Assessing the influences of e-resources motives on their utilization

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Abstract— **The foundation of e-learning is formalized learning delivered via electronic devices like computers, tablets, smart phone, smart gazettes, etc. This makes it possible for everyone to learn round the clock, regardless of their location or other limitations. The learning materials that are available online are known as e-resources. There are several different electronic resources available for the study, including e-books, e-journals, e-magazines, e-databases, e-newspapers, e-maps, etc. E-resource availability is always expanding. One need only sit at a console and click to access global information without any physical effort. As we can see, using online resources for a variety of objectives is necessary in today's world. Therefore, while determining their use, it is necessary to learn about the availability of different e-resources utilized by students who use online / e-learning and how it impacts them for various reasons. Using the pre-structured questionnaire, data was collected from 250 students, from the Navi Mumbai area who were using e-resources. A theoretical construct was developed based on certain assumptions to explore the relationship between utilization and reasons for using e-resources, viz., time saving, easy to use, and helping to get better grades on the test and examination. The proposed construct was examined using SPSS version- 20. The demographic profile, objectives, and hypothesis were followed while doing the data analysis. The average values of chi-square test results for the reasons (time savings, ease of use, and helping students get better grades in tests and examinations) are calculated. These are found to be 0.016, 0.015, and 0.002 for the first variable (e-learning material), 0.141, 0.016, and 0.001 for the second variable (knowledge enhancement), and 0.182, 0.096, and 0.004 for the third variable (other e-resources), respectively. The results of the data analysis shows the linkage between motives/ reasons of e-resources and its utilization. As the nature of education is predicted to become more hybrid in the future, similar research might be conducted to further identify the areas that need development in the realm of e-resources.**

Keywords—**E-resources, Reasons/motives, Utilization, E-learning.**

***JEET Category*—: Technology Enhanced Learning**

I. INTRODUCTION

An increasing number of individuals are choosing to learn online or electronically. The learning system substantially changed from traditional to electronic learning methods during and after the COVID-19 epidemic.

In the majority of industries, including education, we can see significant technological advances. We might state that there is a necessity in order to learn what is needed today and to adapt to changing circumstances. Today's students use online/electronic learning methods and resources, taking into account the demands of the K to PG educational system. It has been noted that e-learning is essential in the modern world since it offers a number of advantages, including time savings, ease of use, increased information, and assistance in learning new concepts for both mentors and students. In light of this necessity, the aim of our study is to determine the factors that influence how students use electronic resources. An inferential statistical method was used to develop and verify the theoretical construct in this case.

II. LITERATURE REVIEW

Electronic resources must be easily found and accessible since they are digital or digitized content that librarians have chosen, acquired, and managed for use by library users S. Johnson et al.,

E-books, e-journals, indexing and abstracting, full-text (aggregated), reference (biographies, dictionaries, directories, encyclopedias, etc.), numeric and statistical, e-images, and e-audio/visual resources are some examples of these. Similar to this, it is crucial to gauge user satisfaction in order to enhance library services and satisfy user needs.
A. K. Tamrakar and R. G. Garg

More than ninety percent (98%) of students are aware of online information sources, although few are familiar with the ones that the university offers, according to Dumebi in a study on awareness of online information sources among university students. O. Dumebi.

Bakare concentrated on the study of students' perceptions of, access to, and usability with regard to, e-resources. D. Bakare, B. Bamigboye, and M. Chiemenem.

(Manisha, Shukla, & Shaikh) In this study, researchers investigated and looked at a range of reasons and purposes for student use of electronic resources. According to the researcher's comparative analysis, the key benefits of adopting e-resources are time savings, ease of use, more informational value, lower cost, and better usefulness. The researcher proposed a hypothetical framework of online resources and students' reading preferences. Researchers shed light on earlier literature reviews regarding the motivations and goals of using e-resources in this study. In a tabular style, many motives and purposes are elaborated using comparative study of various works of literature. The researcher made reference to the educated, noting that these are the ones who are acquainted with new technologies and are ready to handle unexpected circumstances.

Bala, Suniti& Lal, Payare in their article titled Usage of Electronic Resources and their Impact on Reading Culture: Study of Punjab Agricultural University, Ludhiana, the authors revealed that the most popular e-resources among students are e-books, e-journals, and electronic theses. Other online databases are less well-liked by students, and the majority of them believe that using e-resources has improved their reading habits and made them more open to using them. Their use boosted their self-assurance and inspired them to develop their finding abilities. Although the students prefer to use the library's resources for their study, many choose to use their own electronic devices because they believe the buildings infrastructure is insufficient. On the other hand, the majority of students said that the library's internet access is adequate. The students agreed that the library staff provides instruction on how to use electronic resources and that they have the necessary abilities to retrieve the information from e-resources. Bala, Suniti& Lal, Payare.

Use of Electronic Resources by Law Degree Students at the Anuradhapura Regional Center of the Open University of Sri Lanka is the title of a 2014 essay by Karunarathna, H M P P. The results showed that 93% of students had accessed electronic resources, but the majority of them had no idea how to use different types of electronic resources for their academic work. Further research found that the utilization of electronic resources was also impacted by a lack of English language proficiency and computer literacy. Their biggest obstacle was a lack of workstations with enough bandwidth. The researcher therefore suggested expanding the ARC library's computer capacity and creating additional training programmes and courses to help people improve their English language and computer skills. Karunarathna, H M P P.

Komissarov and Murray, at the University of Wisconsin, looked into characteristics that affected undergraduates' information-seeking behaviour and chances for success. The study's objectives were to comprehend how undergraduate students search for information and to discover the variables that affect this behaviour. The researchers identified the characteristics of the sources that undergraduate student's value, the kinds of databases or search engines they utilize, and how they perform their research. Undergraduate students' academic traits, demographics, and information-seeking tactics were the main determinants of how they sought out the needed information. Komissarvo, S., & Murray, J. Joo and Choi studied the various variables, including utility and usability, resource quality, and individual variations, that influence undergraduate students' choices of online library resources. The desire of undergraduate students to use online library resources was positively influenced by usefulness and convenience of use, the researchers discovered. Joo, S., & Choo, N.

In her study, Kulatunga looked at undergraduate students' use of technological resources during the Covid virus 19 outbreak in Sri Lanka. The study looked at the different kinds of electronic resources, how frequently they are used, and why. Electronic journals, electronic mail, and electronic articles were the most frequently utilized electronic resources among undergraduate students. According to the study's findings, the majority of undergraduate's students used all of the available electronic resources. Kulatunga, R.K.

(Waghmode Manisha, Shukla Manisha) Researchers in this study concentrated on identifying various reasons for using electronic resources as well as e-resource usage based on demographic factors such student age and gender. For this study, researchers employed a survey method to gather information from 246 students in the Navi Mumbai area using a pre-structured questionnaire technique. The study discovered a substantial association between student gender and their usage of electronic resources. The study also showed a relationship between the age of the students and the sources of e-resources

III. METHODS AND MATERIAL

The use of electronic resources is addressed, along with the benefits associated with it. A conceptual framework was created. Based on this theoretical framework, the current study used an inductive methodology to acquire information and develop hypotheses. The primary tool utilized to collect data was pre-structured questionnaires. 250 responses were eventually received after the questionnaire was distributed to 270 students in the Navi Mumbai region. SPSS 20 was used to analyze this data. To make inferences about the relationship between the variables that is reasons of using e-resources and its utilization, the chi-square method was employed. Statistical analysis such as descriptive statistics and inferential analysis of the data was done for the purpose of testing the presumed hypothesis.

A. Objectives
- To examine the link between the reasons and utilization of e-resources based on e-learning material.
- To investigate the relation between the reasons and utilization of e-resources based on knowledge enhancement.
- To study the relation between the reasons and utilization of e-resources based on other e-resources

B. Hypothesis

H1: There is a positive association between the reasons (time saving, easy to use, it helps students to get better grades in tests and exams) and utilization of e-resources (e-learning material).

H2: There is a positive association between the reasons (easy to use, it helps students to get better grades in tests and exams) and utilization of e-resources (knowledge enhancement).

H3: There is a positive association between the reasons (it helps students to get better grades in tests and exams) and utilization of e-resources (other e-resources).

C. Theoretical Construct:

The theoretical framework was created with the aforementioned objectives in mind.

The following suggested model of e-resource usage is used to study these objectives. The following equations—1, 2, and 3, respectively—show how the specified objectives are represented mathematically.

$ELM = f(EM, ET, EJ, EC, EDA, SE, EMP)$ (1)

$KE = f(EB, SN, NPTEL, EB, EMZ, EN)$ (2)

$OER = f(ODB, CD, TS)$ (3)

The following assumptions are made in order to explore the relationship between the factors that influence the use of electronic resources, such as time-saving (TS), ease of use (EU), and benefits for students to perform better on tests and

TABLE I. NOMENCLATURE DETAILS USED IN THE THEORETICAL CONSTRUCT

ELM Electronic Learning Material	KE KNOWLEDGE ENHANCEMENT	OER Other E-resources
EM → E-Manuscript	EB→ E-Bibliographic Databases /Referencing tools	
		ODB→ Online Database
ET → E-Thesis	SN→ Stories/novels	CD→ CDs/DVDs
EJ → Accessing E-Journals	NPTEL→ NPTEL NDL Swayam Free / paid e-resources	
		TS→ Time spent with friends
EC → E-Courseware's	EB→ Accessing E-books	
EDA→ E-Data Archives	EMZ→ E-Magazines	
SE→ Search Engines	EN→ Accessing E-Newspapers / Watching online News	
EMP→ E-Maps		

exams (BG), and their utilization are mathematically expressed as follows.

$ELM = f(TS, EU, BG)$ (4)
$KE = f(EU, BG)$ (5)
$OER = f(BG)$ (6)

The aforementioned mathematical equations demonstrate that there is a relationship between the use of electronic
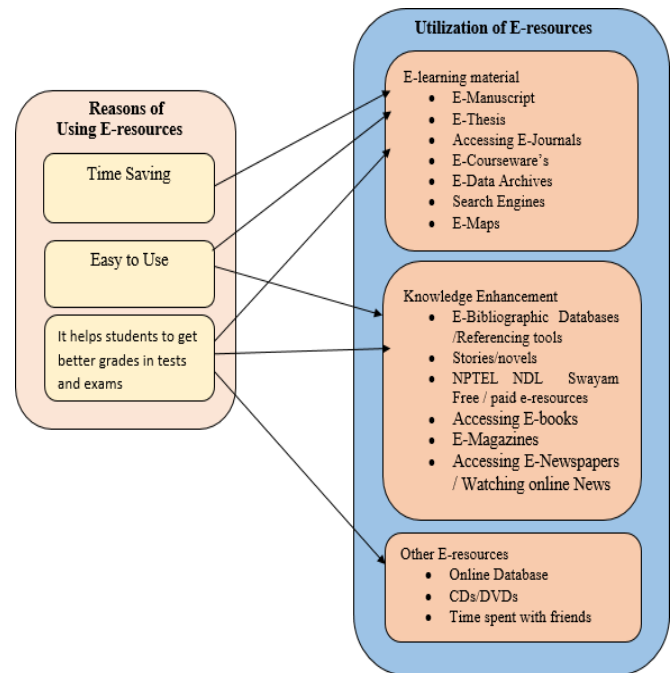

Fig. 1. Theoretical Model.

resources and the various reasons for using them. As a result, the theoretical construct is created based on these expressions, as represented in the following figure.

Figure 1 shows a hypothetical relationship between the utilization of e-resources and the reasons that motivate it. Various aspects of using e-resources are grouped into three groups based on the assumptions made: e-learning materials, knowledge augmentation, and other e-resources. The objectives and hypotheses were constructed keeping in mind these concepts.

IV. ANALYSIS AND INTERPRETATION OF THE DATA

The data was codified and entered using the SPSS application after the data was collected. For analysis purposes, the coded data was cleaned and confirmed. For e-resource reasons, the 5 point Likert scale data measuring approach was employed for responses such strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. In order to measure how often students used electronic resources, alternatives such as daily, 2-3 times a week, 2-3 times a month, once per month, and never. The chi-square test was used to analyses the data and find associations or linkages between the reasons and the utilization of e-resources. Descriptive statistics were applied to collect demographic information about the respondents. The results so

TABLE II. DEMOGRAPHIC DETAILS OF THE RESPONDENTS

Variables	Gender		Age				Class			
	Male	Female	17-18	19-20	21-22	Above 22	FY	SY	TY	Final Year
N	138	112	84	92	48	26	126	32	73	19
Percentage	55.2	44.8	33.6	36.8	19.2	10.4	50	13	29	7.6

Variables	Stream						
	Arts	Commerce	Science	Engineering	Information Technology	Management	Other
N	2	74	16	11	58	80	9
Percentage	0.8	30	6.4	4.4	23.2	32	3.6

generated are displayed below in tabular format.

The analysis was carried out based on the respondents' demographic information as well as the proposed hypothesis. The findings are displayed using a tabular manner as shown below.

Table II gives details on the respondents' demographic backgrounds, including gender, age, class, and stream. Table II shows that 55.2% of the students (n = 138) were male and 44.8% (n = 112) were female. In the survey, 33.6% (n=84) of respondents were between the ages of 17 and 18, 36.8% (n=92) were between the ages of 19 and 20, 19.2% (n=48) were between the ages of 21 and 22, and 10.4% (n=26) were over the age of 22. 50 % (n = 126) of respondents are in their first year of study, followed by 13 % (n = 32) were in second year of study, 29 percent (n = 73) were in third year of study, and 7.6 percent (n = 19) in their final year.

The number of students studying in each stream was as follows:

0.8% (n=2) were studying in the arts stream, 29.6% (n=74) were studying in the commerce stream, 6.4% (n=16) were studying in the scientific stream, 4.4% (n=11) were studying in the engineering stream, 23.2% (n=58) were studying in the information technology stream, 32% (n=80) were studying in the management stream, and 3.6% (n=9) were studying in other streams.

☐ H1: There is a positive association between the reasons (time saving, easy to use, it helps students to get better grades in tests and exams) and utilization of e-resources (e-learning material).

TABLE III. RESULTS OF CHI-SQUARE TESTS OF E-LEARNING MATERIAL

Variables / Parameters	Utilization of E-resources	Reasons of Using E-resources		
		Time Saving	Easy to Use	It helps students to get better grades in tests and exams
E-Learning Material	E-Manuscript	0.012	0.027	0.001
	E-Thesis	0.001	0.010	0.000
	Accessing E-Journals	0.044	0.002	0.001
	E-Courseware's	0.030	0.011	0.001
	E-Data Archives	0.015	0.030	0.000
	Search Engines	0.009	0.018	0.014
	E-Maps	0.004	0.008	0.000
	Average	**0.016**	**0.015**	**0.002**

The results of the first variable, which is e-learning material for each reason and the utilisation of e-resources, are combined and shown in table III, where the given hypothesis is tested using the chi-square test. The average values of each reason are also calculated and are found to be 0.016, 0.015, and 0.002, respectively, for time savings, ease of use, and helping students get better grades on tests and examinations. For utilization and reasons of e-resources (time-saving, easy to use, and get better grades on the tests and exams), each of these average chi-square test results in Table III above are less than 0.05 at the 5% level of significance. This indicates that the above-mentioned

TABLE IV. RESULTS OF CHI-SQUARE TESTS OF KNOWLEDGE ENHANCEMENT

Variables / Parameters	Utilization of E-resources	Reasons of Using E-resources		
		Time Saving	Easy to Use	It helps students to get better grades in tests and exams
Knowledge Enhancement	E-Bibliographic Databases /Referencing tools	0.053	0.030	0.000
	Stories/novels	0.144	0.001	0.001
	NPTEL NDL Swayam Free / paid e-resources	0.133	0.024	0.001
	Accessing E-books	0.117	0.005	0.000
	E-Magazines	0.294	0.006	0.002
	Accessing E-Newspapers / Watching online News	0.106	0.027	0.004
	Average	**0.141**	**0.016**	**0.001**

hypothesis is put to the test and verified. Thus, we can say that there is a positive association between the reasons of e-resources (time saving, being easy to use, to get better grades in the tests and exams) and its utilization (e-learning material).

☐ H2: There is a positive association between the reasons (easy to use, it helps students to get better grades in tests and exams) and utilization of e-resources (knowledge enhancement).

In table IV, the results of the second variable—knowledge enhancement—the use of e-resources and reasons are combined and presented. The stated hypothesis is tested using the chi-square test. The average chi-square test values of each reason are also calculated and are found to be 0.141, 0.016, and 0.001, respectively, for the reasons of time savings, ease of use, and helping students get better grades on tests and examinations. At the 5% level of significance, two of these average chi-square values in Table IV above are less than 0.05 for knowledge enhancement and two reasons for using e-resources, namely, it is easy to use and it helps students to get better grades on tests

TABLE V. RESULTS OF CHI-SQUARE TESTS OF OTHER E-RESOURCES

Variables / Parameters	Utilization of E-resources	Reasons of Using E-resources		
		Time Saving	Easy to Use	It helps students to get better grades in tests and exams
Other E-resources	Online Database	0.091	0.056	**0.032**
	CDs/DVDs	0.191	0.140	**0.000**
	Time spent with friends	0.182	0.096	**0.004**
	Average	**0.182**	**0.096**	**0.004**

and exams. This indicates that the said hypothesis is put to the test and confirmed. Thus, we can come to the conclusion that there is a positive association between the utilization of e-resources and the reasons (easy to use and it helps students to get better on tests and exams) (knowledge enhancement).

☐ H3: There is a positive association between the reasons (it helps students to get better grades in tests and exams) and utilization of e-resources (other e-resources).

The results of the third variable, other e-resources, are combined and shown in table V, where the chi-square test is used to test the stated hypothesis. Each reason and the use of e-resources are also included. The average chi-square test values of each reason are also calculated for this variable and are found to be 0.182, 0.096, and 0.004, respectively, for the reasons of time savings, convenience of use, and helping students earn better grades on tests and examinations. One of these average chi-square values (0.004) in Table V above is less than 0.05 at the 5% level of significance, indicating that utilizing e-resources can help students to get better test and examination grades. This indicates that the above-mentioned hypothesis is

put to the test and confirmed. Thus, we can come to the conclusion that there is a positive association between the reasons (it helps students to get getter grades on the tests and exams) and the utilization of electronic resources (other e-resources).

V. CONCLUSION

The utilization of electronic resources is skyrocketing in the modern days. The COVID-19 global pandemic has been considered as teaching everyone how to deal with unforeseen circumstances, discover means of sustenance during such circumstances, and face the crisis effortlessly and without any obstacles. E-learning serves as a fundamental instrument for learning and problem-solving. Today's students must become familiar with a variety of online learning tools that will aid in their academic development. This study concentrated on how the use of e-resources is influenced by the reasons for their use for this, a theoretical construct was created based on a set of presumptions. Chi-square findings are collected for a variety of factors, including the use of e-resources, and are displayed in accordance with the proposed hypothesis. The average values of chi-square test results for the reasons (time savings, ease of use, and helping students get better grades in tests and examinations) are computed. These are found to be 0.016, 0.015, and 0.002 for the first variable (e-learning material), 0.141, 0.016, and 0.001 for the second variable (knowledge enhancement), and 0.182, 0.096, and 0.004 for the third variable (other e-resources), respectively. The study's findings revealed a connection between the reasons for using e-resources and their utilization. The research revealed a link between using online resources and the reasons (saving time, being simple to use, helping students perform better on tests and exams) (e-learning material). The findings of the study showed a relationship between the usage of electronic resources and the reasons (easiness of use, ability to assist students do better on tests and exams) (knowledge enhancement). Additionally, it was found that there was a linkage between the utilization of e-resources and the reasons (it helps students perform better on tests and exams) (other e-resources). As the nature of education is predicted to become more hybrid in the future, similar research might be conducted to further identify the areas that need development in the realm of e-resources.

REFERENCES

K. Tamrakar and R. G. Garg, "User perception towards e-resources and services of IIT-Guwahati Library," Journal of Library and Information Technology, vol. 36, no. 1, pp. 40-46, 2016.

Bala, Suniti& Lal, Payare (2016) Usage of Electronic Resources and their Impact on Reading Culture: Study of Punjab Agricultural University, International Journal of Digital Library Services, Ludhiana, 6(3), July-Sept., pp. 59-66.

D. Bakare, B. Bamigboye, and M. Chiemenem. (2015). "Students perception of e-resources in an academic library: The federal university of agriculture, Abeokuta experience," Journal of Information and Knowledge Management. [Online]. 6(1). pp. 105-116. Available: http://www.researchgate.net/publication/281633777

Joo, S., & Choo, N. (2015). Factors affecting undergraduates' selection of online of online library resources in academic tasks: usefulness, ease of use, resource quality, and individual differences. Library Hi Tech, 33 (2), 272-291. https://doi.org/10.1108/LHT-01-2015-0008

Karunarathna, H M P P (2014) Use of Electronic Resources by Law Degree Students at Anuradhapura Regional Centre of the Open University of Sri Lanka, Journal of the University Librarians Association of Sri Lanka, 18(20), June, pp. 41-61.

Komissarvo, S., & Murray, J. (2016). Factors that influence undergraduate information-seeking behaviour and opportunities for student success. Journal of Academic Librarianship, 4(2), 423-429. https://doi.org/10.1016/j.acalib.2016.04.007

Kulatunga, R.K. (2020). Use of electronic resources by undergraduate students during COVID-19 Pandemic in Sri- Lanka. International Research Journal of Multidisciplinary Studies, 6 (10), 14-20.

O. Dumebi, "Awareness and use of online information sources among University of Ibadan students," International Journal of Library Science, vol. 6, no. 2. pp. 37-41, 2017

S. Johnson et al., "Key issues for e-resource collection development: A guide for libraries," International Federation of Library Associations and Institutions, 2012.

Manisha, W., Shukla, M., & Shaikh, A. (2020). A Study of Electronic Resources and Reading Habit of Graduate Students : Hypothetical Framework. PSYCHOLOGY AND EDUCATION, 57(9), 6762–6768.

Waghmode Manisha, Shukla Manisha, S. A. (2021). An Exploratory Study on Motives and Use of Electronic Resources by Graduate Students in Navi Mumbai. Journal of Contemporary Issues in Business and Government, 27(2), 4823–4829.