Measuring the skill capabilities of researchers to access information according to the standards of the Arab Federation for Libraries and Information (AFLI)

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ABSTRACT: The study aims to measure the level of digital and intellectual skills for researchers to access information in the digital environment, according to the standards of the Arab Library and Information Federation (AFLI).

The comparative analytical study found differences in the levels of digital skills for researchers, as the skills of using the computer were the most in conformity with the standards, followed by search skills on the Internet and access to information. As for intellectual skills, the comparison has proven that the skills of using and processing information more in conformity with the standards, followed by information analysis skills and then information evaluation skills at the last rank..

The results also showed statistical differences between researchers' skill capabilities in the digital environment with (AFLI) standard level. The study concluded with recommendations to enhance researchers' digital skills through literacy programs and development courses, as well as recommendations to focus on developing intellectual and critical thinking skills for information access. It also encouraged academic institutions to adopt the AFLI standards to measure and develop researchers' digital and intellectual capabilities for effective information access.

Introduction

The field of the information industry is witnessing a great development through the production, transfer and dissemination of information in its digital sources and ensuring that it reaches the public through a digital environment, which constitutes a difficult challenge for many researchers to raise their digital levels that helps them understand this environment and deal with various technologies in it. Such as the use of computers, internet and different software applications, these international organizations concerned with the field of information and information institutions have stimulated to determine a set of standards, guidance and indicators that help determine the level of capabilities and skills for researchers and the amount of the gap compared to the standard level.

 This study Description three Main Problems in Information Search and information access

1. How to use the criteria for measuring the skill capabilities for researchers to access information in the digital environment?

2. What are the criteria for measuring the skill capacity of researchers in the digital environment?

3. What is the level of digital and intellectual researchers 'skills to access information according to the standards of the Arab Federation of Libraries and Information (AFLI)?

Theoretical background

Capabilities :

The ability is to be able to do something as it represents everything that the individual can do from the work, whether it is an innate or acquired capacity of any acquisition and development of skills and knowledge to achieve specific goals [1] , and the individual capabilities to access information represent a set of procedures and operations Which enables him to obtain, process, transfer and benefit information [2]

Skill :

Convention, the skill is something that can be learned, acquired or composed by the learner through simulation and training; it is a behavior that is required to be directed towards a specific goal or purpose and the ability to do something perfectly [3, p. 311] and the definitions of skill in general are based on three basic elements: (effort, time, and mastery,), That is, to accomplish the tasks with the lowest effort and time with the greatest mastery, and the skills may be linked to the strength of the direction and its weakness towards the intended skill ,The direction towards training may generate more skill than the skill based on knowledge and academic theorizing without exercise, and the skill reaches its best levels with the mixing of both things knowledge and practice [4]

The skill capabilities to access information in the digital environment

It is intended by the ability to determine the needs of the individual from information, access to sources that Converge these needs, identify this information, determine, evaluate, organize, and use it, especially from electronic sources to solve a problems whether for personal, social, cultural or commercial purposes. Also to Transfer this information to others [5] The ODLIS Dictionary has counted it as the skills of finding the information it needs by knowing the research techniques and skills necessary to Information content evaluation by a critical way, Likewise, understanding the technological infrastructure on which the transmission of information is based, including context and social, political and cultural influence [6] In a digital environment which has many characteristics and features, the skill capabilities are related to access to information in digital skills in addition to the thinking based on criticism, analytical and creativity, where several points can be identified showing the digital and intellectual skills necessary to access information [7, p. 68]

1. The skill of identifying the need for information.
2. The skill of accessing information from the appropriate sources
3. The skill of dealing with information technology and communication networks.
4. The skill of dealing with information through thinking based on analysis, reasoning and criticism.
   5 - The skill of the information industry, its available and transferred.

Measurement

The meaning of the measurement can be determined in relation to the procedures by which the numerical values are appointed or allocated to something according to a set of specific rules.

These rules include the methods and conditions of the application of the measuring tools used [8] In definition of the last measurement, the process of describing information is quantitative ,Using numbers to describe and organize information or data in an objective way and easy to understand Where the transformation of descriptive events or phenomena into numbers according to specific rules and laws .

In addition to measuring psychological features, such as capabilities, skills and intelligence, which are inferred by their impact and impact, not to build or their entity which difficult to measure directly and materially and focus on measuring the differences between individuals in a specific feature rather than measuring a specific amount of that feature. [9] There are two ways or two methods to measure the level

of skill capabilities and explain them quantitatively to reach results describing the state of the variables are

Norm Referenced Test (NRT)

Which provides information about the relative status of the individual for his peers through joint criteria to measure and explain the performance of individuals in comparison with a group of similar individuals from the tests to determine the relative individual status in comparison with his peers, regardless of the level of his actual efficiency

Criterion Reference Test (CRT)

It is used to measure the level of capabilities, efficiency or skill for the individual by comparing his performance at a specific level that is (standard) and estimating the extent of the individual's achievement of a specific level of knowledge or skill, compared to that standard [10, p. 507]

Standards

The **Odlis** Dictionary indicates that the criteria "are a set of rules and requirements set, whether by professional societies, accreditation bodies, or government agencies in order to measure and evaluate libraries services, groups, activities and programs that are available [11] Likewise, the library and information science dictionary is a concept of the standards issued by the American Society (ALA) as standards through which it is possible to evaluate the services and activities of libraries as a quantity or quality through which it is possible to know the minimum of materials, human resources, material capabilities and the quality of their products. From programs and activities. And provide them with acceptable services and these criteria are set from professional bodies, internationally recognized official destinations [12, p. 364] , Organizations and specialized federations in the field of library sciences and information as well as the specialized authorities in setting international standards were concerned with determining the skill capabilities that must be provided by those looking for information from the minimum limits in the initial stages in academic studies to advanced stages of them and have played an important role in developing standards and resources where they collect These organizations between professionals, researchers, teachers and preachers to face challenges and opportunities in the field of advanced information constantly. Perhaps one of the most important organizations that contributed to this field is

American Library Association (ALA)

(ALA) oversees the work of libraries in the United States, promoting libraries, library services, intellectual freedom, and developing library secretarie.It develops many criteria and guidelines related whith library services, including developing skill capabilities and information literacy by advanced programs , (ALA) includes thousands of members of librarians, as well as publishers and supporters of libraries. The association represents all types of libraries and support the public access to information. . [13]

The American Association for School Library Secretariat (AASL)

Established As one of the departments of the American Libraries Association (ALA) , on January 1, 1951, it devoted its activities to supporting school libraries secretaries, enhancing excellence in programs and services, developing school libraries standards, adopting proactive solutions to expected problems by setting strategic plans [14]

International Federation for Library Associations and Institutions (IFLA)

It is a global organization dating back to 1972, which represents the interests of library and library professionals around the world. Provides a platform for international cooperation, knowledge participation and calling for libraries , (IFLA) develops standards, guidelines and policies in various fields of library and information services, including developing skill capabilities to access information, erasing information illiteracy, digital conservation, copyright, and intellectual freedom. And descriptive indexing [15, p. 173]

International Computer Driving License (ICDL)

The global recognition program for digital literacy skills was established in 1997 to provide a unified scale for digital skill capabilities to show the level of efficiency in the use of computer and digital technologies effectively. (ICDL) certificate covers different fields, including basic computer skills, file management, text processing, data tables, presentations, databases, and online communication as well as working to supervise curricula, evaluation and empowerment standards for the use of information and communication technology, and fill the gap Digital in cooperation with experts, partners and governments to develop independent standards .[16]

International Council on Archives (ICA)

An international organization established in 1948 with the aim of enhancing the field of preserving the archive and providing access to it all over the world working in cooperation with UNESCO and the Blue Sheld Foundation, And other international (NGOs) that represent librarians, records of traditional and heritage specialties; To provide specialized training courses, develop standards, and educate the public about the importance of documentary records [17]

Special Libraries Association (SLA)

A professional association serves information professionals in private libraries. Founded in 1909 and has a global presence to support professionals working in specialized libraries through resources, training programs, knowledge exchange and vocational development opportunities [18] The Association for Information Science and Technology (ASIS & T)   A professional association that brings together researchers, practitioners and teachers in the field of information science. It enhances the study and understanding of information, technologies and policies, organizing conferences, publishing magazines, and providing opportunities for communication and job development [19]

World Intellectual Property Organization (WIPO)

The United Nations specialized organization deals with intellectual property issues. It provides assistance in order to ensure the protection of the rights of creators and intellectual property owners all over the world and works to develop international treaties and guidelines related to publishing rights, patents, brands and other forms of intellectual property protection, as well as libraries, information professionals and the fields of copyright and digital rights management [20, p. 381]

International Organization for Standardization (ISO)

NGO representing a group of national institutes and bodies for standards or stipulation concerned with setting international standards and issuing standards and specifications for the quality management system in any organization, whether production or service in order to unify standard standards [21, p. 4] ,This organization has produced the ISO (11620) descriptions of libraries, information and information institutions, as it contains an accurate description of each of the approved indicators. Mawasfa (11620) emphasized the satisfaction of the beneficiary, the speed of access to the required scientific material, the speed of retrieval and electronic research service, and the digital skill capabilities to access information and technical and technical services [22, p. 38]

the Arab Federation of Libraries and Information (AFLI)

The Arab Library and Information Federation was established in Kairouan, Tunisia, in 1986, with the efforts of a number of experts in libraries and information science and by representatives of Arab office associations, professors, experts and libraries managers [23, p. 24]   (AFLI) aims to unify Arab libraries and Arab office in one entity, and is related to developments in the Arab arena, such as establishing departments for teaching library sciences in Arab universities, increasing interest in the profession and expanding information institutions. The Federation aims to enhance cooperation and develop the profession in the Arab region [24]

Standards of the Arab Federation for Libraries and Information (AFLI)

The unified standards of libraries seek to set indicators and trends to help measure performance and increase the level of the individual and the institution and the services provided. It is clear that the criteria for determining the level of skill required for individuals to deal with the digital environment and awareness of their ability in the Arab world,so (AFLI) came to set the standards to determine the level of capabilities and skills that must be available to individuals [25, p. 12]

Digital skill capabilities standards

It includes the skills of using computers and electronic devices, understanding the arterial system for operating and dealing with programs and applications. The search skills also include information that allows individuals to find the required information and also include digital communication skills, which include the ability to express ideas and information effectively using various digital communication means, such as e -mail and social media. Finally, it includes digital learning skills, which help individuals to use digital tools and technologies to enhance the process of continuous learning and development and in order to determine the number of standards and indicators that can be included in the name of digital skill standards collected and joined to some of them and has reached (116) standards and an indicator at a level Digital skill capabilities , As shown in the table No. (1)

Table No. (1) digital standards

	The first criterion is the basic skills in the computer.
1	Distinguish between desktops and mobile devices.
2	The ability to determine the material components of the computer such as the screen - the printer - the keyboard - the mouse - the touch plate)
3	The ability to run and stop the device and the screen
4	Sign out of the computer.
5	Knowledge of the keyboard and keyboard functions,
6	Determine the types of input tools "mouse and touch painting.
7	The ability to understand the various forms of mouse indicators.
8	The ability to determine the uses of right -clicking and clicking with the left.
9	The ability to use double -click and function.
10	Drag and Drop
11	Use the mouse in the selection boxes, drop -down menus and scrolling tape.
12	Adjust the volume and conceal it.
13	The ability to use computer headphones connected to the computer.
14	The ability to determine visual icons on the desktop online browser - control panel
15	recycle bin"
16	The ability to use the deleted basket successfully delete and retrieve vocabulary.
17	Understand the ability to customize the computer multiple uses.
18	Understand the ability to customize the mouse to suit those who use their left hand.
19	Understand the ability to change the clarity and brightness of the screen.
20	Understand that different software is constantly updated, and that different versions of them can be downloaded on the computer.
21	Determine the storage units of the Flash Discuits inner and external hard disk

	The second criterion: Windows operating systems.
22	Determine the operating system used in the computer.
23	The ability to log out of the device, restart and close it.
24	Opening and closing windows and moving between them.
25	Zoom and minimizing windows.
26	Determine the tapes and menus.
27	Determine the taskbar taskbar.
28	Opening and closing "Texpeetics processor - presentations - sports tables"
29	Determine the CD driver, hard disk, and removable tablets
30	And network outlets.
31	Enter the help list.
32	Determine the desktop.
33	Critical knowledge of the Windows system to organize files, and use them to access specific desktop files, documents or computer.
34	Use the search tool to reach folders and files.
35	Delete files and folders.
36	Determine the basic Office programs "Word - PowerPoint - Excel", know their functions and uses, and determine the extension of their files.
37	Open different files using the right programs.
	The third criterion is a text processor program
38	Create a new document.
39	Save and close the document.
40	Open an existing document.
41	Determine the tool tapes.
42	Understanding the difference between the function of "save" and "save in Bassem".
43	Use a memorization order to save a document in a specific position and nambu.
44	Use the function of retreat and retreat.
45	The ability to cut, copy and paste.
46	Use the spelling and grammatical auditor.
47	Coordination of the size of the lines and change their types and color.
48	The alignment of texts right - left - Tusan - control.
49	Adjust the distance between the lines "single and double".
50	Use of the numbered and digital census.
51	Use the print inspection and the document printing.
52	Mushroom adjust.
53	Choose the "vertical and horizontal" page layout.
	Fourth standard: presentation and video offers.
54	Create a new presentation, preserve and close it.

55	Create, edit and coordinate text with the chip.
56	Create and organize a number of slides.
57	Copy, paste and insert shapes with the slide and change their size and position.
58	This is rearranging the slides.
59	Use drawing and color applications to prepare a visual display.
60	Prepare offers with texts, audio and video clips and animated fees.
61	Design a product from multimedia to effectively connect the idea.
	Fifth Standard: Excel.
62	Open the work and select the components of the cell worksheet - the row - the column - the value - the graphic shapes. "
63	The ability to save the worksheet.
64	Using sports transactions for combination, subtraction, beating and division.
65	Printing and printing worksheet.
66	Use help to perform a specific function.
67	Close the worksheet and get out of the program.
68	Create a new worksheet, and use mathematical transactions with it.
69	Cell coordination and awareness of the changes with it.
70	The use of mathematical equations "average, beating, subtraction, collection and division ...
71	Use different forms of numbers and percentage.
72	The ability to coordinate the worksheet change the position of the columns and rows - designation of the worksheet - copying and transporting cells.
73	Insert and coordinate graphic fees and shapes.
74	Use multiple working papers with a single workbook and link them.
75	Import and export of data between the sports tables program and other applications.
	Sixth Standard Internet
76	The ability to identify internet service provider ISP ", and to identify the basic points for internet connection, internet speed and wireless connection.
77	Determination of "Internet Explorer. Firefox. Chrome. Safari" and understanding its function.
78	Select the address bar, and enter the regular source detector for a site.
79	Determine the location of the web.
80	Determine the main page of the website.
81	Determine the browser's toolbar buttons, and use it, which is "Home - update - forward - back"
82	Use the scrolling tape to show different aspects of the web page.
83	Determine the hyperlinks, and absorb the ability to use them to access other pages.
84	Open a new tab and move between tabs.
85	Employment of the displayed text size.
86	Fill an electronic questionnaire.
87	The ability to use the Captcha Security Code for user verification.
88	Use zooming and miniac change image size.

89	Determine Google Yahoo Bing "and search them.
90	Determine and close the population windows.
91	Determine the popup that prevented their display, and enable their offer.
92	Determine the type of field for the site com orgov.edu.
93	Understanding knowledge related to the methods of increasing security use of the Internet by children.
94	Determine the Norton MSper MS Essentials and its various functions.
95	Avoid providing personal or financial information, especially in the web.
96	The ability to judge the accuracy and modernity of digital content available on the Internet
97	Exchanging acquaintances and communication with others using e -mail - Twitter - Elvis
	Seventh standard email
98	Determine the email service provider.
99	Register for a new account in one of the available online sites.
100	Create a user name and password.
101	Entry for email.
102	Create an email.
103	Insert an email to more than one recipient.
104	Send e -mail.
105	Open e -mail.
106	Respond to a message to one person Reply or respond to all the people sent to them. Reply all
107	Forward rearcese
108	Add an attachment to the message.
109	Open the attachments.
110	Transfer or delete messages and restore them from the trash
111	Understanding e -mail basics include inserting a theme for the message - using greeting phrases and the appropriate conclusion of the message. "
112	Consideration of caution when opening messages from unknown destinations and sources, and avoiding opening the attached attached to them.
113	Realizing avoiding giving personal information, especially financial information or email address for unknown persons.
114	Determine unwanted messages, and the ability to delete them.
115	Determine the viruses attached to the messages.
116	Determine the difference between URI regular source detector and email addres

Intellectual skill capabilities standards

It includes critical thinking and information analysis skills, evaluating information, solving problems, continuous learning, creative thinking, and other skills. Collected by (AFLI) The criteria that we need in this study were extracted by (41) standards and an indicator to measure the level of intellectual skill capabilities that help access information in the digital environment , As shown in Table No. (2)

, (AFLI) Intellectual skill capabilities standards Table No. (2)

	Information evaluation standard
1	Evaluating the extent of information and determining the extent of its connection to the subject of the inquiry, by measuring the amount and quality of the information recovered, to determine other tools that can be used to retrieve more relevant information.
2	Defining and applying standards such as intellectual responsibility, dependency, the target audience, accuracy, credibility and modernity of information to assess information through the individual's ability to compare information between more than one source to verify its accuracy and credibility
3	Receive the impact of the environmental and cultural context on the interpretation and understanding of information.
4	Amending and developing the research process and research strategy, and using other research tools to obtain information, if necessary.
5	The ability to determine accuracy, credibility and complete information.
6	The ability to assess the quality of the personal information product.
7	Setting strategies to revise, improve and update self -generated knowledge.
8	Summarize the main ideas included in the information collected through:
9	Read the texts and determine its basic idea.
10	Revolving the concepts included in the text with his own terms and words.
11	Apply the basic criteria for evaluating each of the information, as well as its sources.
12	Comparing information between multiple sources, in order to be able to determine the accuracy, credibility and modernity of the information.
13	Realizing the cultural and environmental context of the information, and understands the impact of the context on the interpretation of information.
14	Dealing with computer and various technologies, such as sports tables programs, multimedia software and audiovisual materials, to integrate information and ideas
15	The ability to apply information in critical thinking and problem solving.
16	The ability to produce and develop an information product, to deliver information and ideas appropriately to the public.
	Information analysis criterion
17	The ability to distinguish between opinion and scientific truth.
18	The ability to determine incomplete or incorrect information.
19	The ability to choose the right information to answer his questions.
20	The ability to prepare a summary of the information accessed.
21	The ability to compare several versions of the same book.
22	The ability to organize information is specific cognitive sectors.
	Legal and moral rights standard
23	Knowledge of the principles of intellectual freedom.
24	Knowledge of intellectual property rights.
25	The use of information technology responsibly.
26	Knowing the principle of equality in obtaining information.
27	Realizing social responsibility towards the library and its sources, and carrying out practices that

	show the understanding of the library procedures.
28	Documenting information with its sources using one of the recognized documentation methods, and fighting plagiarism and scientific theft.
29	Understand that every person has the freedom to read and write and express his opinion according to the principles of society.
	The standard of organizing and processing information
30	The ability to combine new information with previous information integrated.
31	The ability to apply information in critical thinking and problem solving.
32	The ability to produce and develop an information product, to deliver information and ideas to the public appropriately
	Standard comparison between information
33	Merging new information with previously previous knowledge.
34	Choose information that is a guide to the points that are processed.
35	Distinguish the various views included in the source.
36	Determine the reasons for adopting or rejecting a specific viewpoint.
	The criterion for using information
37	Merging new information with previous knowledge, organizing content in a way that supports the purpose of the information product
38	Use digital texts, pictures and data, transfer them from their original source, and merge them in a new context.
39	Amending and revising the development of the information product development during its completion stages.
40	Connecting the information product effectively to others, by choosing the most appropriate means and shapes for the target audience, and the use of information technology applications in product design.
41	Application of new and previous information for planning and designing a new product, or completing some work, from

Sample description

The sample included a group of researchers who obtained the higher academic certificates, the total reach to (196) researchers, distributed according to the educational achievement, where the number of those with a master's degree (140) and the number of those involved in a doctorate (46) and the number of those with a high diploma (10) as in Table (3)

Researchers described the total of certificates (3)

Certificate	number	percentage
Higher Diploma	10	5.10 %
Master's	140	71.43 %
PhD	46	23.47 %
total	196	100%

Study procedures

- Test information search capabilities in the digital environment in order to access information sources

- examine the capabilities of the research strategies and tools

- Testing skill capabilities in evaluating, analyzing and using information

The respondents determine the level of conformity with the standards or non -conformity by the 5 -point Likert scale (very low, low, medium, high, very high) or the corresponding weights (1 - 2 - 3 - 4 - 5) respectively , and measuring the level of the relative importance index of a scale for the 5 -point Likert scale by the following equation [26] , [27]

$$RII = \frac{\Sigma \ Wn}{A \ N} \times 100$$

$$RII = \frac{\Sigma \ n \times 1 + n \times 2 + n \times 3 + n \times 4 + n \times 5}{5 \times N} \times 100$$

RII: Relative Importance Index

W: It is the weight given to all elements by the respondents according to the - 5 - point Likert scale from (1 - 5), where (1) is the lowest (very low) and (5) is the highest (very high.

N: The number of repetitions for each weight of the 5 -point Likert scale

A: It is the highest weight in the Laker scale, which is weight (5)

N: It is the total number of respondents (sample).

To determine the level of skill capabilities, a special schedule has been created to measure the level of alternatives to the values of the relative importance index , ranges in a measurement period (1 ≤ RII ≥ 100) And by dividing the periods of the number of weights (5) in the 5 -point Likert scale, the result of the division process (20) is the amount of the period between the levels, as in Table (5)

Table (5) level of measuring the Relative Importance Index

Level	Periods
very low	1 - 19.9
low	20 - 39.9
average	40 - 59.9
high	60 - 79.9
very high	80 - 100

procedures

First: Defining the criteria for measuring the level of skill capabilities

Researchers need a set of skills to effectively access information in the digital environment. Where the level of skill capabilities is one of the factors affecting access to information.

The study used the standards of the Arab Federation of Libraries and Information (AFLI) in determining the level of the skill capabilities of researchers from higher degrees, which indicated five main standards

– The first criterion: identifying information

- The second criterion: access to information
- The third Specific: Information evaluation
- Fourth standard: Using Information
- The fifth standard: Legal and Ethical aspects of Information
  The study required a filtering process for (AFLI) standards and extracting a set of standards that suit the level of researchers from the higher degrees and distribute them to two sections

The first section: Digital skill capabilities standards

Table No. (6) the standards for measuring digital skill capabilities

	Standard paragraphs		Standard paragraphs
	The first standard: Computer Technology Skills	21	Using the research tights (time, place, language ...)
1	Awareness of the basic computer skills	22	Successive parts strategy
2	Awareness of material components	23	Dark shot strategy
3	Awareness using operating systems		(Using databases)
4	Awareness using the menus bar, toolbar and use flaws	24	Scopus
5	Awareness of file pressure tools	25	Microsoft Academic Search
6	Awareness use image processing programs	26	Google Scholar
7	The skill of using sound processing programs	27	The Web Science
8	Office programs use skills	28	Research Gate
9	Using, copying, photographing, storage, and retrieval tools		The third criterion: access to digital information sources
10	Knowing the correct methods to document the types of information sources	29	The ability to determine the need for information and its locations
	Second criterion: Internet use skills (search tools)	30	Formulating appropriate keywords and using terms lists and subject heads
11	Skills to use browsers and browsing	31	The skill of selecting research questions that help to access the information we need
12	Skills to use Search engines	32	The ability to communicate with peers and consult experts to access information
13	Skills to use Objective evidence	33	The ability to access content in other languages and use translation applications
14	Skills to use Meta Search Engines	34	Using the tools provided by websites such as (site map, navigation and links)
15	Skills to use artificial intelligence engines	35	Awareness with production , industry and Publishing digital content
	(Research Strategies)	36	Access to digital Repositories

16	Search Using logical transactions	37	communication skills with information sources, paying fees and subscription
17	Advanced research strategy	38	Access to libraries and indexes available on line
18	Pinter and allowance strategy	39	Publishing in digital periodicals
19	Search use a sentence	40	The ability to gain skill or learn an additional language to access information
20	Snow Ball Strategy		

- The second section : Intellectual skill capabilities standards

Table No. (7) the standards for measuring Intellectual skill capabilities

	Standard paragraphs		Standard paragraphs
	First criterion: Information evaluation skills		The second criterion: the skills of access to information, its release and its available
1	In -depth reading and reformulation of concepts in content to extract information	17	Merging information to extract new information
2	Comparing the information with other sources	18	Employ various forms of information sources to access information
3	Collecting information about the phenomenon and realizing the historical and cultural context for it	19	The ability to provide information and deliver it to others
4	Using tools and employing technologies and software to extract and processing relevant information		The third criterion: awareness of legal and moral salaries to access information
5	Linking new information with previous information and finding an integrative relationship between them	20	Intellectual property rights for information producers
6	Follow different opinions to distinguish different views	21	The safety and privacy system in the digital environment
7	The comparison between information and the ability to determine the reasons for adopting or dismissing an idea	22	Laws and licenses to use information
8	Refer to experts to explain information	23	Awareness of free access tools to access information
9	Refer to dialogue groups to interpret information		Information, control policy and restrictions of expression of opinion
10	The ability to analyze the content and logical inference to verify the suitability of information	24	Fourth Standard: Information Analysis
11	Check information by referring to multiple sources to ensure accuracy in transportation	25	The ability to distinguish between the scientific truth and the opinions circulated by the implicit knowledge
12	The ability to determine the goals of the content and the target audience	26	The ability to distinguish between information if it is incomplete

13	Check the content product and reputation	27	The ability to compare information to determine the best source of information
14	Determine the modernity of information and its representation of the latest developments on a phenomenon	28	Merging information from multiple sources
15	The ability to distinguish the objectivity of the content and the extent of its influence with intellectual baking	29	Inference, criticism and analysis of information by yourself -
16	The ability to determine the value of the information " originality, not consumed and contains a cognitive addition	30	Content analysis and extract the ideas it contains

Measuring digital skills

The measurement process is carried out through the evaluation and determination of the level of the sample capacity and their skills in using and understanding the digital environment and its characteristics and tools to make access to information easier by measuring the level of performance and capabilities by questionnaires and analysis answers and estimating the extent of their digital skills [28] By the answers of the sample on the paragraphs of the questionnaire with regard to the first section (digital skills), which will be matched with the standards of the Arab Federation of Libraries and Information (know) through the following basic axes:

- The first axis: computer skills

- The second axis: search skills on the Internet

- The third axis: access to information

Steps to measure skill capabilities

Defined (40) paragraphs of the questionnaire related to digital skills to extract the answers are distributed to the three axes according to the (AFLI) standards, (10) paragraphs of the standard of computer skills and (18) paragraphs of the standard of skills for the axis of the Internet use and (12) a paragraph to determine the need for information and as Come

- The first axis: computer skills

The basic skills in the use of computer show the level of capabilities and digital skills for researchers and the extent of their conformity with the standard of determining the level of researchers' skills in the use of the computer by answers as shown in the table. (8)

Table. (8) level of computer use skills

computer skills standards												
		Very low	low	aver age	high	Very high	Total	mean	Std.	RII	level	Rank
P1	Rep	0	21	72	85	18	196	3.51	0.80	70.2	high	2
	%	0	10.7	43.4	31.6	9.2	100%					
P2	Rep	23	59	52	39	23	196	2.89	1.19	57.8	aver age	9
	%	11.7	30.1	26.5	19.9	11.7	100%					
P3	Rep	7	59	76	47	7	196	2.93	0.90	58.6	aver	8

		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
	%	3.6	30.1	38.8	24.0	3.6	100%				age	
P4	Rep	13	21	58	79	25	196	3.41	1.05	68.2	high	3
	%	6.6	10.7	29.6	40.3	12.8	100%					
P5	Rep	19	49	54	56	18	196	3.02	1.13	60.4	high	7
	%	9.7	25.0	27.6	28.6	9.2	100%					
P6	Rep	61	75	27	22	11	196	2.21	1.16	55.2	low	10
	%	31.1	38.3	13.8	11.2	5.6	100%					
P7	Rep	9	29	112	39	7	196	3.03	0.82	60.6	high	6
	%	4.6	14.8	57.1	19.9	3.6	100%					
P8	Rep	22	37	64	46	27	196	3.09	1.19	61.8	high	6
	%	11.2	18.9	32.7	23.5	13.8	100%					
P9	Rep	10	25	48	75	38	196	3.54	1.09	70.8	high	1
	%	5.1	12.8	24.5	38.3	19.4	100%					
P10	Rep	6	43	82	50	15	196	3.12	0.94	62.4	high	4
	%	3.1	21.9	41.8	25.5	7.7	100%					
							Total	3.17	0.45	63.4	high	

The results extracted from the above table that computer skills paragraphs standard (9, 1, 4, 10, 8, 7, 5) are the highest in the arrangement and the value of the relative importance index (70.8, 70.2, 68.2, 62.4, 61.8, 60.6, 60.4), respectively, where the level of matching (high) achieved the standards, and the paragraphs (3, 2, 6) came in a lower order and the value of the relative importance index (58.6, 57.8, 55.2), respectively, which achieved the level of matching (average), while the paragraphs were Level -free (low, very low and height), average total paragraphs (3.17) and standard deviation (0.45) and average relative importance reached (63.4), which occurred in the measurement schedule with a match between the two values (40 - 59.9), which is the level (average)

The second axis: search skills on the Internet

The level of digital skill capabilities for researchers in accordance with the standard for determining the level of researchers' skills in using the Internet and accessing information in the digital environment in Table (9):

Table (9) search skills on the Internet

search skills on the Internet standards												
paragraph		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
P11	Rep	0	5	79	54	58	196	3.84	0.88	76.8	high	2
	%	0	2.6	40.3	27.6	29.6	100%					
P12	Rep	0	3	75	58	60	196	3.89	0.86	77.8	high	1

	%	0	1.5	38.3	29.6	30.6	100%				
P13	Rep	50	50	61	27	8	196	2.45	1.13	49	low	14
	%	25.5	25.5	31.1%	13.8	4.1	100%				
P14	Rep	64	50	42	30	10	196	2.34	1.22	46.8	low	17
	%	32.7	25.5	21.4	15.3	5.1	100%				
P15	Rep	63	55	51	19	8	196	2.25	1.13	45	low	18
	%	32.1	28.1	26.0	9.7	4.1	100%				
P16	Rep	50	63	40	28	15	196	2.46	1.22	49.2	low	13
	%	25.5	32.1	20.4	14.3	7.7	100%				
P17	Rep	25	52	62	45	12	196	2.83	1.10	56.6	average	8
	%	12.8	26.5	31.6	23.0	6.1	100%				
P18	Rep	42	61	59	23	11	196	2.48	1.12	49.6	low	11
	%	21.4	31.1	30.1	11.7	5.6	100%				
P19	Rep	20	38	58	58	22	196	3.12	1.15	62.4	average	7
	%	10.2	19.4	29.6	29.6	11.2	100%				
P20	Rep	10	20	58	67	41	196	3.55	1.08	71	high	3
	%	5.1	10.2	29.6	34.2	20.9	100%				
P21	Rep	10	21	60	77	28	196	3.46	1.02	69.2	high	6
	%	5.1	10.7	32.8	39.3	14.3	100%				
P22	Rep	8	22	64	71	31	196	3.48	1.02	69.6	high	4
	%	4.1	11.2	32.7	36.2	15.8	100%				
P23	Rep	6	27	65	61	37	196	3.48	1.04	69.6	high	5
	%	3.1	13.8	33.2	31.1	18.9	100%				

P24	Rep	58	56	42	30	10	196	2.37	1.20	47.4	low	16
	%	29.6	28.6	21.4	15.3	5.1	100%					
P25	Rep	48	57	52	26	13	196	2.48	1.18	49.6	low	12
	%	24.5	29.1	26.5	13.3	6.6	100%					
P26	Rep	37	27	102	21	9	196	2.68	1.04	53.6	average	9
	%	18.9	13.8	52.0	10.7	4.6	100%					
P27	Rep	54	65	34	29	14	196	2.40	1.23	48	low	15
	%	27.6	33.2	17.3	14.8	7.1	100%					
P28	Rep	39	43	70	40	4	196	2.62	1.08	52.4	average	10
	%	19.9	21.9	35.7	20.4	2.6	100%					
						Total		2.84	0.30	56.8	average	

The results extracted from the above table showed that the paragraphs of the standard of Internet search skills (, 12, 11, 20, 22, 23, 21, 19) are the highest in arranging and the value of the relative importance index (77.8 ، 76.8 ، 71 ، 69.6 ، 69.6 ، 69.2 ، 62.4), respectively, where the level of matching (high) achieved the standards, and the paragraphs (17، 26، 28، 18، 25، 16، 13، 27، 24، 14، 15) came in a lower order and the value of the relative importance index (56.6، 53.6، 52.4 ، 49.6 ، 49.6 ، 49.2 ، 49 ، 48 ، 47.4 ،46.8 ، 45) , respectively, which achieved the level of matching (average), while the paragraphs were Level -free (low, very low and height), average total paragraphs (2.84) and standard deviation (0.30) and average relative importance reached (56.8), which occurred in the measurement schedule with a match between the two values (40 - 59.9), which is the level (average)

The third axis: access to information

The Table (10) showing Details about achieving the level of conformity with the standards as it comes:

Table (10) access to information skills standards

access to information skills standards												
paragraph		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
P29	Rep	32	45	73	39	7	196	2.71	1.07	54.2	average	5
	%	16.3	23.0	37.2	19.9	3.6	100%					
P30	Rep	54	49	45	35	13	196	2.51	1.25	50.2	low	9

	%	27.6	25.0	23.0	17.9	6.6	100%					
P31	Rep	13	21	89	50	23	196	3.25	1.01	65	average	3
	%	6.6	10.7	45.4	25.5	11.7	100%					
P32	Rep	66	48	47	20	15	196	2.33	1.25	46.6	low	12
	%	33.7	24.5	24.0	10.2	7.7	100%					
P33	Rep	64	43	33	41	15	196	2.48	1.33	49.6	low	10
	%	32.7	21.9	16.8	20.9	7.7	100%					
P34	Rep	12	27	75	55	27	196	3.29	1.06	65.8	average	2
	%	6.1	13.8	38.3	28.1	13.8	100%					
P35	Rep	41	58	65	25	7	192	2.48	1.06	49.6	low	11
	%	20.9	29.6	33.2	12.8	3.6	100%					
P36	Rep	51	43	36	50	16	196	2.67	1.32	53.4	average	6
	%	26.0	21.9	18.4	25.5	8.2	100%					
P37	Rep	55	42	49	35	15	196	2.55	1.27	51	low	7
	%	28.1	21.4	25.0	17.9	7.7	100%					
P38	Rep	8	25	108	40	15	196	3.14	0.88	62.8	average	4
	%	4.1	12.8	55.1	20.4	7.7	100%					
P39	Rep	15	24	54	77	26	196	3.38	1.10	67.6	average	1
	%	7.7	12.2	27.6	39.3	13.3	100%					
P40	Rep	29	81	43	34	9	192	2.55	1.08	51	low	8
	%	14.8	41.3	21.9	17.3	4.6	100%					
Total								2.78	0.35	55.6	average	

The results extracted from the above table showed that the paragraphs of the standard of access to information (39, 34, 31, 38) are the highest in arranging and the value of the relative importance index (67.6, 62.8, 65, 62.8) for each, respectively, where the level of matching (high) achieved the standards, and the paragraphs (, 29, 36, 37, 40, 30, 33, 35, 32) came in a lower order and the value of the relative importance index (54.2, 53.4, 51, 51, 50.2, 49.6, 49.6, 46.6),, respectively, which achieved the level of matching (average), while the paragraphs were devoid of levels (low, very low, high and very high), The arithmetic average of the total paragraphs 2.78) and a standard deviation reached (0.35) and the value of the average of total relative importance reached (55.6), which was in the measurement table with a match between the two values (40 - 59.9) which is the (average) level

As a result, the digital skills of the three axes (computer skills, search skills in the Internet and access to information) show that computer use skills came first, as the relative importance index for the total number of averages recorded a value of (63.4) and the search skills on the Internet second with a value of (56.8) While the axis of access to the information recorded a value of (55.6), the average of the relative importance index of all the (40) paragraphs of the axes combined, its value (58.4), which occurred in the measurement schedule with a matching level between the two values (40 - 59.9), which is the level (average) and Figure No. (1)shows the levels of the relative importance index of the three axes.
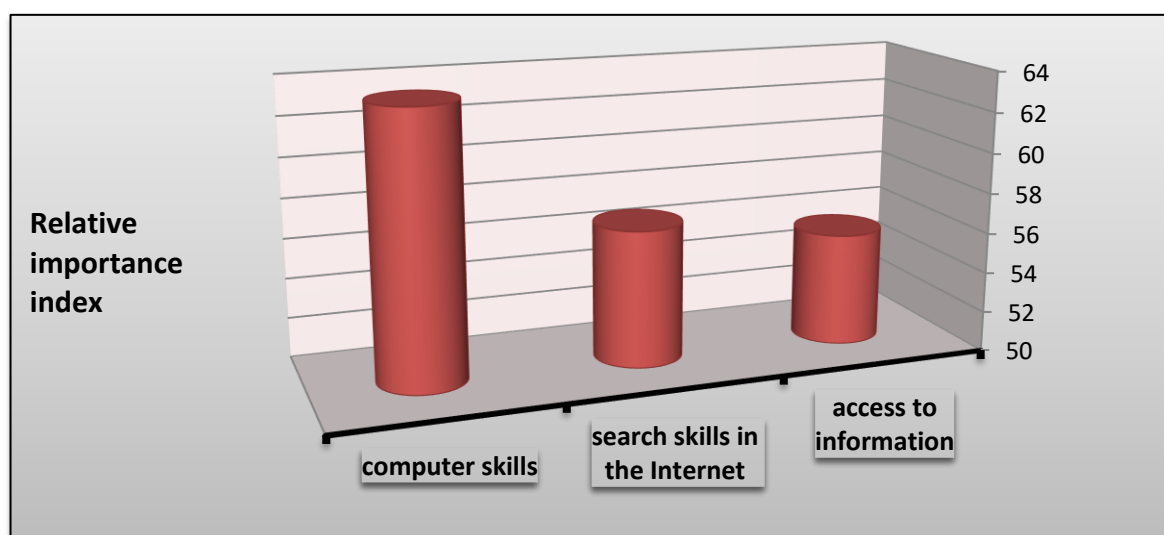

Figure No. (1) Relative importance index to digital skill capabilities

Measuring intellectual skills

This part of the research relates to standing at the level of intellectual skills for researchers in order to access information by identifying a set of skills from the standards of the Arab Federation for Libraries and Information (know) a casualty on the following main axes:

The first axis: information evaluation

The second axis: using and processing information

Third axis: Information Analysis

Distributed by (16) paragraphs of the information evaluation skills standard, (8) paragraphs of the information access to and processing standard and (6) paragraphs of the criterion of information analysis skills

The first axis: information evaluation

Table No. (11) showed

Table. (11):The level of information evaluation skills

information evaluation standards												
		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
P1	Rep	36	77	50	21	12	192	2.46	1.09	49.2	average	15
	%	18.4	39.3	25.5	10.7	6.1	100%					
P2	Rep	55	54	41	31	15	196	2.47	1.26	49.4	average	14
	%	28.1	27.6	20.9	15.8	7.7	100%					
P3	Rep	44	54	46	26	26	196	2.67	1.31	53.4	average	9
	%	22.4	27.6	23.5	13.3	13.3	100%					
P4	Rep	40	80	41	23	12	192	2.42	1.12	48.4	average	16
	%	20.4	40.8	20.9	11.7	6.1	100%					
P5	Rep	38	63	48	25	22	196	2.64	1.23	52.8	average	10
	%	19.4	32.1	24.5	12.8	11.2	100%					
P6	Rep	33	57	37	46	23	196	2.84	1.28	56.8	average	6
	%	16.8	29.1	18.9	23.5	11.7	100%					
P7	Rep	48	65	36	24	23	196	2.53	1.30	50.6	average	12
	%	24.5	33.2	18.4	12.2	11.7	100%					
P8	Rep	37	49	48	44	18	196	2.78	1.24	55.6	average	7
	%	18.9	25.0	24.5	22.4	9.2	100%					
P9	Rep	20	13	59	80	24	196	3.38	1.11	67.6	high	3
	%	10.2	6.6	30.1	40.8	12.2	100%					
P10	Rep	50	55	40	30	21	196	2.57	1.30	51.4	average	11
	%	25.5	28.1	20.4	15.3	10.7	100%					
P11	Rep	15	22	56	69	34	196	3.43	1.13	68.6	high	2
	%	7.7	11.2	28.6	35.2	17.3	100%					
P12	Rep	12	64	64	44	12	196	2.89	1.01	57.8	average	5
	%	6.1	32.7	32.7	22.4	6.1	100%					
P13	Rep	29	60	52	44	11	196	2.73	1.13	54.6	average	8
	%	14.8	30.6	26.5	22.4	5.6	100%					
P14	Rep	4	21	54	64	53	196	3.71	1.04	74.2	high	1
	%	2.0	10.7	27.6	32.7	27.0	100%					
P15	Rep	39	75	36	34	12	192	2.51	1.17	50.2	average	13
	%	19.9	38.3	18.4	17.3	6.1	100%					

P16	Rep	24	36	68	44	24	196	3.04	1.18	60.8	high	4
	%	12.2	18.4	34.7	22.4	12.2	100%					
Total								2.82	0.34	56.4	average	

The results extracted from the above table showed that the paragraphs of the standard information evaluation (14, 11, 9, 16) are the highest in arranging and the value of the relative importance index (74.2, 68.6, 67.6, 60.8) for each, respectively, where the level of matching (high) achieved the standards, and the paragraphs (12, 6, 8, 13, 3, 5, 10, 7, 15, 2, 1, 4) in a lower order and the value of the relative importance index (57.8, 56.8,55.6, 54.6, 53.4, 52.8, 51.4, 50.2,50.2, 49.4, 49.2, 48.4) respectively, which achieved the level of matching (average), while the paragraphs were devoid of levels (low, very low and very high), The arithmetic average of the total paragraphs (2.82) and a standard deviation reached (0.34) and the value of the average of total relative importance reached (56.4), which was in the measurement table with a match between the two values (40 - 59.9) which is the (average) level

The second axis: The intellectual skill capabilities of the using and processing information

as shown in Table (12) following:

Table. (12) level of using and processing information

using and processing information standards												
		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
P17	Rep	26	46	67	49	8	196	2.83	1.07	56.6	average	7
	%	13.3	23.5	34.2	25.0	4.1	100%					
P18	Rep	52	54	55	24	11	196	2.42	1.16	48.4	average	8
	%	26.5	27.6	28.1	12.2	5.6	100%					
P19	Rep	15	22	57	69	33	196	3.42	1.12	68.4	high	1
	%	7.7	11.2	29.1	35.2	16.8	100%					
P20	Rep	24	44	52	53	23	196	3.03	1.20	60.6	high	5
	%	12.2	22.4	26.5	27.0	11.7	100%					
P21	Rep	17	16	84	48	31	196	3.30	1.10	66	high	2
	%	8.7	8.2	42.9	24.5	15.8	100%					
P22	Rep	13	37	67	56	23	196	3.19	1.08	63.8	high	3
	%	6.6	18.9	34.2	28.6	11.7	100%					
P23	Rep	17	43	75	44	17	196	3.00	1.06	60	high	6
	%	8.7	21.9	38.3	22.4	8.7	100%					
P24	Rep	8	46	69	56	17	196	3.14	1.007	62.8	high	4
	%	4.1	23.5	35.2	28.6	8.7	100%					
Total								3.04	0.45	60.8	high	

The results extracted from the above table showed that the paragraphs of the standard of the using and processing information (19, 21, 22, 24, 20, 23) are the highest in arranging and the value of the relative importance index (68.4, 66, 63.8, 62.8, 60) for each, respectively, where the level of matching (high) achieved the standards, and the paragraphs (17, 18) in a lower order and the value of the relative importance index (56.6, 48.4) respectively, which achieved the level of matching (average), while the paragraphs were devoid of levels (low, very low and very high), The arithmetic average of the total paragraphs (3.04) and a standard deviation reached (0.45) and the value of the average of total relative importance reached (60.8), which was in the measurement table with a match between the two values (60 - 79.9) which is the (high) level

Third axis: Information Analysis

as shown in Table (13) following:

Table (13) Information Analysis standards

Information Analysis standards												
		Very low	low	average	high	Very high	Total	mean	Std.	RII	level	Rank
P25	Rep	4	21	85	60	26	196	3.42	0.92	68.4	high	1
	%	2.0	10.7	43.4	30.6	13.3	100%					
P26	Rep	18	36	59	51	32	196	3.21	1.19	64.2	high	2
	%	9.2	18.4	30.1	26.0	16.3	100%					
P27	Rep	49	75	40	18	14	196	2.35	1.16	47	average	6
	%	25.0	38.3	20.4	9.2	7.1	100%					
P28	Rep	25	57	61	42	11	196	2.78	1.09	55.6	average	4
	%	12.8	29.1	31.1	21.4	5.6	100%					
P29	Rep	21	58	59	43	15	196	2.86	1.11	57.3	average	3
	%	10.7	29.6	30.1	21.9	7.7	100%					
P30	Rep	47	75	38	27	9	196	2.36	1.12	47.2	average	5
	%	24.0	38.3	19.4	13.8	4.6	100%					
Total								2.83	0.47	56.6	average	

The results extracted from the above table showed that the paragraphs of the standard of the skill capabilities in the analysis of information (25, 26) are the highest in arranging and the value of the relative importance index (68.4, 64.2) for each, respectively, where the level of matching (high) achieved the standards, and the paragraphs (29, 28, 30, 27) in a lower order and the value of the relative importance index (57.3, 55.6, 47.2, 47) respectively, which achieved the level of matching (average), while the paragraphs were devoid of levels (low, very low and very high), The arithmetic average of the total paragraphs (2.83) and a standard deviation reached (0.47) and the value of the average of total relative importance index reached (56.6), which was in the measurement table with a match between the two values (40 - 59.9) which is the (average) level

As a result, the total intellectual skills of the three axes (information evaluation skills, information use and processing skills and the information analysis skills) show that use and processing of information came first, as the relative importance index for the total number of averages recorded a value of (60.8) and the

information analysis skills second with a value of (56.6) While the axis of the information evaluation recorded a value of (56.4) , the average of the relative importance index of all the (30) paragraphs of the axes combined, its value (57.59), which occurred in the measurement schedule with a matching level between the two values (40 - 59.9), which is the level (average) and Figure. (2)shows the levels of the relative importance index of the three axes.

Figure. (2) relative importance index of the three axes
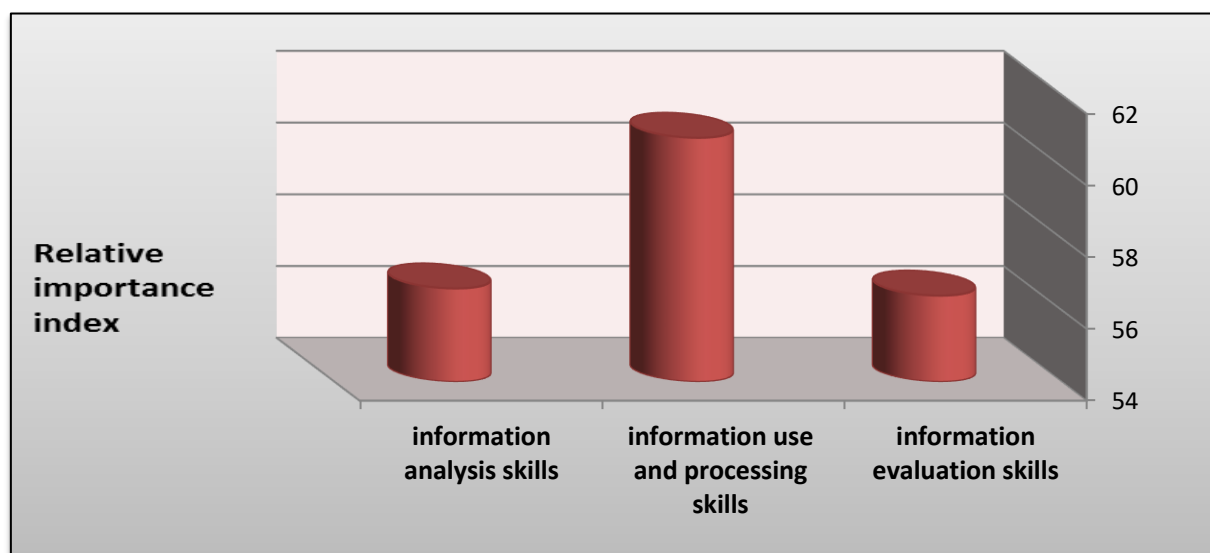
Results:

The results showed a disparity in the level of digital skills for researchers, as computer use skills ranked first , Where the relative importance index for the total number of averages recorded a value of (63.4),The search skills on the Internet came second with a rate of (56.8), While the axis of access to information in the digital environment was recorded (55.6).

The average of the relative importance index of all the paragraphs of (40) percent (58.4), which is the level (average).

Intellectual skills The results showed that the skills of using and processing information came first, as the relative importance index for the total number of averages recorded a percentage of (60.8), and information analysis skills came secondly, a percentage of (56.6), while the information evaluation axis recorded a percentage of (56.4) At the third.

The average of the relative importance index of all (30) (57.59) paragraphs is (57.59), which is the level (average)

There are statistical differences between the adequacy of the skill capabilities of researchers in the digital environment and the standard level of those capabilities in accordance with the standards of the Arab Federation of Libraries and Information (AFLI) , (57.9) for digital and intellectual skill capabilities together, which is an average level

Recommendations:

Establishing continuous education programs for technological literacy, and the use of digital environmental information sources.

Encouraging development courses for researchers to introduce them to the importance of various research and research strategies to obtain research results that meet their information needs.

Awareness of researchers about the necessary information that helps to access reliable information.

Increasing the level of information awareness of the researchers, ensuring their continued communication with the latest developments in the digital environment and planning to prepare a training program to spread information awareness increases the efficiency and quality of access to information

The need to train researchers to use intellectual skills in addition to digital skills and adopt a critical thinking method based on evaluation and analysis to access information

Encouraging academic and research institutions to adopt the standards of the Arab Federation of Libraries and Information (AFLI) in measuring the level of researchers and developing their digital and intellectual skill capabilities to meet their knowledge needs and achieve effective access to information

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