlight the advantages and disadvantages of using the internet in scientific research.
5/ Assess the intellectual and scientific gratifications derived from the use of the internet as an information source.

Study Problem:

Information sources play a fundamental role in conducting scientific research. Preparing research papers is a core requirement for completing the master's program. Master's students are often tasked with preparing research plans and papers, either as part of coursework, research projects required to pass the program, or at the thesis level.

The internet has emerged as a vast network offering a wide variety of electronic information sources and multiple methods for accessing them. It provides quick access to the information needed for scientific research, ensuring the information is current and offering numerous services that are often unavailable in traditional libraries.

The use of the internet by master's students as an information source for scientific

research, compared to traditional libraries, has its own set of motivations and reasons. It also produces certain intellectual and scientific gratifications. Accordingly, the main problem of this study is summarized in the following central question:
What is the extent and motivation behind the use of the internet by master's students as a source of information for scientific research, and what intellectual and scientific gratifications are achieved as a result?

Study Background:

Numerous studies have examined the use of the internet in scientific research, focusing on its academic and educational roles, its use within university settings, and its future prospects.

- **Hussein Qasim Ubaid and Hatim (2019):**
  This study aimed to explore the motivations, patterns, habits, and nature of internet use among university students. It highlighted changes on both academic and cultural levels based on the perspectives of the study sample.

Findings:

  - Most participants moderately relied on the internet for writing research and reports, particularly students in humanities.
  - Students in scientific disciplines showed a higher degree of reliance.
  - Half of the respondents confirmed that internet usage had led to cognitive changes.

- **Balomri, Lynda, and Bousder, Iman (2020):**
  This study focused on the role of the internet in supporting scientific research as perceived by professors and postgraduate students. It emphasized the internet's advantages in terms of providing rapid access to reliable, diverse electronic sources and search engines.

Findings:

  - The internet contributed to offering students quality scientific ideas and easy access to electronic resources.
  - This was contrasted with the challenges of obtaining print-based sources.

- **Natsha, Abeer (2023):**
  This study investigated the use of the internet in scientific research by postgraduate faculty members, aiming to identify the contextual factors influencing their usage.

Findings:

  - 78% of the sample reported high internet usage.

- No statistically significant differences were found in internet usage based on gender or academic rank.

These studies collectively emphasize the growing reliance on the internet as a key resource for scientific research, highlighting its advantages in accessibility, diversity, and efficiency, while also underscoring variations in usage based on discipline and demographic factors

In Sudan, the study conducted by Bilal Ahmed (2017) aimed to analyze and evaluate the reality of internet usage in scientific research. This field study was carried out on postgraduate students in the computer program at the Open University of Sudan, with a sample of 41 students.

The study's findings revealed: A high percentage of students use the internet. Over 80% of the sample preferred accessing the internet from home. The average daily usage time ranged from two to four hours. The most commonly used internet service among researchers was email for communication and collaboration with other researchers. More than two-thirds of the sample expressed satisfaction with the websites they used to obtain the data and information needed for scientific research.

All the studies reviewed relied on questionnaires as the primary tool for collecting field study data. This could be justified by the fact that such survey-based studies find the questionnaire to be the most suitable tool. However, other tools, such as structured or in-depth interviews or case studies, were not employed.

Based on the above, this study derives its importance from its subject matter—the significance of information sources in scientific research—and the internet's emergence as a vast and diverse source of information. The internet provides researchers, especially master's students, with a wide range of tools and diverse academic materials. The study also addresses the differing perspectives on the internet as an information source, with some supporting it and others opposing it. Additionally, this research could contribute to the media library by exploring the impact of communication technology on scientific research at the master's level specifically, and on postgraduate studies in general.

Practically**,** the results of this study are expected to benefit universities and higher education institutions as a guiding reference for developing scientific research at the master's level.

4. Study Methodology:

4.1 Study Hypotheses:

1. There are statistically significant differences in the rate of internet use as an information source in scientific research among master's students (the study sample) based on gender.

2. Search engines rank first among the internet tools that master's students (the study sample) rely on as an information source in scientific research.
3. There is a statistically significant positive correlation between the extent of internet use for scientific research and the intellectual and scientific gratifications achieved among master's students (the study sample).
4. There is a statistically significant positive correlation between the time master's students (the study sample) spend browsing the internet for scientific research purposes and their use of the internet as an information source in scientific research.

4.2 Study Questions:

1. What is the extent of internet usage as an information source for scientific research among master's students?
2. What are the motivations for master's students to use the internet as an information source for scientific research compared to traditional libraries?
3. What are the main information sources provided by the internet that master's students use most frequently for scientific research?
4. What are the advantages and disadvantages of the internet as an information source for master's research in scientific research?
5. What intellectual and scientific gratifications do master's students achieve from using the internet as an information source for scientific research?

4.3 Theoretical Framework of the Study:

Uses and Gratification Theory:

The 1940s marked a shift in how audiences were viewed in relation to media, driven by the emergence of factors like individual differences and social variations that influenced media-related behavior. This shift paved the way for the development of the **Uses and Gratification Theory**, which introduced a new perspective on the relationship between audiences and media. The theory represented a transition from viewing audiences as passive and non-reactive to perceiving them as active participants who selectively engage with media messages and content based on their preferences.

The uses and gratification approach began to take shape in the 1940s and gained greater popularity in the 1950s. During this time, researchers became increasingly interested in understanding how audiences interact with various media and their content. Over time, the theory evolved into one of the most influential frameworks for studying audiences. It provides insights into the motivations that attract people to specific media and the types of content that satisfy their social and psychological needs.

The Uses and Gratification Theory serves as a foundational framework for understanding audience behavior, particularly their media usage patterns and the motivations behind those behaviors. It is one of the primary theoretical references employed to examine how audiences engage with media and the factors that drive their media consumption.

The concept of **Uses and Gratification** evolved further through the study conducted by **Blumler and Katz in 1969**, which focused on the 1964 British general elections. This research identified the reasons for watching or not watching election campaigns. Later, in 1984, Katz, Blumler, and Gurevitch defined the **Uses and Gratification Approach** in the context of new media, emphasizing the psychological and social aspects of individuals to determine their needs and expectations from new media.

Objectives of the Uses and Gratification Theory

1. To explain how audiences use various media, based on the assumption that audiences are active and conscious, selecting the medium that satisfies their needs.
2. To identify and understand the motivations audiences seek to fulfill through exposure to media and other communication tools, and to explore patterns of these motivations.
3. To obtain insights that help in understanding and interpreting the communication process (Amouri, Asmaa, & Nahal, Sama, 2022).

Foundations of the Theory:

Assumptions of the Uses and Gratification Theory:

1. **Audiences are active participants.** They select from media and its messages what aligns with their preferences, values, and interests.
2. **Media usage is purposeful.** Audiences use media to achieve specific goals and fulfill particular gratifications.
3. **Individual differences influence media choices.** People's unique needs and differences determine their choice of media and messages.
4. **Audiences control their media interactions.** They select content that satisfies their needs, demonstrating that individuals use media, not the other way around.
5. **Audiences can identify their needs and motivations.** They consciously choose media that satisfies their specific requirements.
6. **Cultural norms can be inferred from media usage.** Insights into prevailing cultural standards can be derived from audience media habits, rather than solely analyzing message content (Basioni, Marwa Yaseen, 2022).

Applications of the Uses and Gratification Theory in This Study:

The theory provides a framework for understanding the following:

- The motivations of master's students for using the internet as a source of information for scientific research.
- The types of gratifications—intellectual and scientific—that students aim to achieve through their internet usage.
- The psychological and social factors that influence their media choices, particularly when comparing internet use with traditional libraries.

- This perspective aids in analyzing how individual differences among students shape their research habits and media preferences.

Applications of the Uses and Gratification Theory in This Study:

The theory aligns with this study through its hypotheses, as it views the audience as an active participant in media interaction, with specific motivations and reasons for engaging with media content, leading to the fulfillment of their needs. This study benefited from the **Uses and Gratification Theory** in the following ways:

1. **Determining Study Variables and Designing Hypotheses**: The researcher derived the hypotheses for this study regarding the use of the internet by master's students as a source of information for scientific research from the **Uses and Gratification Theory** as the theoretical foundation.
2. **Designing the Data Collection Tool**: To measure the rate at which postgraduate students use online sources for scientific research, as well as to identify the motivations behind their use and the gratifications achieved, the researcher designed a questionnaire based on the theoretical model used.

4.4 Methodology and Study Tools

This study is classified as a **descriptive survey study**, utilizing the **media survey method**, which is a key approach for studying media audiences. The method aims to assess the rate and motivations of master's students (the study sample) in using the internet as a source of information for scientific research. Additionally, the study seeks to understand to what extent this usage fulfills intellectual and scientific gratifications and to identify the most prominent gratifications.

Study Population and Sample:

The study population includes master's students (both male and female) from the College of Arts at King Faisal University. The study sample is a random sample consisting of **135** students from the master's program at the College of Arts, King Faisal University.

Basic Data:

The number	Data	Frequency	Percentage
	Gender		
1	Male	14	10.4%
2	Female	121	89.6%
	Age		
1	Less than 30 years	104	77.0%
2	30-40 years	27	20.0%
3	More than 40 years	4	3.0%

	Specialization		
1	Media Communication, Strategic Communication	62	46.0%
2	Audio-Visual Media	26	19.26%
3	Journalism and Digital Publishing	20	14.72%
4	Arabic Language	10	7.4%
5	Social Sciences and Social Work	17	12.6%

Statistical Analysis of Data:

1. **Face Validity**: The questionnaire was reviewed by a group of experts in the field of media.(1)
2. **Internal Consistency Validity**: The questionnaire was tested on a pilot sample, and Pearson's correlation coefficient was used. The correlation values between the study tool's sections and the overall score of each section were found to be statistically significant at the 0.05 level for all sections, confirming the internal consistency and validity of the tool for field application.
3. **Reliability**: Cronbach's alpha coefficient was used to measure the reliability of the study tool regarding the use of the internet as a source of information for scientific research by master's students.

Reliability of the Study Tool:

Table (1) shows the **Cronbach's Alpha reliability coefficient** for the responses of the sample participants as follows:

Number of Sections	Cronbach's Alpha Value
6	0.703

From the table above, it is observed that the value of **Cronbach's Alpha** is **0.703**, which indicates that the questionnaire has a high reliability coefficient and is capable of achieving the study's objectives.

Preliminary Data:

The following describes the study participants according to the basic demographic variables, which are referred to as **demographic characteristics**:

(1) Dr. Omar Al-Mahdi, Professor, Taibah University, Kingdom of Saudi Arabia, Dr. Hisham Abbas, Professor, Al Qasimia University, United Arab Emirates and Dr. Um Hani Abu Sabah, Assistant Professor, Prince Abdulrahman Bin Faisal University, Kingdom of Saudi Arabia

Table (2)
Source: Prepared by the researcher, field study, **SPSS Program**, and references:

The previous table (2) shows the distribution of the sample participants according to demographic data. We observe that the number of females is higher than the number of males, with **121** females (89.4%) and **14** males (10.6%). The most frequent age group is **under 30 years**, with **104** individuals (77%). The most common specialization is **Strategic Media Communication**, with **62** individuals (46%).

Second: Rate of Master's Students' Use of the Internet as a Source of Information in Scientific Research

1. Using the Internet as a Source of Information in Scientific Research:

Table (3)
Source: Prepared by the researcher from the field study, SPSS program

Source	Frequency	Percentage
Always	119	88.10%
Sometimes	12	8.90%
Rarely	4	3%
Total	135	100%

From the table above, it is observed that the sample participants **always** use the internet as a source of information for scientific research, with **119 individuals** (88.1%). This aligns with the study's objective of assessing the rate at which master's students use the internet as a primary source of information in scientific research.

Average Time Spent Browsing the Internet for Scientific Research Purposes Weekly

Table (4)
Source: Prepared by the researcher from the field study, SPSS program, 2024

Duration	Frequency	Percentage (%)
1 to 3 hours/week	48	35.6%
More than 3 to 6 hours/week	51	37.8%
More than 6 hours/week	36	26.7%
Total	135	100%

From the table above, it is observed that the time spent by the sample participants browsing for scientific research purposes is very similar, ranging from **1 hour** to **more than 6 hours** weekly.

Students' Agreement with Using the Internet for Information in Scientific Research

Agree	Neutral	Disagree
2.33 to 3	**1.33 to 2.32**	**1 to 1.32**

This table is used to interpret the mean values for agreement with using the internet for information in scientific research, where:

- **2.33 to 3** indicates **Agree**,
- **1.33 to 2.32** indicates **Neutral**,
- **1 to 1.32** indicates **Disagree**.

First Axis: Motivations for Using the Internet by Graduate Students (Master's) as a Source of Information in Scientific Research Compared to Traditional Libraries

Table (5)
Source: Prepared by the researcher from the field study, SPSS program, 2024

Statement	Agree	Neutral	Disagree	Mean	Standard Deviation	Chi-Square Value	P-Value	Result
The internet provides me with diverse sources of information not available in traditional libraries.	103 76.3%	26 19.3%	6 4.4%	2.27%	0.542	157.259	0.001	Significant
The internet provides me with up-to-date information compared to paper sources.	110 81.58	21 15.6%	4 3%	2.79%	0.479	147.619	0.001	Significant

I can obtain information from the internet faster compared to traditional libraries.	127 94.1%	6 4.4%	2 1.5%	2.93%	0.315	166.846	0.001	Significant
The internet allows me to translate sources in foreign languages.	121 89.6%	10 7.4%	4 3%	2.87%	0.420	209.130	0.001	Significant
The internet allows me to join virtual academic groups.	108 80.0%	21 15.6%	6 4.4%	2.76%	0.525	120.458	0.001	Significant

From the table above, the main motivation for using the internet as a primary source in scientific research is "I can obtain information from the internet faster compared to traditional libraries," which ranked highest among the motivations of the sample with a mean of **2.93** and **94.1%** agreement. Since the Chi-Square value is **157.259** with a significance level of **0.001** (less than 0.05), it indicates that there are statistically significant differences in the responses, answering the study's question regarding the motivations behind using the internet as a source for scientific research compared to traditional libraries.

Second Axis: Most Prominent Information Sources on the Internet Used by the Sample in Scientific Research

2- Electronic Sources Available on the Internet Most Used in Scientific Research

Table (6)
Source: Prepared by the researcher from the field study, SPSS program, 2024

Statement	Agree	Neutral	Disagree	Mean	Standard Deviation	Result
Encyclopedias and Dictionaries	91 67.4%	34 25.2%	10 7.4%	2.60%	0.625	Agree

Electronic Books and References	131 97%	2 1.5%	2 1.5%	2.96%	0.270	Agree
Databases	107 79.3%	24 17.8%	4 3%	2.70%	0.492	Agree
Dictionaries and Lexicons	88 65.2%	39 28.9%	8 5.9%	2.59%	0.602	Agree
Electronic Journals and Periodicals	108 80%	23 17%	4 3%	2.77%	0.488	Agree
Blogs	70%	41%	24%	2.31%	0.767	Agree
Forums	72 53.3%	33 24.4%	22.2%0	2.31%	0.815	
Scientific Conferences	93 68.9%	32 23.7%	10 7.4%	2.61%	0.623	

From the table above, the most commonly used electronic information sources on the internet by the sample in scientific research are **electronic books and references** with a mean of **2.96** and **79%** agreement, followed by **electronic journals and periodicals** with a mean of **2.77** and **80%** agreement. These findings answer the third research question regarding the most frequently used internet sources for scientific research.

3- Services for Accessing Information on the Internet Most Used in Scientific Research

Table (7)

Source: Prepared by the researcher from the field study, SPSS program, 2024

Statement	Agree	Neutral	Disagree	Mean	Standard Deviation	Result
Websites	125 92.6%	6 4.4%	4 3%	2.90	0.392	Agree
Search Engines	131	2	2	2.96	0.270	Agree

	97%	1.5%	1.5%			
Social Networks	94 69.6%	27 20%	14 10.4%	2.59	0.672	Agree
Electronic Directories	78 57.8%	43 31.9%	14 10.4%	2.47	0.78	Agree
Electronic Publishing	107 79.3%	16 11.9%	12 8.9%	2.70	0,624	Agree
Email	72 53.3%	36 26.7%	27 20%	2.33	0.792	Agree
Mailing Lists	65 41.5%	38 28.1%	41 30.4%	2.11	0.843	Agree
Conference Proceedings	66 48.9%	46 34.1%	23 17%	2.32	0.750	Agree

We observe from the table above that the most frequently used internet service for obtaining information in scientific research is search engines, with an average score of 2.96 and a 97% agreement rate. This supports the study's second hypothesis: "Search engines rank first among the research tools provided by the internet in terms of their level of reliance by master's students (study sample) as a primary source of information for scientific research."

4- **The Most Used Search Engine for Research Information in Scientific Studies**

Table (8)
Source: Prepared by the researcher from the field study, SPSS program, 2024

Search Engine	Agree	Neutral	Disagree	Mean	Standard Deviation	Result
Google	127 94.1%	6 4.4%	2 1.5%	2.93	0.315	agree
ChatGPT	34 25.2%	53 39.3%	48 35.6%	1.90	0.775	Neutral
Firefox	29	44	62	1.76	0.787	Neutral

	21.5%	32.6%	45.9%			
Bing	20 14.8%	42 31.1%	73 54.1%	1.61	0.734	Neutral
Google Scholar	84 62.2%	22 16.3%	29 21.5%	2.42	0.822	agree

We observe from the table above that the most commonly used search engine for finding information related to scientific research is Google, with an average score of 2.93 and a 94.1% agreement rate. It is followed by Google Scholar, with an average score of 2.41 and a 62.2% agreement rate. As for the other search engines, they received neutral ratings according to the study sample.

Axis Three: Positive and Negative Characteristics of the Internet as a Source of Information in Scientific Research

Table (9)

Source: Prepared by the researcher from the field study, SPSS program, 2024

Statement	Agree	Neutral	Disagree	Mean	Standard Deviation	Chi-Square Value	P-Value	Result
The internet provides diverse sources for obtaining data needed for scientific research.	122 90.4%	13 9.6%	0%	2.90	0.296	71.207	0.001	Agree
The internet provides me with the most up-to-date information in all fields of knowledge and specialization.	114 84.4%	19 14.1%	2 1.5%	2.83	0.415	93.382	0.001	Agree
I can easily handle information in its electronic format.	114 84.4%	21 15.6%	0%	2.84	0.364	86.261	0.001	Agree
A large portion of the information	65 48.1	46 34.1	24 17.8%	2.30	0.756	133.03	0.001	Neutral

provided by the internet is of low originality and is repeated or copied from other sources.	%							
A large portion of the information provided by the internet lacks sufficient accuracy and standardization.	67 49.6 %	46 34.1 %	22 16.3%	2.23	0.743	126.701	0.001	Neutral
Some websites are unreliable, and it is difficult to verify their credibility.	116 85.9 %	15 11.1 %	4 3%	2.83	0.450	75.895	0.001	Agree
Some websites require a subscription fee or purchase of books.	119 88.1 %	12 8.9%	4 3%	2.85	0.432	82.755	0.001	Agree

We observe from the table above that the most significant advantage of using the internet as a primary source for scientific research is *"The internet provides diverse sources for obtaining the necessary data for scientific research."* This ranks first, with an average score of 2.9 and a 90.4% agreement rate. Since the Chi-square value is 71.207 at a significance level of 0.001, which is less than 0.05, this indicates that there are no statistically significant differences in the opinions of the sample group.

Similarly, the most significant disadvantage of using the internet as a primary source for scientific research is *"Some websites require paid subscriptions, and some e-books must be purchased."* This also ranks first, with an average score of 2.85 and an 88.1% agreement rate. Since the Chi-square value is 82.755 at a significance level of 0.001, which is less than 0.05, this indicates that there are no statistically significant differences in the opinions of the sample group.

Axis 4: Cognitive and Scientific Benefits Resulting from the Use of the Internet as a Source of Information in Scientific Research

Table. (10)

Statement	Agree (%)	Neutral (%)	Disagree (%)	Mean	Chi-Square Value	p-value	Standard Deviation	result
The internet enabled me to obtain scientific consultations.	95 70.4%	30 22.2%	10 7.4%	2.63	160.149	0.001	. 620	Agree
The internet helped me to develop my skill in analyzing research issues.	98 72.6%	33 24.4%	4 3%	2.70	95.741	0.001	0.522	Agree
The internet enabled me to communicate scientifically with peer researchers and specialized scientific groups.	107 79.3%	20 14.8%	8 5.9%	2.73	144.416	0.001	0.563	agree
The internet allowed me to subscribe to information databases.	104 77%	21 15.6%	10 7.4	2.70	138.773	0.001	.602	agree
I communicated through the internet with some academic publishing houses.	95 70.4%	20 14.8%	20 14.8%	2.91	120.404	0.001	.740	agree
The internet helped me learn the latest trends in scientific research in my field.	123 91.1%	12 8.9%	0	2.91	89.726	0.001	.286	Agree

We observe from the table above that the statement *"The internet has helped me stay updated on the latest research trends in my field of specialization"* ranks first, with an

average score of 2.91 and a 91.1% agreement rate. Since the Chi-square value is 89.726 at a significance level of 0.001, which is less than 0.05, this indicates that there are no statistically significant differences among the opinions of the sample group. Therefore, this statement is considered the most significant cognitive and scientific satisfaction resulting from using the internet as a source of information in scientific research according to the sample.

This is followed by the statement *"The internet has improved my level of scientific communication with peer researchers and specialized scientific groups,"* with an average score of 2.73 and a 79.3% agreement rate. Next is the statement *"The internet has enabled me to subscribe to databases,"* with an average score of 2.70 and a 77.0% agreement rate. The remaining satisfactions show very similar agreement rates among the sample group.

This finding answers the study's questions about the cognitive and scientific satisfactions derived from using the internet as a primary source of information in scientific research.

Hypothesis Analysis:

First Hypothesis: There are statistically significant differences in the rate of internet usage by master's students (study sample) as a source of information for scientific research based on gender.

Levene's Test for Equality of Variances

Independent Samples Test

Table No. (11): t-test for Equality of Means 10% Confidence Interval of the Difference

	Levene's Test for Equality of Variance		t.test for equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of Difference	
								Lower	Upper
Equal variances assumed	3.101	0.081	-1.26	133	0.210	-0.153	0122	-0.394	0.087
Equal variances not assumed			-1.170	15.600	0.260	-0.153	0.131	-0.432	0.125

We observe from Table No. (11) that the T-value is 1.26 at a significance level of

0.08, which is greater than 0.05. This means that there are no statistically significant differences between male and female master's students in their rate of internet usage as a primary source of information for scientific research, according to gender. This is consistent with today's trend, as the internet now provides most of the needs for students in scientific research and other areas.

Second Hypothesis: Search engines are the most used tool for accessing information in scientific research by master's students (study sample).

This hypothesis was confirmed by the responses from the sample group in the second section, where 97% of the respondents agreed that search engines are the most frequently used tool compared to other resources for scientific research.

Third Hypothesis: There is a statistically significant positive correlation between the motivations for using the internet by graduate students (study sample) for scientific research and the cognitive and scientific satisfactions achieved.

Correlations:

Items	The motivations for using the internet in scientific research		
	Pearson Correlation	**Sig. (2-tailed)**	**N**
Cognitive and scientific satisfactions achieved	0.347**	0.000	135

From the table above, the hypothesis is confirmed, as there is a positive correlation, although weak, with a correlation value of 0.347 at a significance level. This indicates that the motivations for using the internet in scientific research are positively related to the cognitive and scientific satisfactions achieved.

Fourth Hypothesis: There is a statistically significant positive correlation between the amount of time master's students at the Faculty of Arts spend browsing the internet for scientific research purposes and using the internet as a source of information for scientific research.

Correlations:

Items	Average time spent browsing the internet for scientific research purposes weekly		
Use the internet as a source of information in scientific research	**Pearson Correlation**	**Sig. (2-tailed)**	**N**
	0.955	0.000	135

From the table above, the hypothesis is confirmed, as there is a strong positive correlation

between the amount of time master's students spend browsing the internet for scientific research purposes and using the internet as a source of information for scientific research, with a correlation value of 0.955 at a significance level of 0.005, which is considered a high and statistically significant value.

Summary of Results:

- The main motivation for master's students to use the internet as a source of information for scientific research is the speed of obtaining information from the internet compared to traditional libraries.
- The most frequently used electronic sources for scientific research by the sample group are books and electronic references.
- The most commonly used search engine for finding scientific research information among master's students is Google.
- The main positive aspect of using the internet as a primary source for scientific research is its provision of diverse sources for obtaining the necessary data for research.
- The main disadvantages of using the internet as a primary source for scientific research are the requirement by some websites to subscribe for a fee, and the necessity to purchase certain e-books.
- The top cognitive and scientific satisfactions achieved from using the internet as a source of information in scientific research is the network's readiness to help researchers stay updated on the latest trends in scientific research within their fields of specialization.
- There are no statistically significant differences in the rate of internet usage by master's students (study sample) as a source of information for scientific research based on gender.
- Search engines rank first in terms of the research tools provided by the internet, in the level of reliance by master's students (study sample) on them as a source of information for scientific research.
- The motivations for using the internet by master's students as a source of information for scientific research align with the cognitive and scientific satisfactions achieved.
- There is a positive correlation between the amount of time master's students spend browsing the internet for scientific research purposes and using the internet as a source of information for scientific research.

References

- El-Sayed, Mohamed Abdel-Badee (2012). "Motivations for Internet Use among Saudi Youth." *Journal of Media Research*, Al-Azhar University, Issue 38.
- Basyuni, Marwa Yaseen (2022). "The Satisfactions Achieved from Egyptian Youth's Use of TikTok and Its Relationship with Social Isolation Levels." *Journal of Media Research and Studies*, Issue 19.
- Bilal, Billa Ahmed (2017). "The Reality of Internet Use in Scientific Research: An Applied Study on Graduate Students at Sudan Open University." *Journal of Libraries and Information*, Issue 22.
- Hussein, Qasim; Obaid, Hatem (2019). "Internet Usage in University Settings and Its Future Uses." *Journal of Humanities, University of Babylon*, Volume 26, Issue 9.
- Al-Amouri, Asmaa; Nahal, Sama (2022). "The Impact of Digital Communication Tools on Social Values among Algerian Adolescents." *International Journal of Social Communication*, Volume 9, Issue 2.
- Neesha, Abeer (2023). "Using the Internet in Scientific Research: A Comparative Study of Graduate Social Science Professors at Palestinian Universities." *Qabas Journal of Humanities and Social Studies*, Volume 7, Issue 2.