

# Evaluation of students' awareness and usage of digital learning sources in academic libraries: College of Business- King Khalid University, Saudi Arabia

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## ABSTRACT

Information and communication technology (ICT) has become one of the most important components for improving the performance of educational institutions and provide various learning sources in academia. Unlike conventional hard copy sources of information, electronic (e-) sources use modern technologies to store, process and disseminate information effectively. However, there is still a lack of awareness about the importance of digitisation and informatics in the academic community, especially in the Arab world. Therefore, this study explores the importance of ICT and its role in providing e-sources to improve the educational system at King Khalid University (KKU). Moreover, information awareness is evaluated among the students of the College of Business at KKU. The issues of e-sources and their impact on the use of ICT to access data are further investigated. Finally, the factors that limit access to e-sources at KKU are highlighted.

**Keywords:** Academic library; digital sources; e-resources; e-learning; King Khalid University, Saudi Arabia

## 1. INTRODUCTION

The emergence of electronic (e-) libraries in the early 1990s was triggered by the rapid growth in technology and communications, the large-scale spread of education and the necessity for building advanced information networks capable of dealing and interacting with various information sources in line with researchers' needs. These libraries have contributed to widespread education and provided immediate access to information sources.

According to Arishee (2005), 'digital library' is the most widely used term in the literature to describe the means of communication and information transfer by online library services. This term was adopted after the everyday use of the terms 'digital radio' and 'digital television'. Digital libraries introduce several benefits, such as accessing information remotely and at any time, exploiting the



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computer's enormous potential to search for and review information and creating and updating data easily (Arishee, 2005).

Several factors necessitate the establishment of e-libraries, especially in the academic community. One of these factors is the massive amount of knowledge produced annually in research papers, books and theses (digitally or otherwise). Moreover, meeting researchers' requirements and facilitating access to information sources is another factor. In addition, the emergence of e-learning has led to a significant increase in virtual universities worldwide. This has further encouraged the digitisation of learning sources and tools, leading to low-cost and diverse education systems.

University libraries are among the essential sources of information. Therefore, library departments must plan to provide the required references and scientific books for academic courses to support self-learning requirements and help universities achieve their teaching and research visions. Moreover, libraries should have a proper study atmosphere and be equipped with several study areas for students. Continuous evaluation and development of the learning sources services should also be considered based on the feedback of students and academic staff.

Saudi universities started to digitalise their educational systems, libraries and information sources by providing e-references and other scientific and research materials in recent years. This gave students and faculty access to e-libraries and their facilities to meet self-learning needs and adapt to emergent changes in the era of the information revolution. The Saudi Digital Library (SDL) has become one of the most prominent facilities in Saudi universities. This library primarily aims to build a database that keeps pace with technological developments in the e-publishing industry to facilitate information accessibility and contribute to the development of scientific research. The SDL contains several e-books, volumes, issues, conferences and theses issued by reputable universities, journals and international publishers.

Libraries at King Khalid University (KKU) are another vital source of information for students. They provide users with dozens of e-databases in various scientific fields to meet the requirements of university programmes. Moreover, they are linked with the learning management system, 'Blackboard', to allow students and faculty members to access information rapidly. It also offers many extension programmes to train new students, faculty members and visitors on using the e-library, research facilities and services. There are qualified specialists to answer any visitors' queries. Moreover, databases are continuously updated with recent scientific publications. The Deanship of Library Affairs undertook several projects to develop KKU's libraries, such as 'Horizon', 'Mark 21' and a transition to the 'Symphony' system, as well as self-lending and photocopying. Moreover, the university libraries hold training courses in cooperation with the SDL to teach employees, especially faculty members, about using available international databases and participating in internal and external book fairs. All these steps will reflect the development of e-services at university libraries and facilitate access to substantial information sources.

## 2. LITERATURE REVIEW

In the last decade, e-sources have been used extensively by students and researchers in academic libraries worldwide. In this study, the literature is limited to the last 10 years, when a remarkable development took place in the implementation of e-computing for libraries, especially in developed countries.

Studies by Dusane et al. (2021) and Mani et al. (2019) investigated the use of e-sources by postgraduate students of state agricultural universities and Manonmaniam Sundaranar University, respectively. It was found that most students use e-sources in their research. Both studies suggested providing the university campuses with internet and wireless networks and affording training programmes to expand the use of e-sources. Also, Rahaman et al. (2021) evaluated the awareness of faculty members at King Fahd University of Petroleum and Minerals (KFUPM) about the available e-sources. KFUPM faculty faced a few obstacles, such as difficulty in finding important information, a lack of user awareness and a slow download process. Islam and Karim (2020) studied students' use of e-sources in developing countries. The lack of training programmes and slow internet speeds were the eminent obstacles that obstruct the students from accessing e-sources correctly. Another similar study conducted by Mallikarjuna and Padmamma (2020) presented an extensive review of the awareness of e-sources and the use of the internet and e-services by faculty members in different university libraries. Several aspects were considered during the review, such as the frequency of the use of the internet and e-sources, the search strategies used and the level of awareness of e-sources.

The awareness and usage of e-sources by professors at different college libraries in Marathwada were examined by Sawai and Chavan (2020), who noted that most users had a good knowledge of e-sources. Moreover, e-journals were used by most of the respondents to obtain relevant information for their research and teaching purposes. Roman et al. (2020) studied the factors that influence the use of e-sources among college students. The results showed the students lacked awareness and technical knowledge, which hindered their use of e-sources. This highlights the need for solutions to improve awareness and provide guidance and training on available e-sources. Similarly, a study by Mushtaq and Riyaz (2020) analysed the perception of researchers in the College of Social Sciences at the University of Kashmir about the issues and challenges of accessing e-sources. It was found that there is an issue with awareness of library e-sources and a need to develop the library system at the university.

Another study conducted by Moruwawon (2020) focused on implementing e-sources to enhance library services. It also examined the benefits and challenges of integrating the e-sources with library services. The study suggested the need to address the unavailability and inaccessibility of e-sources and insufficient information and communication technology (ICT) infrastructure. Moreover, Anyim (2020) examined students' perceptions of e-sources in promoting distance learning. The results showed that students are familiar and satisfied with the available e-sources. However, they were unaware of their institution's multimedia e-sources (video and audio conferencing). The study highlighted the scope to improve e-sources by creating user-friendly interfaces and providing users with internet access. A study by Al-Alawi and Noor (2020) investigated the factors that affect academics' acceptance of e-sources at the Oman Virtual Science Library. The results indicated that gender, age and academic qualification affect the tendency of academics towards using e-learning sources. In addition, a study by Joshua and King (2020) found that the lack of adequate internet access, training and information awareness campaigns is the main obstacle to using e-sources at Ibrahim Babangida Library of the Modibbo Adama University of Technology, Yola. The study highlighted the need to teach students and academics information literacy, subscribe to various databases and provide free internet access to overcome these obstacles.

Studies by Akuffo and Budu (2019) and Kavithanjali (2019) investigated the types of e-sources and related awareness and advantages of and problems with using them. Akuffo and Budu (2019) results showed that postgraduate students at university in Ghana were aware of e-sources and used them for academic purposes; however, they lacked sufficient skills to access e-sources. Moreover, they struggled to access e-sources outside of campus and had slow internet speed. Therefore, the study recommended providing mandatory information literacy training for students. In the study by Nwabugwu et al. (2019), the awareness and use of e-sources among public extension staff were discussed. The study found that e-sources were not often used for extension services. The main challenges that hindered the effective adoption of these e-sources were the difficulty of using them, their unavailability and poor internet connectivity. Also, Sharma et al. (2018) found a lack of e-sources at the libraries of engineering colleges of Uttar Pradesh state, India. Alzahrani (2017) aimed to study the attitude of Saudi students about e-sources on the BBC Learning English website. A positive correlation was found between students' knowledge of and attitude towards e-sources, emphasising the importance of acquiring more knowledge about e-sources. Soni et al. (2018) conducted a study to investigate the awareness and usage of e-sources among research scholars. Patel and Modi (2016) and Tlakula and Fombad (2017) were also in line with Soni et al. (2018) and concerned about using e-sources by students. They found that most researchers use e-sources to carry out research work, write research papers and improve their education. Library visitors faced difficulty accessing e-sources due to the insufficient number of computers, lack of skills and lack of required learning sources at the library. Most of the participants were satisfied with the available e-sources and databases of the library. The study also showed that the library website was the best source of information. In addition, Sohail and Ahmad (2017) found an increased interest in e-sources among users. Moreover, most of the respondents were familiar with e-sources and e-services. However, an inadequate ICT infrastructure, having insufficient skills and the slow speed of downloading e-sources from the website were some of the problems users faced. A low level of awareness about various e-services was noted among students of social sciences in the study conducted by Jan and Ganaie (2016). Moreover, most students preferred to use a hard copy of sources rather than e-sources. The study recommended educating students about the importance and advantages of e-sources and services.

Regarding the awareness of Saudi citizens about the use of e-government services in the study conducted by Al-Maliki (2016a), the results showed a poor understanding of the use of these

e-government services. This is attributed to the gap between what citizens know about these e-services and the advanced e-government technology. In addition, academic libraries at KKU were studied by Al-Maliki (2016b) to measure their e-readiness. The study highlighted the weaknesses of implementing ICT within university libraries. Moreover, the author proposed an e-readiness model to assess the current e-sources and ICT infrastructure at university libraries.

According to the former literature, many reasons limit the effective use of e-sources in university, such as the digital gap between modern technology in universities and university students, computer illiteracy and low ICT skills. Moreover, there is a lack of studies related to the awareness of e-sources in Saudi Arabia's university libraries. Therefore, this study seeks to assess the awareness of students at the College of Business about the available e-sources at KKU's libraries to enhance their ability to access information and interact with each other positively.

### 3. RESEARCH PROBLEM

Technologies used in the e-library provide a suitable environment for dealing with information sources in their various forms. Linking these sources with the e-library portal will provide a better, more comprehensive and accurate work environment.

With the introduction of information systems and technologies, e-sources at Saudi universities are continuously developing. This development is apparent in their services offered to the university community, including providing the internet, developing their websites and employing many technologies to access various learning sources. Saudi universities have made a great effort to improve their libraries and public facilities to promote the educational process in various scientific programmes.

KKU offers several sources of information, such as libraries, e-references and other materials, to meet the specific requirements of the available courses. Moreover, it provides easy access to the library and its ICT facilities for all students and faculty. Despite the rapid development of e-learning sources at KKU, there is still a lack of awareness and e-literacy among students about how to take advantage of digital sources at the university's libraries, including the SDL.

### 4. OBJECTIVES OF THE STUDY

This study is dedicated to assessing the awareness of using e-sources among the students of the College of Business at KKU. It also aims to identify the problems associated with using digital sources and explore the main factors that hinder and affect students' awareness of the use of e-sources at KKU's libraries.

This study focuses on the following objectives:

- Evaluate the use and awareness of the available e-sources at KKU's library among the students of the College of Business.
- Investigate the extent of e-source usage by college students in university libraries.
- Identify the main obstacles to accessing e-sources in university libraries.
- Analyse how frequently the available e-sources in the KKU are used.
- Provide recommendations to colleges and students for using digital learning sources.

### 5. RESEARCH METHODOLOGY

The researcher gathered the required data using a descriptive survey method to investigate awareness among students who used digital sources at KKU. The adopted data collection tool was an online questionnaire, which was designed using Google Forms. The questionnaire link was sent to the sample units via the e-learning program, Blackboard. This questionnaire comprised a list of questions about the use and awareness of the available e-sources at KKU's library in Abha and the demographic data of the sample. The study population was students of the College of Business at KKU, Abha. The study sample comprised eight groups of students from the management information systems course from four scientific disciplines, with a total of 776 participants. Of these students, 283 completed the questionnaire from all scientific departments in the college during the first term of the year 2021/2022. In addition to examining the main variables of this study, an extensive literature review on the use of ICT in libraries, e-literacy and the use of computer basics for e-access is presented.

## 6. DATA ANALYSIS

Descriptive statistical methods were used to calculate the means and percentages and investigate the differences in students' awareness of using e-sources at KKU's libraries.

### 6.1 Statistical coefficients used

The SPSS software (version 25) was used to analyse the data obtained from the respondents through the following statistical methods:

- Frequencies and percentages.
- Evaluating the level using the mean: create the beginning and end of the five-point Likert scale groups. The data was encoded and entered into the computer. The range was calculated ( $5 - 1 = 4$ ) to determine the length of the five-point scale cells (lower and upper limits). Then, it was divided by the number of scale cells to obtain the correct cell length ( $4/5 = 0.80$ ). This value was added to the lowest value in the scale (or the beginning of the scale, the integer) to determine the corresponding cell's upper limit. Thus, the length of the cells is given in Table 1.

**Table 1. Statistical coefficients used**

If the mean for the statement or dimension varies between 1:1.8	Very weak
If the mean for the statement or dimension varies between 1.8:2.6	Weak
If the mean for the statement or dimension varies between 2.6:3.4	Medium
If the mean for the statement or dimension varies between 3.4:4.2	Large
If the mean for the statement or dimension varies between 4.2:5	Very large

- Standard deviation (SD) is used to obtain the degree of dispersion of the participants' responses. Moreover, it helps arrange the statements or variables with the weighted average (WAVG). In the case of statements with an equal-weighted mean, the statement or variable with less SD takes the first order.
- Cronbach's alpha test verifies the reliability of questionnaire statements.
- Pearson's correlation test measures the validity of internal consistency.
- The chi-square ( $\chi^2$ ) goodness-of-fit test measures the good fit between theoretical and observed ratios.

### 6.2 Tool reliability and validity

The researcher used Cronbach's alpha equation to verify the reliability of the tool. According to this equation, the value of the reliability coefficient of the total degree was 0.982, which is a very high value and exceeds the statistically acceptable value (0.60). This analysis aims to obtain the same data when the study is repeated using the same study tool under the same conditions. Table 2 presents the reliability coefficients of study dimensions and the total range.

**Table 2. Reliability coefficients of study dimensions and total range**

Tool dimensions	Statement number	Reliability coefficient value
<b>First axis: e-sources at KKU</b>	23	<b>0.980</b>
<b>Second axis: reasons for using e-sources at KKU's libraries</b>	5	<b>0.944</b>
<b>Third axis: the main reason why e-sources at KKU's libraries were not accessed</b>	10	<b>0.952</b>
<b>Fourth axis: satisfaction with e-sources in KKU's libraries</b>	6	<b>0.955</b>
<b>Total tool</b>	<b>44</b>	<b>0.982</b>

### 6.3 Verification of internal consistency

Internal consistency is the degree of consistency between the questionnaire statements with the corresponding axis. Therefore, the correlation coefficients between the levels of the scale and its axes and between the axes themselves are used in this study to verify the validity of internal consistency. Pearson's correlation coefficient is calculated between the axis statements and the whole axis.

**Table 3. Verification of internal consistency**

Statement	First axis		Second axis		Third axis		
	Correlation coefficient	Statement	Correlation coefficient	Statement	Correlation coefficient	Statement	
<b>1</b>	.692**	13	.883**	1	.892**	1	.804**
<b>2</b>	.755**	14	.891**	2	.943**	2	.865**
<b>3</b>	.829**	15	.904**	3	.913**	3	.856**
<b>4</b>	.839**	16	.855**	4	.899**	4	.870**
<b>5</b>	.838**	17	.851**	5	.875**	5	.856**
<b>6</b>	.855**	18	.905**	Fourth axis		6	.826**
<b>7</b>	.849**	19	.815**	1	.898**	7	.845**
<b>8</b>	.521**	20	.890**	2	.918**	8	.828**
<b>9</b>	.823**	21	.875**	3	.894**	9	.790**
<b>10</b>	.860**	22	.838**	4	.934**	10	.828**
<b>11</b>	.832**	23	.850**	5	.913**		
<b>12</b>	.888**			6	.869**		

● \*\* Important correlation at the functional level 0.01.

Table 3 shows that the reliability coefficients for each axis of the tool and the tool as a whole are acceptable and statistically significant.

## 6.4 Study themes

### 6.4.1 E-sources at KKU

**Table 4. E-sources at KKU**

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Weighted average	SD	Rank	Degree	Direction	chi2	Function level
I need to read the instructions before browsing the library website.	51	136	52	16	28	3.587	1.146	1	High	Agree	155.887	0.000
The library contains many e-databases.	58	117	63	17	28	3.565	1.172	2	High	Agree	107.371	0.000
It is easy to access the library website via a tablet.	66	104	63	21	29	3.555	1.217	3	High	Agree	77.830	0.000
It is easy to access the SDL website via a tablet.	64	106	62	17	34	3.527	1.244	4	High	Agree	81.329	0.000
I can download all books and research papers easily as PDF files on my device.	67	104	51	27	34	3.505	1.281	5	High	Agree	66.664	0.000
I can remotely download all research papers, theses and references.	65	95	64	24	35	3.463	1.275	8	High	Agree	55.286	0.000
I can get books, references and research papers via email.	55	96	81	18	33	3.431	1.211	11	High	Agree	74.155	0.000
I find it difficult to access e-learning sources at the university.	41	78	62	51	51	3.025	1.327	23	Medium	Agree	14.014	0.007
It is possible to e-communicate with the library to suggest books and theses that I need.	51	90	78	25	39	3.314	1.259	20	Medium	Agree	51.470	0.000
I can join training programmes on the use of different databases, such as those provided by the SDL.	55	97	75	30	26	3.442	1.185	10	High	Agree	63.908	0.000
I consider myself a permanent visitor of the library to access e-learning sources.	47	85	75	33	43	3.212	1.284	22	Medium	Agree	34.968	0.000
The library contains a section for student research work as PDF files.	50	99	81	18	35	3.392	1.211	13	Medium	Agree	77.618	0.000
There is remote technical support in the library.	51	93	80	24	35	3.357	1.228	15	Medium	Agree	60.657	0.000

I get instructions from the librarian electronically.	50	88	84	26	35	3.325	1.226	19	Medium	Agree	56.240	0.000
Smart devices and other instruments are available at the library.	48	96	81	22	36	3.346	1.220	17	Medium	Agree	67.901	0.000
The library offers a strong internet network.	50	91	84	25	33	3.353	1.210	16	Medium	Agree	62.424	0.000
University employees and students can access the internet network at the library through their smart device.	58	95	74	14	42	3.399	1.283	12	Medium	Agree	67.265	0.000
The sign-in steps to access e-databases, such as the SDL, are clear and easy.	53	107	74	16	33	3.463	1.200	8	High	Agree	89.420	0.000
I know about the communication methods with the technical support team to report problems about information sources at the library.	50	96	77	18	42	3.332	1.264	18	Medium	Agree	65.640	0.000
The e-sources can be accessed easily.	58	106	64	23	32	3.477	1.227	7	High	Agree	74.756	0.000
I am satisfied with the e-sources at the university libraries, as they provide easy access to the information required in our studies.	60	101	75	13	34	3.495	1.221	6	High	Agree	83.625	0.000
The library has enough computer devices for the students.	47	89	90	19	38	3.311	1.221	21	Medium	Neutral	70.975	0.000
We are always updated about the library's content and programmes via the website and social media accounts.	46	105	75	19	38	3.360	1.225	14	Medium	Agree	80.445	0.000
The whole first axis						3.40	1.024		High	Agree		

In Table 4, the first axis, i.e. e-learning sources at KKU's libraries, comprises 23 statements. The degree of agreement of the sample units on 11 statements was high, whereas the degree of agreement on 12 statements was medium. However, the total degree of agreement on the whole axis was high, with a WAVG of 3.40 and an SD of 1.024.

From the previous scale, we could list some suggestions to improve e-learning sources at KKU's libraries. The statement 'I consider myself a permanent visitor of the library to access e-learning sources' ranked 22nd. Therefore, it can be suggested that there is a need to raise awareness of e-sources in students and encourage them to frequent the library. The previous statement is followed



by the statement 'The library has enough computer devices for the students'. Increasing the number of devices is recommended to reduce the waiting time for users.

The following statements, 'It is possible to e-communicate with the library to suggest books and theses that I need' and 'I get instructions from the librarian electronically', were ranked 20th and 19th, respectively. Today, e-communication is one of the most important methods to facilitate many operations, searches and enquiries.

The statement 'I know about the communication methods with the technical support team to report problems about information sources at the library' was ranked 18th. To overcome this problem, it is recommended to provide the required instructions for the student to access the technical support. The statements 'Smart devices and other instruments are available at the library' and 'The library offers a strong internet network' were ranked 16th and 17th, respectively. It is recommended to constantly check and fix the library's technical issues to meet the intensity of use and students' requirements. The following statements ranked 15th and 14th, respectively: 'There is remote technical support in the library' and 'We are always updated about the library's content and programmes via the website and social media accounts'. As social media has become widely popular among students, it may promote their use of e-learning sources at KKU's libraries.

#### 6.4.2 Reasons for using e-sources at KKU's libraries

**Table 5. Reasons for using e-sources at KKU's libraries**

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Weighted average	SD	Rank	Degree	Direction	chiz	Function level
E-sources contribute to the development of my knowledge in my field of specialisation.	53	117	60	22	31	3.491	1.201	4	High	Agree	97.618	0.000
E-sources support my courses.	53	119	64	23	24	3.544	1.140	2	High	Agree	108.714	0.000
E-sources facilitate the comprehension of my specialist lectures.	50	119	64	21	29	3.495	1.171	3	High	Agree	106.382	0.000
Professors ask us to take advantage of the university's e-sources.	49	108	64	33	29	3.406	1.200	5	High	Agree	71.965	0.000
The COVID-19 pandemic forced us to take advantage of e-sources at university libraries.	65	105	65	24	24	3.576	1.178	1	High	Agree	81.435	0.000
The whole second axis						3.50	1.065		High	Agree		

From Table 5, the second axis, namely the reasons for using e-sources at KKU's libraries, comprises five statements on which the degree of agreement of the sample units is high. However, the degree of agreement of the whole axis was high, with a WAVG was 3.50 with an SD of 1.065. The least common reason was 'Professors ask us to take advantage of the university's e-sources'. It would probably be useful if the professors referred to some course-related sources for the benefit of the students. The fourth most common statement was, 'E-sources contribute to the development of my knowledge in my field of specialisation'. It may therefore be helpful to link these sources to lectures to ensure their use and link them to the conference specialisation.

### 6.4.3 The main reason why e-sources at KKU's libraries were not accessed

**Table 6 The main reason why e-sources at KKU's libraries were not accessed**

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Weighted average	SD	Rank	Degree	Direction	chiz	Function level
I did not know much about the e-sources at the university.	58	99	62	39	25	3.445	1.212	1	High	Agree	55.428	0.000
I did not get the importance of e-sources at the university libraries.	48	81	78	47	29	3.254	1.217	4	Medium	Agree	35.004	0.000
I did not care to use e-sources at the university libraries.	40	87	79	50	27	3.223	1.177	5	Medium	Agree	46.311	0.000
I did not see any benefit of the e-sources at university libraries.	45	71	75	58	34	3.124	1.250	7	Medium	Neutral	21.081	0.000
I did not find what I needed in the e-sources.	45	74	70	64	30	3.141	1.238	6	Medium	Agree	24.367	0.000
I do not have the technical skills to benefit from e-sources at the university.	36	66	78	57	46	2.961	1.264	9	Medium	Neutral	19.138	0.001
There is a lack of sufficient information about e-sources.	43	90	78	44	28	3.269	1.187	3	Medium	Agree	48.325	0.000
I do not want to take advantage of learning e-sources at the university libraries.	37	60	69	63	54	2.869	1.308	10	Medium	Neutral	10.551	0.032
Notes and references I find in out-of-university xerox centres are sufficient for my undergraduate studies.	50	88	70	44	31	3.290	1.238	2	Medium	Agree	35.746	0.000
I do not have enough knowledge about using the internet to access learning e-sources at the university.	39	74	71	55	44	3.032	1.278	8	Medium	Agree	17.336	0.002
The whole third axis						3.16	1.035		Medium	Agree		

From Table 6, the third axis, i.e. the main reason why e-sources at KKU's libraries were not accessed, consists of 10 statements. The sample units have a medium degree of agreement on nine statements. However, this degree is high with the rest of the statements. The total degree of agreement on the whole axis is high, with a WAVG of 3.16 and an SD of 1.035.

'I did not know much about the e-sources at the university' was the main reason participants gave for not accessing them at KKU's libraries. This highlights the importance of raising awareness

of and publicising library activities, as well as guiding and encouraging students to use e-sources as determined by professors and library staff. The statement 'Notes and references I find in out-of-university xerox centres are sufficient for my undergraduate studies' was the second most common reason, probably due to students' interest in only collecting the information needed to comprehend the course-related subjects. Consequently, it may be useful to encourage students to expand their knowledge and conduct research outside the study framework. Subsequently, the statement 'There is a lack of sufficient information about e-sources' also emphasises the need to develop the means of communication that are convenient for students, such as social media. The statements 'I did not get the importance of e-sources at the university libraries', 'I did not care to use e-sources at the university libraries' and 'I did not find what I needed in the e-sources' were ranked fourth, fifth and sixth, respectively. This supports the suggestion that the professors may refer to some sources of information available in the library in a way that helps the students open up and look more closely at other available sources.

#### 6.4.4 Satisfaction with e-sources in KKU's libraries

**Table 7. Satisfaction with e-sources in KKU's libraries**

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Weighted average	SD	Rank	Degree	Direction	chi2	Function level
E-sources at KKU's libraries are very useful in my specialist subjects.	90	90	86	30	28	3.360	1.178	5	Medium	Agree	62.954	0.000
E-sources at KKU's libraries made it easier to access information.	104	104	77	24	26	3.466	1.158	3	High	Agree	82.742	0.000
E-sources at KKU's libraries are important in our scientific and research field.	114	114	70	19	23	3.576	1.128	1	High	Agree	106.311	0.000
It is easy to access e-learning sources at KKU's libraries.	104	104	72	29	24	3.477	1.162	2	High	Agree	76.240	0.000
KKU's libraries have e-research systems that help to access e-sources.	105	105	75	27	26	3.445	1.161	4	High	Agree	80.163	0.000
E-printed guides on how to access information sources and use information bases are available.	94	94	81	29	31	3.350	1.197	6	Medium	Agree	61.576	0.000
The whole fourth axis						3.50	1.065		High	Agree		

Table 7 shows that the fourth axis, namely satisfaction with e-sources at KKU's libraries, consists of six statements. The sample units show a high degree of agreement on four statements. However, it is medium with the remaining two. The degree of agreement of the whole axis is high, with a WAVG of 3.50 and an SD of 1.065.

From the previous scale, we could highlight some suggestions to improve satisfaction with e-sources at KKU's libraries. The statement 'E-printed guides on how to access information sources and use information bases are available' was ranked sixth, followed by the statement 'E-sources at KKU's libraries are very useful in my specialist subjects'.

## 7. RESULTS, DISCUSSION AND RECOMMENDATIONS

From the data analysis in the first aspect of the study, which discusses the e-learning resources in KKU's libraries, the researcher found that it is important to increase students' awareness of library resources, encourage them to use the library more and provide a sufficient number of computer devices in the university libraries commensurate with the number of visitors. It is also necessary to continue to communicate with library visitors and those interested to note requests for books or scientific references. Today, we find that e-communication facilitates searches and enquiries. It is also recommended to educate students on how to access e-learning resources. Although university libraries at KKU have the necessary tools, such as smart devices, and a strong internet network is available in the library, the researcher believes that the university's ICT department should review the technical requirements in the library and develop them in a way that suits the intensity of use and requirements of students, which will increase their interest in using e-learning resources in KKU's libraries.

Considering the students' reasons for using e-sources in university libraries at KKU, the data analysis indicated that e-sources contribute to the development of students' knowledge. Therefore, course professors should pay attention to linking e-sources with the lectures they present to facilitate students' access to e-learning resources in libraries.

With regard to the barriers to students at the College of Business benefiting from e-sources in university libraries, the data analysis of this study showed that the most common reason was not knowing much about e-sources within the university, which is why libraries should care about the need to increase awareness by announcing their activities and directing and ensuring professors and library staff to encourage students to use e-resources. The study also indicated that it is necessary to develop the means of communication that suit students, such as increasing the use of social media to communicate with them. The e-resources available in university libraries, especially the central library, will help students support their education and increase their knowledge, as well as encourage them to search more in various e-learning resources in the university's libraries. Having measured the level of students' satisfaction with e-sources in KKU's libraries, the researcher recommends paying attention to improving the mechanism of access to a satisfactory level of e-sources to gain library visitors, which requires increased attention to providing printed and e-guides that include how to obtain information and use databases, particularly the SDL.

According to Yamauchi (2010), using information technologies is one of the essential skills that university students should possess due to their importance in both research and education. These information technologies include computers, the internet, e-learning programmes and e-sources at university libraries. Kaur and Kathuria (2016) suggested providing proper training for the library staff to serve the library's visitors efficiently. They also recommended encouraging the students to attend the training programme conducted by the library to increase their awareness and use of the e-sources available at the university.

In Saudi Arabia, universities provide many library services and offer training courses to provide students with the necessary skills to use these services.

This study revealed the students' lack of ability to access e-sources of information at the libraries. Moreover, there is a decrease in the number of students who try to benefit from the databases of the SDL. The level of undergraduate students' use and awareness of e-sources was limited and low. However, the students tended to acquire the technical skills required to access the libraries. On the contrary, there was not enough training on how to use e-resources in libraries. In most cases, one training course on library services was conducted in the first year. Therefore, there is a need to conduct effective courses by the Deanship of Library Affairs to educate students and provide them with the required knowledge to benefit from e-learning sources at the university libraries. This research emphasises the importance of conducting various activities to introduce the e-sources available at libraries. Librarians should also volunteer with new ideas to encourage the use of digital learning sources at the libraries of KKU, and more attention should be paid to the infrastructure of library e-services.

## 8. CONCLUSIONS

It can be concluded that access to all sources of information in the library and integration with the e-library management system, e-books and periodicals will increase the value of information and enhance the knowledge sources for all users in the educational environment.

Some reasons that limit the students' use of e-sources at KKU's libraries are apparent in the results. These reasons are attributed to the fact that many students do not have the skills to access learning e-sources in university libraries. Moreover, they have not obtained adequate training on how to search for these sources. Therefore, regular training on libraries' e-programmes is required to educate and help the students to access e-sources and enhance their e-literacy. This, in turn, facilitates their studies during remote online classes and supports them throughout the different educational programmes. These reasons could also be attributed to the lack of introductory library plans at the beginning of each term to educate the students about the systems and databases available. In addition, it could be that students fail to enquire about accessing e-sources due to a lack of communication between them and library officials. The study also demonstrates the presence of poor communication between course professors and students about e-sources at the university's libraries. Furthermore, the students do not search for information and are content with the literature in bookshops outside the university. This is a clear indicator of the tendency of students to develop their ICT skills and improve their academic achievement in various courses. This reflects the awareness of the students about e-literacy. However, the study concluded that there was a lack of awareness among library users about the importance of using modern ICT and available e-sources. Therefore, it is essential to train users and researchers to access e-sources. Moreover, different training courses should be available for researchers in digital databases, including e-learning sources and the SDL. In addition, professors should encourage their students to visit the university library and access its online databases to obtain the required knowledge. As the results show that most participants (66%) can successfully access e-sources at the university, this means that respondents have basic knowledge of ICT, which is a significant indicator of an adequate scientific background and awareness of digital libraries' importance among students. In addition, the analysis of the obtained results indicates students' tendencies to develop their ICT skills. This can help improve their e-learning through distance learning techniques and increase their awareness of and skills in accessing university digital libraries.

This study is limited to investigating the use of e-sources at the central library of KKU, Abha by the students of the College of Business. Further studies should be conducted in this aspect of resource awareness in academic societies regarding library staff, university faculty members and students from different colleges in the universities of developing countries.

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