The role of electronic information resources in supporting scientific research at Northern Border University

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ABSTRACT

This study aimed to realize the impact of Electronic Information Resources on the scientific research movement at the Northern Border University. As it includes Electronic Information Resources provided by the university through the Saudi Digital Library, and many forms of sources such as databases, which include full-text databases, abstracts databases, bibliographic databases, as well as electronic books and electronic periodicals, these resources are characterized by the magnitude of content, continuous modernity, and linguistic diversity, the ability to permanently meet the needs of faculty members. The study sample consisted of 150 faculty members from all disciplines and academic degrees at the university, consistently standard of 137 faculty members from this sample. The study was keen to apply the survey methodology through the main measurement tool (the questionnaire), which consists of 16 main vocabularies that constitute the direction of measurement for the study. The study reached many results, the most important of which is that the high percentage of staff members use teaching Electronic Information Resources significantly, that they can meet teaching and research needs and upgrade academic, as well as there is a broad trend of satisfaction towards the use of full-text databases from other forms of databases. The study showed that the preferred form of access to the types of Electronic Information Resources is through the Saudi Digital Library for free, and there is a tendency of faculty members towards access through the home is larger than the university campus. In general, the study found a high percentage of faculty members 'satisfaction with the use of Electronic Information Resources and the extent of their impact on the flourishing of scientific research. Also, it recommended the necessity of increasing training programs towards using research methods for Electronic Information Resources and intensifying the use of the Internet through the university campus with linking Electronic Information Resources to academic courses.

1. Introduction

Electronic Information Resources are technological means that transmit information to the future and include all traditional and non-traditional information, such as printed materials such as books, pamphlets, and reports, and non-traditional information such as visual and audio materials, databases, e-books, and electronic journals, and the information resources are divided into two types:

Documentary sources such as primary sources, secondary sources, and third-degree sources. Non-documentary sources such as official sources that contain informative, advisory, and advisory information, and informal sources known as personal sources, which are obtained through dialogues, conferences, seminars, and meetings (Brett, 2018).

Electronic Information Resources are of great importance to researchers and students in university institutions, especially in our time, as this era continues with the existence of a huge amount of information, as this era witnessed great progress in the information industry and communication networks, thus allowing libraries and information centers the opportunity to enter the electronic environment and depend on it in the performance and their coils and its services (Akussah et al., 2015).

Libraries and information centers have taken the initiative to develop their automated systems, CD-ROM technologies, databases (Guajardo et al., 2017), the Internet, and electronic publishing, as the current era is witnessing a diversification and multiplicity of publishing media (Broatch et al., 2019), and the use of Electronic Information Resources by a wide group of researchers in all disciplines (Abouelenein, 2017).

Because universities are considered scientific centers due to their foundation on the philosophy of education, scientific research, and the cultural and developmental advancement of society, so they must consider their libraries and the information resources available in them as the main tool in the success of the educational process, as they are the main element on which scientific research is based in universities.

The problem of the study stems from identifying the reality of the use of faculty members at the Northern Border University from the Electronic Information Resources provided by the university through its official website, and measuring their attitudes and means of accessing them.

The following main question can be identified:

- To what extent do faculty members at Northern Border University benefit from Electronic Information Resources in scientific research?

The main question is divided into several sub-questions:

- To what extent do faculty members use Electronic Information Resources?
- Do the Electronic Information Resources meet the needs of the faculty members?
- How satisfied are faculty members with Electronic Information Resources?
- To what extent do Electronic Information Resources contribute to the flourishing of scientific research?
- What are the obstacles that faculty members see through the use of Electronic Information Resources?

Electronic Information Resources is one of the important technological tools that provide information in a fast, comprehensive, and integrated manner that meets the needs of university faculty members, and this positively affects the flourishing of the scientific research movement and the increase in publishing in electronic publishing resources affiliated with the approved databases (Amjad et al., 2013).

Electronic Information Resources in various forms are also one of the important aspects of human knowledge, as they are useful in revealing the actual needs of those resources, and identifying the problems and obstacles that face faculty members about their use of these resources, from an attempt to reach indicators and confirmed results that in turn contribute to improving The conditions of the electronic information services provided to the beneficiaries, and through this basis stems the importance of the study that sheds light on the extent to which faculty members at the Northern Border University benefit from Electronic Information Resources, and the extent of this reflection on the prosperity of their scientific research movement, given the multiplicity of their research needs related to the preparation of scientific studies and thesis.

The objectives of the study stem from the university's keenness to make use of modern technologies for Electronic Information Resources to meet the needs of faculty members by harnessing modern technical developments in regulating the flow of information, and working on providing Electronic Information Resources of various kinds with them, to increase scientific research.

So the study aims to:

1. Learn about the use of Electronic Information Resources by faculty members at Northern Border University.
2. Knowing the effect of using Electronic Information Resources on increasing scientific research.
3. Learn about the Electronic Information Resources available at the Northern Border University and the extent to which they meet the needs of faculty members.
4. Knowing the extent of the satisfaction of the faculty members through their testimonies about the use of Electronic Information Resources.
5. Identify the obstacles that affect faculty members for their use of Electronic Information Resources.

Through the aim of the study to realize the extent to which faculty members benefit from the use of Electronic Information Resources at Northern Border University, and the extent to which this affects the flourishing of the scientific research movement, the study used the descriptive analytical survey method, as it is suitable for data of a quantitative nature, which need statistical treatment With the application of the questionnaire tool, which was revised and modified by professors and experts in library and information science.

2. Definition of electronic resources

A resource that requires access to a computer or any electronic product that provides a set of data, whether it is text, electronic magazines or other multimedia products, image collections, digital products, graphics, or time-based resources, and can also be delivered on CD or from Over the Internet or on tape (Ayers, 2020), it is also a source of information that can be defined simply as resources containing documents in an electronic format that can be accessed over the Internet (Broatch et al., 2019). It has developed a set of technologies and standards that allow creating and distributing documents in an electronic form and then dealing

with the current situation, and librarians turn to new media, that is, electronic resources to develop their collections, and electronic resources are more useful because of the capabilities inherent in the ability to search, In addition to providing cheaper access to information to obtain information resources, sometimes an electronic form is the only alternative.

There is a large amount of information available on the Internet, through web pages (Williams, 2010), blogs, forums, social media, etc., and because there is a lot of information available and because this information can be published quickly and easily by anyone at any time. The researcher must be careful in choosing reliable information resources, and for many topics, the Internet can be a suitable place for research, and in some disciplines, we find the Internet is the most appropriate solution to collect information, such as technology-related topics.

3. Types of electronic resources

There are many types of electronic information containers, which are electronic books, electronic journals, electronic newspapers, electronic databases, electronic patents, electronic standards, electronic theses, a scientific web resource (Williams, 2010), CDs, electronic clippings, electronic forums, electronic newspapers, and electronic blogs (Broatch et al., 2019).

The researcher will provide a comprehensive overview of the different types of Electronic Information Resources (Ani et al., 2015).

- First: Electronic Information Resources according to coverage and objective treatment:

1. Resources of objective information with specific and precise specializations, which deal with a specific topic or topics of interrelated relationship with each other.
2. Objective resources of information that have comprehensive specializations or sometimes known as non-specialized, and are characterized by comprehensiveness and subjective diversity of the databases that they contain (Wilson et al., 2011).
3. Public information resources, which have media and political orientations and the general public, regardless of their specializations and scientific and cultural levels.

- Second: Electronic Information Resources according to the authorities responsible for them:

1. Electronic Information Resources belonging to commercial enterprises, whose primary goal is financial profit, and they deal with information as a commercial commodity
2. Electronic Information Resources belonging to non-commercial institutions.

- Third: Electronic Information Resources according to the type of information (Chen et al., 2020):

1. Electronic bibliographic information resources, which are the most common and oldest to appear among the Electronic Information Resources, as they provide descriptive and objective bibliographic data that refer us or direct us to the full texts with extracts of those texts or information (Priore and Giannini, 2006).
2. Full-text Electronic Information Resources provide full texts of required information such as periodical articles, conference research, complete documents, encyclopedia pages, newspaper clippings, reports, or government publications (Ng et al., 2012).
3. Textual information resources with numeric data, which include many books and guides, especially in the field of trade, and give very brief textual information with facts and figures.
4. Digital information resources. These resources focus on providing quantities of digital data such as statistics, standards, standards, and specifications in a specific form such as population statistics, marketing, business, and corporate management.

- Fourth: Electronic Information Resources according to the availability or according to the method of information availability (Hulseberg, 2016):

1. Electronic Information Resourcesvia direct contact: They are the local, regional and global databases available and spread around the world that allows libraries and information centers and scientific, cultural, commercial, and media bodies to obtain information resources electronically through remote communication networks linked to the computers available to them and the beneficiaries (Niqresh, 2019).
2. Electronic Information Resources on CDs: It can be considered an advanced stage, and many parties have moved towards using these rules as alternatives to the direct automatic search service or direct contact after the availability of most of the information resources on these drives (Ivory and Viens, 2019).
3. Electronic Information Resources on magnetic tapes: It is one of the oldest types of Electronic Information Resources, and its use has been associated with the widespread use of electronic computers in libraries, and the Library of Congress was the pioneer in this application.

4. Characteristics of electronic information resources

Easily access Electronic Information Resources around the world without any geographic or time restrictions (Tella et al., 2018). The user can access the electronic resources and download them to their desktop (Krieglstein, 2018).

- Many users can use Electronic Information Resources simultaneously.

- It Easy to search in the text.
- The possibility of making the amendment and updating easily.
- The ability to subscribe to Electronic Information Resources through consortia, publisher, or service provider.
- Electronic Information Resources are available in files.
- Electronic Information Resources include search speed, browsing, accessibility, and downloading.
- Easy to copy, store and publish.
- Provides an educational environment suitable for all types of researchers.
- It helps the researcher to study and research the topic he desires and to learn from it.
- Help students with self-education.
- It strengthens the research and exploration skill of students and faculty members.
- Make the faculty member able to follow modern systems in the subjects, to attract students.
- The use of e-learning helps in linking the educational system (school, teacher, learner, home, community, and environment).

5. Electronic information resources and education

The Internet has become an integral part of life at present, and in particular faculty members due to their use in research to search for information and specialized research procedures, and the current educational standards for higher education are working to expand the systems of educational institutions towards building an Electronic Information Resources and educational environment. In addition to the internal resources of the educational institution, and the general web services and educational resources become effective in improving the e-learning environment, and through that (Coogan, 2019), the faculty member gets additional opportunities for the creative approach to organizing the educational process, as well as organizing educational cooperation, and developing his research capabilities (Rehman and Al-Ansari, 2003).

6. The study sample

A random sample consisting of 150 faculty members was selected, and upon receiving the questionnaires later, it was found that there were 13 questionnaires not suitable for measurement, and therefore the final sample amounted to 137 questionnaires. Table 1 shows the distribution of the research sample according to a variable (academic degree-years of experience-type).

6.1. Study tool

The questionnaire was used as a main tool for the study, and the objectives of the questionnaire were identified in the awareness of faculty members'

trends towards the use of Electronic Information Resources available at the Northern Border University and their impact on the flourishing of the scientific research movement. The validity factor of the questionnaire was also ascertained, which was represented in measuring the validity and reliability factors according to the following.

Table 1: Distribution of the study sample

Variable	Variable class	#	%
Gender	Male	78	57%
	Female	59	43%
Academic degree	Professor	17	12.4%
	Associate professor	25	18.2%
	Assistant professor	81	59.1%
	Lecturer	14	10.2%
Years of Experience	Less than 5 years	30	21.9%
	6-10 years	93	67.9%
	More than 10 years	14	10.2%
	Total	137	100%

6.2. Tool validation

The validity of the questionnaire was verified in two ways: The first is the validity of the arbitrators, and the second is the validity of the internal consistency.

6.3. The validity of the arbitrators

The questionnaire was presented to a selected and specialized group of arbitrators with scientific competence and sufficient experience in the specialization of library and information science, including the problem and objectives of the study and its questions, and the number of arbitrators reached 5.

To ensure the degree of appropriateness of the phrase, its clarity, and its affiliation with the dimension that it measures, and to consider categories of response to the questionnaire are listed, and the number of statements in the questionnaire was 15 statements, and they were divided into 3 dimensions.

6.4. Internal consistency validity

The internal consistency was confirmed by applying and distributing the questionnaire on the study sample, and the internal consistency was calculated, "the correlation coefficient between the degree of each statement with the total degree of the dimension to which it belongs and to which this statement is related."

The following is a detailed presentation of the results of the validity of the internal consistency where the values of the coefficients ranged, Correlation from 0.63 to 0.77, and all values of the correlation coefficients are positive, high, and statistically significant at the level of 0.05 and indicate the internal consistency, between the degree of each statement and the total degree of the dimension to which it belongs.

7. Discussion and results

Table 2 shows trends of the answers of faculty members. The results show that there is little use by faculty members of Electronic Information Resources, as 79 faculty members are keen on permanent use at a rate of 57.7%, while there are 58 faculty members who do not use Electronic Information Resources at a rate of 42.5%. This indicates that there is a weakness in the use of Electronic Information Resources and traditional information resources, by analyzing the results of the questionnaire, there is a strong trend among faculty members towards the use of Electronic Information Resources, as there are 113 faculty members, by 82.5%, who use these resources and prefer them to traditional information resources.

Table 2: Trends of the answers of faculty members

#	Statement	SMA	Standard deviation	Practice degree
1	Using Electronic Information Resources within faculty members	4.53	0.64	Good
2	Using Electronic Information Resources and traditional information sources	4.38	1.11	V. Good
3	Internet connection ports to apply Electronic Information Resources	3.89	1.07	Low
4	Methods for identifying Electronic Information Resources	4.49	0.64	Good
5	Types of Electronic Information Resources	4.75	0.90	Good
6	Search into the contents of Electronic Information Resources	4.33	1.01	V. Good
7	Forms of electronic databases	3.91	0.82	Good
8	The university provides access points to Electronic Information Resources	3.67	1.13	Good
9	Appropriateness of Electronic Information Resources in developing research capabilities	4.55	1.08	Good
10	The ability to view research studies in a renewed and immediate manner	3.98	0.97	Good
11	Reflection of the ability to prepare lectures and develop teaching abilities and skills	4.13	1.19	Good
12	Ways to obtain Electronic Information Resources	4.59	0.87	Good
13	Languages for obtaining Electronic Information Resources	4.81	1.05	Good
14	Difficulties in using Electronic Information Resources	3.54	1.11	V. Good
15	The extent of satisfaction with the use of Electronic Information Resources	4.19	1.03	V. Good
	The overall average	4.25	0.97	Good

The results also show that faculty members prefer to use internet connection outlets to use Electronic Information Resources through homes about the university, as there are 93 faculty members, 68% use access to the Internet from home, while access to the Internet is used from during the university, with 44 faculty members, or 32%.

In another direction, the results show that there are different ways to identify the resources of electronic information, as there are 54 faculty members, 39.5% have known about these resources through the university, while there are 47 faculty members and 34.3% have identified them through colleagues, while there are 36 faculty members, at a rate of 26.2%, who knew the Electronic Information Resources through their personal experience.

The results show that there is a diversified use of types of Electronic Information Resources, as the use of databases is particularly high, with 67 faculty members keen to use them at a rate of 48.9%, followed by electronic periodicals for 32 faculty members at a rate of 23.3%, then electronic books for 24 members teaching by 17.5%, and finally those who use websites with 14 faculty members by 10.2%. The results also show that there is a diversity in the contents of Electronic Information Resources, with 53 faculty members accounting for 38.5% keen to use full-text data, while 66 faculty members use 48.3% for abstract data, and finally, 18 faculty members use 13.2% for bibliographical data, The results indicate that there are various forms of search methods within Electronic Information Resources, as there is a wide trend towards using the Saudi Digital Library outlet through 113 faculty members with a rate of 82.5%, while 21 faculty members depend on 15.4% on the use of search engines, and 3 faculty members on a personal subscription of 2.1%.

While the results show that the university is not working to provide access ports for Electronic Information Resources sufficiently, as 69 faculty members answered that there is support from the university at a rate of 50.3%, while 68 faculty members responded with a rate of 49.7% that there is no support from the university towards making available ports of access to Electronic Information Resources.

On the other hand, the results show the suitability of Electronic Information Resources in developing research capabilities to a large extent, as 117 faculty members answered with a rate of 85.4%, while 20 faculty members answered, at a rate of 14.6%, of inadequacy. A large number of faculty members also believe that Electronic Information Resources have the ability to read research studies in a renewed and immediate manner, as 101 answered 73.7%, and 36.3% responded inappropriateness. There is no significant impact of the reflection of the ability to prepare lectures and develop the ability and teaching skills through the use of Electronic Information Resources, as 57 faculty members answered yes with a rate of 41.6%, while 80 faculty members answered in the negative with a rate of 58.4%. The methods of obtaining Electronic Information Resources are also varied, as 123 faculty members, at a rate of 89.8%, obtain Electronic Information Resources for free, while 14 faculty members, at a rate of 11.2%, obtain these resources through paid subscriptions. There is also a diversity of languages for obtaining Electronic Information

Resources. The English language is in the first place, for 107 faculty members, at a rate of 78.1%, while 23 faculty members, by 16.8%, use the Arabic language to obtain information, while 7 faculty members, at a rate of 5.1 % use of Electronic Information Resources for other languages. The results of the study also indicated that there is little difficulty in using Electronic Information Resources faced by faculty members, as 47 faculty members, at a rate of 34.3%, see many difficulties that they face for this use, while 90 faculty members see a ratio of 65.7 % will have no difficulties with this use. Finally, the faculty members' trends towards their satisfaction with the use of Electronic Information Resources showed that there is a high degree of satisfaction through the answers of 106 faculty members with a rate of 77.4%, while 31 faculty members responded with dissatisfaction with a rate of 22.6%.

8. Recommendations

The study concluded the following recommendations:

1. Increasing the university's awareness of the importance of Electronic Information Resources by supporting training programs, knowledge culture, and holding specialized workshops.
2. Linking academic courses and teaching skills to Electronic Information Resources.
3. Work to increase the use of the Internet by faculty members from within the university campus.
4. Holding specialized training courses in methods of searching in databases and systems for retrieving and preserving information.
5. Encouraging faculty members to diversify and update Electronic Information Resources when preparing scientific research.

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Compliance with ethical standards

Conflict of interest

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