

Students' Knowledge of Internet Resources and Search Skills as Correlate of Electronic Information Resources Use in University Libraries in South-West, Nigeria

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Abstract

Rationale of Study – The research looked at how students' understanding of Web resources and search abilities correlated with their use of electronic databases at institutions of higher learning in Nigeria's South-west.

Methodology – The study adopted the correlational research design. The population of the study comprised 58,526 final year students in the federal and state Universities in the South-West, Nigeria. The researcher used Pearson r and multiple correlation statistics to answer the research questions while t-test of significance of simple linear correlation and One Way ANOVA F-test associated with multiple correlation statistics were used to test the hypotheses at $p < 0.05$ level of significance.

Findings – The study revealed that there is a high significant relationship between students' knowledge of Internet resources, knowledge of search skill and their use of electronic information resources (EIR) in university libraries in South-West, Nigeria. This shows that users' knowledge of Internet resources and search skills variables are highly associated with electronic information resources use in university libraries in South-West, Nigeria.

Implications – This paper can help in the improvement of the store of value for libraries and library users will always have the opportunity to update themselves with current information as well as the developments in their various subject areas of interest since the use of EIR have a good potential of developing its users.

Originality – This is the first study of its kind to explore and describe students' knowledge of Internet resources and search skills as correlate of electronic information resources use in university libraries in South-West, Nigeria.

Keywords

Students knowledge, Internet resources, Search skills, University Libraries

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1 Introduction

Undergraduate students' knowledge of Internet resources is defined as a relative assessment of their ability to utilise Internet resources for educational and learning goals. According to Lou et al. (2010), the concept of Internet skills arose during the era of Internet technology and is a subset of information literacy that includes basic computer literacy. Understanding Internet resources entails more than just website study. It entails the ability to read, distribute, and analyse online information in order to socialise, network, and collaborate with others defining, accessing, managing, integrating, assessing, generating, and communicating information are among the seven components of ICT literacy described by Katz and Macklin (2007).

Good research relies on well-developed search abilities (University of Kansas, 2019). Finding relevant sources necessitates the use of good search strategies. Selecting proper keywords and employing Boolean Searches will greatly increase the quality and focus of your search results, especially when using databases, according to the University of Kansas (2019). Knowledge of search skills can be defined as skills required for independently searching the Internet and getting accurate results related to your information needs. University of Nottingham (2019) posited that to get the best out of online databases and search engines, improving your search skills can help you to: narrow down search results when a large amount of information is available, extract only the most relevant information, explore different aspects of a topic and make your search more efficient and save time.

Steps to improve search skills were further outlined as; plan your search properly and use exact keywords. Norton (2011) outlined 10 tips for smarter, more efficient internet searching, they include; use of unique, specific terms, use of the minus operator (-) to narrow the search, use of quotation marks for exact phrases, don't use common words and punctuation, capitalisation, drop the suffixes, maximize auto complete, customize your searches, use browser history and set a time limit, then change tactics. However, Walden University (2019) posited that database search skills are essential to the success of an online student and researcher. Most researchers feel comfortable using internet search engines to get millions of results but a lot of junk information pops up. She further affirms that when searching the library databases, the users want to find items that just fit their topics and the requirements for their discussion, assignment, or capstone. The steps for searching library databases effectively include; decide on a topic,

identify relevant databases, select appropriate keywords, connect your keywords, limit your searches using basic search limiters, use advanced search skills to refine your searches and save and share search results for future use. Meanwhile, improving searching strategies of the students will enhance effective and efficient access to EIR available in the university libraries.

2 Statement of the Problem

As a result of the recent advancements in information and communication technology (ICT), Nigerian university libraries are currently offering resources in electronic formats. Many university libraries have invested much in providing services via Electronic Information Resources (EIR) and other computer-based technologies in the context of COVID-19 so that undergraduate students can access information that will help them with their scholarly study. Nonetheless, the current literature indicates that (EIR) is used infrequently by undergraduate students in most Nigerian university libraries. Given the massive investment in electronic information resources, this has reduced the potentials and payback. This is most likely due to a lack of information technology literacy among users, such as awareness of Internet resources or search abilities, which would allow them to access vital electronic information resources. This condition necessitates the conduct of this research in order to determine the extent to which students' knowledge of Internet resources and search abilities are related to the use of electronic information resources in university libraries in Nigeria's South West.

The main purpose of the study was to examine students' knowledge of Internet resources and search skills as correlate of electronic information resources use in university libraries in South-West, Nigeria. The specific objectives are to ascertain the relationship between students' knowledge of Internet resources and the use of electronic information resources in university libraries in South-West, Nigeria; and relationship between the students' knowledge of search skill and the use of electronic information resources in university libraries in South-West, Nigeria.

Hypothesis: There is no significant relationship between students' knowledge of Internet resources, students' knowledge of search skills and their use of EIR in the university libraries in south-West, Nigeria.

3 Literature Review

Uwaifo and Azonobi (2014) investigated the factors that discourage post-graduate library and information science students at Delta State University in Abraka, Nigeria, from using the Internet. The study used a descriptive survey as the research design, with 34 respondents representing the whole population of postgraduate library and information science students at Delta State University as the sample size. The questionnaire was used to obtain information from the respondents. The postgraduate students were given a total of 35 copies of the questionnaire. The data was examined using a frequency count and a simple percentage formula; the results revealed that the most commonly used Internet resources and services by postgraduate students were e-mail, e-journals, and online databases. The Internet is advantageous to postgraduate students, but it has several drawbacks, such as server slowness, power outages, hefty service fees, and limited access to sites. According to Ani and Ahiauzu (2008), the Internet has been the primary source of building electronic information resources in Nigerian university libraries, with Internet connectivity in 89 percent of those surveyed. More specifically, Oduwale and Adeyinka (2019) investigated the impact of information technology abilities on undergraduate students' library patronage in South-West Nigerian universities. The study's findings demonstrated that undergraduate students' information technology skills had an impact on library patronage in universities ($r = 0.59$, $N = 1333$, $p 0.05$). In addition, the research hypothesis was assessed at a significance level of 0.5. Apotiade (2017) investigated user education and computer literacy abilities as drivers of electronic resource use among undergraduate students in State Universities in Nigeria's South-West. According to the findings, there is a favorable correlation between computer literacy and the usage of internet resources among undergraduate students at a state university in Nigeria's south-west.

In a survey of Internet access and use at Obafemi Awolowo University, Ile-Ife, Omotayo (2010) discovered that, despite the widespread availability of Internet access, not all undergraduates at the university use it. Ani (2010) conducted a study of undergraduate students' Internet access and use at three Nigerian universities. The data was collected using a questionnaire survey as the study method. Undergraduate students at three public universities in Nigeria were given questionnaires: University of Calabar in Calabar, University of Uyo in Uyo, and Rivers State University of Science and Technology in Port Harcourt. The study's findings found that students at the University of Oyo, University of Calabar, and River State University of Science and Technology utilize the Internet

significantly. Despite the fact that these three universities have considerable internet usage, there is a low degree of use of vital electronic resources for learning and research, necessitating comprehensive user education to remedy the deficiencies.

Obasuyi and Otabor (2012) conducted a survey of Internet literacy skills among University of Benin, Nigerian physical science undergraduates. The survey design was used to collect data from 265 undergraduate students in the faculty of physical sciences at the 200 and 300 level using a questionnaire. The data was analyzed using frequency counts and percentages, with chi-square used to test the null hypothesis of independence. The majority of the pupils possess most of the needed internet abilities, indicating that they are computer, Internet, and ICT literate, according to the report. Some areas that need to be strengthened were mentioned, such as internet inclusion, instruction and ICT literacy courses to new undergraduates in the university through orientation and workshop was recommended. In addition, Ozonuwe, Nwaogu, Ifijeh, and Fagbohun (2018) conducted an evaluation of the use of Internet search engines in an academic setting. The research used a descriptive survey design. The data was collected from the respondents via a questionnaire. A total of 290 questionnaires were distributed, with 230 being completed and returned. Descriptive statistics were used to analyze the data. The study's findings revealed that users are aware of internet search engines and online resources, but that obstacles such as a lack of Internet search skills and poor bandwidth are preventing them from using them.

Tariq et al. (2018) investigated business students' online information searching abilities. The study also looks into the disparities in students' information resource seeking skills depending on personal and academic variables such as gender, age, kind of university, degree level, and major academic disciplines. The data on a self-reporting questionnaire was collected using a cross-sectional survey research approach. A straightforward selection technique was used to choose undergraduate, graduate, and postgraduate business students from 24 public and private universities in Lahore, Pakistan. This research included a total population of 114,500 people. The sample size for this study was 470 students, with a margin of error of 5% and a confidence level of 97 percent. Students' searching abilities were deemed to be satisfactory in the study. There was no statistically significant difference in skills based on gender, age, university type, or degree level. Adeleke and Emeahara (2016) investigated the link between information literacy and academic usage of electronic information resources by postgraduate students at the University of Ibadan in Nigeria. The descriptive survey research design was used to

collect data from the students who were the study's subjects. The 13 faculties with a total population of 6,665 postgraduate students served as the primary sampling units. The university's seven traditional faculties (Agriculture & Forestry, Arts, Basic Medical Sciences, Education, Science, Social Science, and Technology) were chosen to provide a good representation of postgraduate students. The findings revealed that a lack of search strategies abilities by many postgraduate students of the institution to access the multitude of e-resources is associated to a low level of utilization of electronic resources, particularly full text data bases. The predicted research-led inquiry in utilizing electronic information resources (EIR) in this digital age was not encouraged due to a lack of adequate abilities among postgraduate students.

A study by Ozoemelen (2009), on use of electronic resources by postgraduate students of the Department of Library and Information Science, Delta State University Abraka, shown there was low level of skillfulness in the use of ICT among the respondents. Lack of search skills was found to be a major hindrance to the respondent's use of electronic resources. Aina (2004) explained that some search strategies such as, Boolean logic, truncation and proximity features are useful for retrieval of information. Abubakar and Adetimirin (2015) further submitted that students sometimes lack both computer literacy and research skills and so do not find the best appropriate information; therefore, they are left to use whatever information they can find first and fast. Being able to locate quality information on the Web in an effective and efficient manner has become an essential ability in order to learn more rapidly and to make informed decisions.

More so, Nikolopoulou and Gialamas (2011) studied undergraduate students' information search practices. The subjects were 250 undergraduate students from two university departments in Greece, and a questionnaire was used to document their search practices. The findings revealed that the Web was the most commonly used information system for locating information for university assignments, with database searches being quite low. Google, in instance, was often utilized for educational tasks as well as personal activities. The top criteria stated by students when evaluating Web-based material were "relevance of content" and "ease of understanding." The variables 'frequency of Web use' and 'years of internet use' were shown to be positively connected to students' self-efficacy when it came to Web searches. The consequences for students' education are examined. Students' search behavior should be broadened to encompass a wider range of information retrieval methods than only Web search engines. Miltsakaki Eleni (2012) studied students' research skills as demonstrated in a record of search behavior on the

internet. The findings revealed that students' possess poor basic research skills, demonstrated in the very low use of multiple keywords, cutting the research short when an answer has been identified on a site, and almost never evaluating the quality of the content. In light of these results, we suggest a four-unit curriculum for teaching research skills in Elementary and Middle Schools.

4 Research Methodology

This study adopted correlational research design involving simple and multiple linear methods. According to Leed and Ormrod (2010), correlational research is concerned with establishing relationship between two or more variables in the same population or between the same variable in two populations. The population of this study is (85,526) final year students in the federal and state universities in South-West, Nigeria. The sample for the study was 398. A proportionate sampling technique was used to draw the sample. This method was used because the population of the institutions under study is not equal. Simple cluster sampling was used to select the individual respondents. Taro Yamane (1969) statistical formula was used to determine the sample size of 398. A total of 398 copies of the questionnaire were distributed and completed copies were retrieved, thus there was 100% response rate. This was achieved because respondents filled the questionnaire and were immediately returned them with help of 5 research assistants. The researcher used Pearson r and multiple correlation statistics to answer the research questions while t-test of significance of simple linear correlation and One Way ANOVA F-test associated with multiple correlation statistics were used to test the hypotheses at $p < 0.05$ level of significance.

5 Findings of the Study

Table 1: Population of the Study

S/N	Name of Institutions	State	Ownership	Total Number of Final Year Students in the South-West, Universities (2019/2020) Session
1	Federal University of Technology Akure, (FUTA), Ondo	Ondo	Federal	7,673
2	Federal University of Agriculture Abeokuta, Ogun, (FUNNAB)	Ogun	Federal	6,219

3	Obafemi Awolowo University, Ile-Ife (OAU)	Osun	Federal	9,394
4	University of Ibadan, Ibadan (UI)	Oyo	Federal	10,151
5	University of Lagos (UNILAG)	Lagos	Federal	7,648
6	Federal University, Ekiti, Ekiti State (FUOYE)	Ekiti	Federal	4,785
7	Ondo State University of science and Technology Okitipupa (OSUST)	Ondo	State	285
8	Olabisi Onabanjo University Ago Iwoye (OOUAI)	Ogun	State	7,981
9	Osun State University Oshogbo (UNIOSUN)	Osun	State	8,456
10	Ladoke Akintola University of Technology Ogbomosho (LAUTECH)	Oyo	State	6,721
11	Lagos State University (LASU), Lagos	Lagos	State	9,235
12	Ekiti State University, Ado-Ekiti, Ekiti State (EKSU)	Ekiti	State	6,978
Total				85,526

Source: Establishment units of the universities under study.

Table 2: What is the coefficient of relationship between students' knowledge of Internet resources and their use of EIR in university libraries in South-West, Nigeria?

Table 2: Summaries of Pearson r for the coefficient of relationship between the students' knowledge of Internet resources (X) and their use of EIR (Y) in university libraries in South- West, Nigeria

Size (n), Summation (Σ), Pearson r (r), Magnitude of Relationship (MR), Direction of Relationship (DR) and Remarks

V	n	Σ	r	MR	DR	Remarks
X	398	22654	0.517	Moderate	Positive	Moderate
Y	398	17270				Positive Relationship

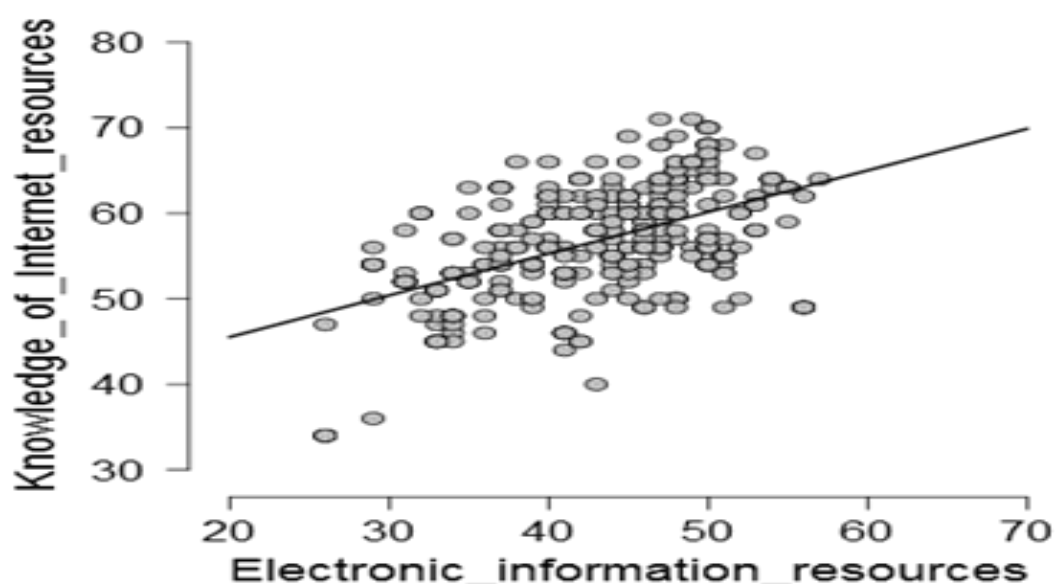


Figure 1: Scatter plot of scores in students' knowledge of Internet resources against scores in their use of EIR

Table 2 showed the computation result for the relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South-West, Nigeria. The result shows that the coefficient of relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South-West, Nigeria is 0.517. This indicated that the magnitude and direction of the relationship is moderate and positive respectively.

Furthermore, the direction of the relationship was further presented and explained in the scatter plot (graphical diagram) above. It indicated that the line of fit tends upward from left to right showing the positive direction of the linear relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South-West, Nigeria. The positive direction of the relationship shows that an increase in one variable could lead to the same measure of increase in another variable or that a change in one variable will likely leads to the same measure of change in another variable.

The summary from the table in order to answer the research question is that there is a moderate positive relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South- West, Nigeria.

Table 3: What is the coefficient of relationship between students' knowledge of search skills and their use of EIR in university libraries in South-West, Nigeria?

Table 3 summaries of Pearson r for the coefficient of relationship between the students' knowledge of search skills (X) and their use of EIR (Y) in university libraries in South-West, Nigeria

Size (n), Summation (Σ), Pearson r (r), Magnitude of Relationship (MR), Direction of Relationship (DR) and Remarks

V	n	Σ	r	MR	DR	Remarks
X	398	10471				Moderate
			0.561	Moderate	Positive	Positive
Y	398	17270				Relationship

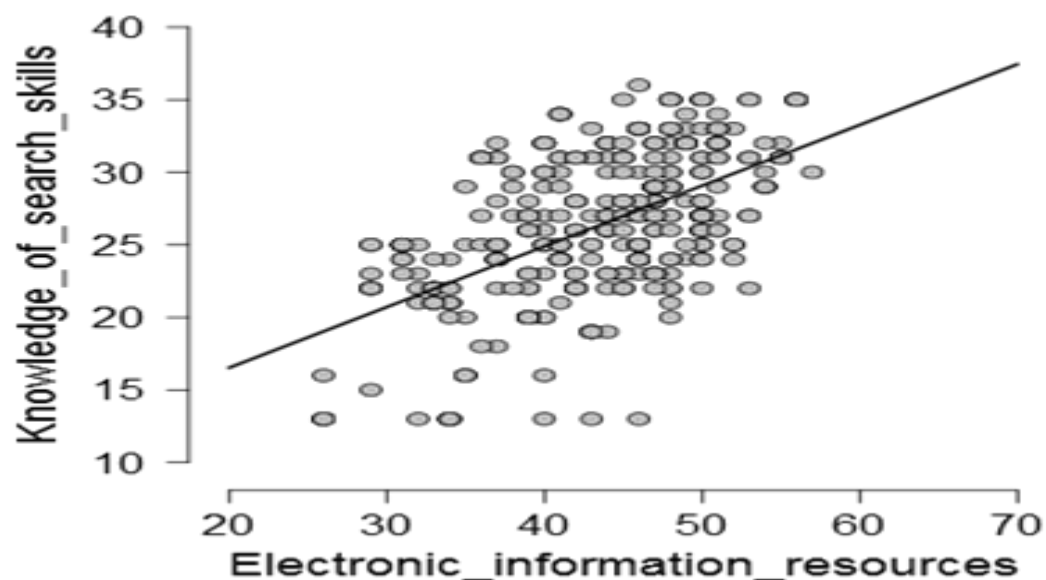


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Hypothesis

Ho: There is no significant relationship between students' knowledge of Internet resources, knowledge of search skill and their use of EIR in university libraries in South-West, Nigeria, Nigeria.

Table 4: Summary of statistics involved in F-test of the significance of the coefficient of multiple correlation

F-test of Significance of Multiple Linear Correlation/Regression among the variables

ANOVA	Sum of Squares	Degree of Freedom	Mean Squares	F _{cal.}	F _{tab.}	Decision
Regression	9157.746	4	2289.436			
Residual	8861.108	393	22.547	101.539	2.45	Reject Ho ₅
Total	18018.854	397				

Table 4 presented the F-test for the coefficient of relationship among students' knowledge of Internet resources, knowledge of search skill and their use of EIR in

university libraries in South-West, Nigeria. It was indicated in the table that the calculated F-ratio value used in testing the hypotheses, stood at 101.539, using a degree of freedom of 4:393, at 0.05 level of significance. Since the calculated F-value of 101.539 is greater than the tabulated F-value of 2.45, hence, the researcher rejected the null hypothesis; thus concluding that there is a high and significant relationship among students' knowledge of Internet resources, knowledge of search skill and their use of EIR in university libraries in South-West, Nigeria.

6 Discussion of Findings

The study revealed that there is a moderate positive and significant relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South- West, Nigeria. This finding is an indication that students' knowledge of Internet resources contributes significantly to their use of EIR in university libraries in South- West, Nigeria. It is an indication that an increase or decrease in students' knowledge of Internet resources has a moderate tendency of leading to an increase or decrease in their use of EIR in university libraries in South- West, Nigeria. Information literacy skills that students need to improve upon to include efficient search strategies, evaluation of internet information and websites, and using information ethically. This finding supports that of Apotiade (2017) study who revealed that there is a positive significant relationship between computer literacy and the use of electronic resources among undergraduate students. In a similar study, Abubakar and Adetimirin (2015) discovered that the computer literacy level of postgraduates was average (56.3 percent). They only used a few of the e-resources in their libraries, and they did so infrequently. Computer literacy demonstrated a favourable, very strong, and substantial connection with postgraduates' use of e-resources. This demonstrates that the more postgraduates are exposed to computer literacy abilities, the more effective they are at using e-resources in their study. Because computer knowledge is required to influence postgraduates' use of e-resources, a computer literacy program for new arrival postgraduates should be implemented.

It was further found in this study that there is a moderate positive and significant relationship between students' knowledge of search skills and their use of EIR in university libraries in South- West, Nigeria. This finding shows that there is a moderate influence of students' knowledge of search skills and their use of EIR in university libraries in South- West, Nigeria. This shows that students' knowledge of search skills

plays a significant role in their use of EIR in university libraries in South- West, Nigeria. Knowledge of search skills are required for independently searching the internet and getting accurate results related to your information needs. This finding is in tandem with the result of Adeniran and Onuoha (2018) which revealed that there was a significant positive correlation between information literacy skills and use of electronic resources. The study concluded that the utilization of electronic resources promoted access to current information among postgraduate students. Similarly, Oluwole and Adeyinka, (2019) revealed that information technology skills had influence on library patronage by undergraduate students in the universities. The related nature of this finding could be attributed to the similar nature of the design.

The study revealed that there is a high significant relationship among students' knowledge of Internet resources, knowledge of search skill and their use of EIR in university libraries in South-West, Nigeria. This shows that users' knowledge of Internet resources variables are highly associated with electronic information resources use in university libraries in South-West, Nigeria. This implies that an increase in one variable is related to the same measure of increase in other variables. This finding is in consonance with the result of Uwaifo and Azonobi (2014) findings which revealed that e-mail, e-journal and online database were the Internet resources and services mostly used by the postgraduate students. In a related manner, Ternenge and Kashimana (2019) findings revealed that the internet search skills of the respondents have boosted their access and use of electronic information resources. Also, Ani (2010) findings of the study revealed that the Internet is extensively use by the students of the University of Uyo, University of Calabar and Rivers State University of Science and Technology. The above findings show a strong indication that the two variables are highly related and thus has an influence on one another. The similarities recorded from the above findings could be attributed to the use of similar variables.

7 Conclusion

The findings of the study indicated among others that there is a moderate positive and significant relationship between the students' knowledge of Internet resources and their use of EIR in university libraries in South- West, Nigeria; there is a moderate positive and significant relationship between students' knowledge of search skills and their use of EIR in university libraries in South-West, Nigeria; and there is a high and significant

relationship among students' knowledge of Internet resources, knowledge of search skill and their use of EIR in university libraries in South-West, Nigeria.

Based on the above findings, the study recommended among others that undergraduate students should enhance their use of Internet resources since it is related with the use of electronic information resources in the universities. It was thus concluded that (students' knowledge of Internet resources & students' knowledge of search skill) are associated significantly with their use of EIR in university libraries in South-West, Nigeria.

8 Recommendations

Based on the results of the study the following recommendations have been outlined:

1. The universities' library management should encourage their students with provision of resources capable of developing the students' knowledge of Internet resources.
2. Seminars and workshops should be organized for students by university management on issues bordering on knowledge of search skills for better electronic information resource usage.
3. There should be presence and instruction of internet and ICT literacy courses to students in the academia through orientation and workshop.

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