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Awareness and Utilization of Electronic Information Resources by Undergraduate Students in Osun State University

 \mathbf{BY}

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Abstract

This study examined awareness and utilization of electronic information resources by undergraduate students in Osun State University. Descriptive survey design was adopted for the study while the population of the study consist the undergraduate students in Osun State University, from which 374 were selected using multi-stage sampling technique. A self-designed questionnaire was used to collect data from 374 respondents, out of which 354 copies were completely filled and returned. Data collected were analyzed using frequency counts, percentage and PPMC. The study found that e-books, e-serial, e-databases, e-magazines, e-journals, CD-Rom, e-mails, e-project and dissertations are the major electronic information resources available to the students. Also, the study found that the level of awareness of students about the available e-resources is high while majority of the respondents use e-resources weekly. Furthermore, slow internet connectivity, inadequate computer facility, epileptic power supply and poor infrastructural facilities are the major challenges that students encountered while using electronic information resources. The study also found that there is a significant relationship between awareness of EIS and utilization. The study recommends that library should improve the awareness of EIS so as to increase the effective use of this service.

Keywords: Awareness, Electronic Information Resources, Utilization, Academic Library, Undergraduate Students

Introduction

The importance of libraries in the higher institution of learning cannot be underrated. This because they play fundamental roles in teaching, learning and research activities through the information resources acquired, and services they rendered to the library users. In the past, libraries only acquired print information resources into their collection and users need to visit the library to access and use the information resources in the library. However, in the 21st century, the introduction of Information and Communication Technology (ICT) to the libraries, there are tremendous changes in the mode of libraries' operations and services, that is, the emergency of ICT in the library has affected all aspects of information acquisition, storage and dissemination

of information resources to the library users. Most importantly, libraries are not only acquiring printed books and journals but also have electronic information resources in their collection which provide access to various learning resources in electronic format. These information resources are not found only in physical formats but also in soft format which can be accessed only through electronically manipulated machines such as computer machines, CD-ROM readers, opaque readers, projector among others. Conceptually, the term electronic information resources can be described as material consisting of data or computer program(s) which are encoded for reading and manipulation by a computer or by the use of a peripheral device directly connected to the computer, such as a CD-ROM drive, or remotely via a network, such as the Internet (Obaseki, 2014). In other words, electronic information resources can be described as the electronic representation of information which can be accessed via electronic system and computer network (Akpojotor, 2016). These resources are available in various forms like e-journals, e-magazine, e-learning tutors, software applications, electronic texts, bibliographic databases, institutional repositories, Web sites, e-books, collections of e-journals, among others.

Consequently, the emergency and development of electronic information resources make it possible for librarians to envision different ways of organizing the information resources and services that library traditionally provided to users. In the same vein, these resources offer numerous advantages over print information resources for the users. Among these advantages is that they are convenient to search and access within the shortest possible time. Also, students and other information users can effectively and efficiently access these information resources to s tackle the issues they are investigating, solving problems, making decisions, creative solutions to support learning, develop new understanding in areas of learning (Aramide & Bolarinwa, 2010). In addition, the use of electronic information resources help the students to have access to up to date information on various subjects and also assist in developing new thinking and learning skills. With these evidences, it shows that electronic information resources are important for the academic community (Egberongbe, 2011). One of the important factors that contribute to the effective and efficient utilization of the electronic information resources available in the library is the level of awareness about these resources. According to Akpojotor (2016), awareness refers to the knowledge or perception of a situation, fact, consciousness, recognition, realization, grasp and acknowledgement concern about and well-informed interest or familiarity in a particular situation or development. This factor is pertinent because it alert the users of the available electronic information resources in the library and the available medium through which these resources can be accessed. Most importantly, it should be noted that when students are aware of the electronic information resources available in the library, they will effectively and efficiently use them for academic and research activities. Apart from this, it is important to note that for students to make the utmost use of these resources, they need ICT skills which will help them to gain independent use of various electronic information resources available in the library and on the web. However, it has been observed that undergraduate students in developing countries including Nigerian lack searching skills and they are also facing some challenges such as poor infrastructural facilities high cost of subscription, poor awareness of the available electronic information resources in the library among others resulted to the underutilization of these information resources by the students. Therefore, it is against this backdrop that this study was set out to examine awareness and utilization of electronic information resources among the undergraduate students in Osun State University.

Statement of the Problem

The advent of Information and Communication Technology (ICT) in 21st century gradually shifting libraries' collection from print resources to electronic information resources so as to become relevant in this digital age. These resources (electronic resources) are invaluable resources that complement print information resources and they have been very helpful to students and other information users who may have limited access to library resources in traditional formats (Egberongbe, 2011). Despite the fact that electronic information resources offered numerous advantages over print information resources, previous studies had shown that undergraduate students in Nigeria seem not to be utilizing these e-resources available to them which could be about poor awareness of these electronic information resources and if they were aware about these resources, what are the factors that hindered there usage. This is because Ekenna and Ukpebor (2012) as well as Okpala (2004) revealed that electronic information resources have received high patronage with functional acceptance in other countries globally as against the situation in Nigeria, which might be as a result of lack of or inadequate awareness of e-resources. However, in the case of Osun State University, there is unavailability of such empirical studies. Therefore, it is in the light of this that this study was designed to examine awareness and utilization of electronic information resources among the undergraduate students in Osun State University.

Objectives of Study

The broad objective of this study is to examine awareness and utilization of electronic information resources among the undergraduate students in Osun State University. The study will specifically:

- 1. Identify perceived electronic information resources available to undergraduate students in Osun State University;
- 2. Determine the level of awareness of undergraduate students in Osun State University of these electronic information resources;
- 3. Determine the frequency of use of electronic information resources by the undergraduate students in Osun State University;
- 4. Identify challenges that students encountered while using electronic information resources.

Research Questions

The study will sought to provide answers to the following research questions:

- 1. What are the perceived electronic information resources available to undergraduate students in Osun State University?
- 2. What is the level of awareness of undergraduate students in Osun State University of these electronic information resources?
- 3. What is the frequency of use of electronic information resources by the undergraduate students in Osun State University?
- 4. What are the challenges that students encountered while using electronic information resources?

Hypothesis of the Study

The following null hypotheses will be tested at 0.05 level of significant

H₀₁ There no significant relationship between level of awareness and utilization of electronic information resources by undergraduate students in Osun State University.

Scope of the Study

The study focused on awareness and utilization of electronic information resources among the undergraduate students in Osun State University. The study is limited to Osun State University. The population of the study consist all the undergraduate students in Osun State University. Questionnaire was the only instrument used to collect data from the respondents. Data collected for the study was coded and analyzed using frequency counts and percentages while the only null hypothesis of the study was tested by using Pearson Product Moment Correlation (PPMC).

Review of Related Empirical Studies

Researchers from different part of the world had carried out different studies on the awareness and utilization of electronic information resources among students in tertiary institutions. One of the findings of the previous researchers is the work of Ahmad and Panda (2013) who carried out a study to find out whether the faculty members of Institutes/Universities in Dubai are aware and fully use the library databases and other electronic information resources within and outside the libraries. Structured questionnaire was used to collect data from the 30 faculty members of the three institutes, representing ten from each. The results showed that majority of the faculty members were aware and use the electronic information resources. In another study conducted by Abinew and Vuda (2013) on acceptance and use of electronic library services in universities revealed that majority of the respondents were aware of the available e-library services to some extent while minority of the respondents were not aware about the existence of these services at all. In the same vein, Aina (2014) investigated awareness, accessibility and use of electronic databases among academic staff of Babcock University. The researcher found that nine out of thirteen databases under consideration were averagely aware by respondents. This shows that there is need for the increase in the awareness of all electronic resources that the library subscribed to.

In addition, Dange, Girish, Savitha, Sushma and Veenakumari (2013) evaluated awareness and usage of digital information sources and services by postgraduate students of Kuvempu University. The study found that there is significant difference between previous and final year students of digital information sources awareness, digital information services awareness, and digital information sources usage. Also, there is significant difference between arts, science and education postgraduate student's digital information sources awareness, digital information services awareness, digital information sources usage and digital information services usage. But there is no significant difference between previous and final year students' digital information services usage, digital information sources awareness. There is no significant difference between digital information sources usage, digital information services awareness, and digital information services usages of male and female postgraduate students. The study of Tyagi (2011) on use and awareness of electronic information sources at IIT Roorkee, India confirmed that users have knowledge about the availability of electronic journals, but many use them as the supplementary way to use information. Furthermore, Dolo-ndlwana (2013) evaluated use and value of library's electronic resources by academic and postgraduate student at Cape Peninsula University of Technology. The researcher found that the majority of the respondents used electronic resources while few of the respondents did not use e-resources due to the lack of awareness.

In another study carried out by Akpojotor (2016) on the awareness and usage of electronic information resources among postgraduate students of library and information science in Southern Nigeria. The descriptive survey design was adopted for the study. The census sampling technique was adopted for this study. Thus, the entire population of three hundred and seventyfive (375) postgraduate students of library and information science in Southern Nigeria were used as the sample for this study. The questionnaire tagged: Awareness and Usage of Electronic Information Resources by Postgraduate Students of Library and Information Science Questionnaire (AUEIRPSLISQ) was used as instrument for data collection. Four research questions were answered and two null hypotheses were tested at 0.05 level of significance. The simple percent statistical tool was used to answer the research questions and Pearson Product Moment Correlation Coefficient (PPMCC) for testing the hypotheses. The results obtained revealed that postgraduate students of library and information science are quite aware and highly use electronic information resources. The study also reported that postgraduate LIS students are skilled in the use of electronic information resources, and there is a significant relationship between level of awareness of EIS and usage. Contrarily, the findings of Angello (2010) revealed that the rate of awareness of electronic resources among livestock researchers in Tanzania was very low. Also, Igbeka and Okpala (2004) reported that since the introduction of CD-ROM literature search into the University of Ibadan library system in 1995, the number of users of the CD-ROM facility was still very small as against the number of registered library users. In the light of this, they concluded that factor that responsible for this may be subjected to the lack of current awareness or dissatisfaction of users. Ali (2005) also examined the use of electronic information services (EIS) among the users of Indian Institute of Technology (IIT) library in Delhi, India and found that 95% of users have awareness about EIS provided by the library.

On the other hands, Dhanavandan and Nagarajan (2012) examined use of electronic resources at Krishnasamy College of Engineering & Technology Library, Cuddalore. The study found that majority of the students were aware and used e-resources once a week while too long to view/download web pages the major challenges encountered In the same vein, Ojo and Akande (2005) surveyed 350 respondents to examined student's access, usage and awareness of electronic information resources at the University College Hospital (UCH) Ibadan, Nigeria. The study revealed that the level of usage of the electronic information resources is not high. This is because majority of the respondents claimed that lack of information retrieval skills for exploiting electronic resources make their level of usage of resources very low. Adeniji, Babalola and Ajayi (2015) investigated the awareness and utilization of electronic resources by Librarians of Olabisi Onabanjo University, Nigeria. The study revealed that internet facilities, ejournals, e-books, OPAC, CD-ROM are commonly available for use in the library and that librarians use electronic resources regularly for daily routine and research work, article search, Library of Congress (LC) online catalogue and OPAC largely for the purpose of in-house official duty. Maharana, Sethi and Behera (2010) examined the use of internet and e-resources among students of business management, Sambalpur University. The study found that e-resources and services in varied forms are rarely used by majority of management students. Furthermore, Sethi and Panda (2012) studied the use of e-resources by life scientists in Sambalpur University. The study revealed that 92.18% of the respondents preferred to use e-resources compared to print documents. In the same vein, Shukla and Mishra (2011) reported that 76% of the postgraduate students at the Institute of Technology, Banaras Hindu University use e-resources daily. Konappa (2013) examined use of electronic information resources in University libraries of Tirupati. The study found that majority of the respondents use electronic information resources everyday. Gakibayo, Ikoja-Odongo and Okello-Obura (2013) also examined electronic information resources utilization by students in Mbarara University Library. The study found that utilization of e-resources was not only affected by lack of computer skills and information literacy skills but also lack of enough computers and slow internet connectivity, and majority of the respondents use e-resource weekly.

Another study carried out by Oduwole and Akpati (2003) on use of electronic information resources at the University of Agriculture Library in Abeokuta, Nigeria. The study identified lack of ICT and power supply outage as constraints to use of electronic resources by the respondents. Also, Owolabi, Idowu, Okocha and Ogundare (2016) evaluated utilization of electronic information resources by undergraduates in the Faculties of Education and the Social Sciences in University of Ibadan. The study adopted a descriptive survey design with a study population of 1872 undergraduates in the Faculties of Education and the Social Sciences in University of Ibadan. A sample of 200 respondents were selected from each faculty using a simple random technique. Data was analyzed using the SPSS software, frequency distribution and percentages. The findings revealed that the internet services, e-mail services, online databases, electronic databases and cybercafés were the available electronic information resources often used by the undergraduate students in University of Ibadan. The result further revealed that inadequate power supply, poor network/internet connectivity and limited access to computer terminals are the factors that hinder the use of electronic resources. In the same vein, Watts and Ibegbulam (2006) surveyed some of the barriers to the use of electronic information resources available at the Medical Library of College of Medicine, University of Nigeria, Nsukka. Their findings exposed that lack of an adequate ICT (information and communication technology) infrastructure and affordable online access, absence of in-depth ICT skills and information searching skills among library staff, and cost of using the cybercafé are barriers to the use of electronic resources. Gakibayo, Ikoja-Odongo and Okello-Obura (2013) examined electronic information resources utilization by students in Mbarara University Library. The study found that

Methodology

This study adopted descriptive survey research design. The population of this study consists of all the undergraduate students in Osun State University. As at 2018/2019 academic session, the total number of undergraduate students in Osun State University is 12827. A sample size of 374 was selected across the faculties that made up the institutions by using multi-stage sampling technique. The questionnaire titled "Questionnaire on Awareness and Utilization of Electronic Information Resources among Undergraduate Students" with the acronym of "QAUEIRUS" was used to collect data from the respondents. The instrument was divided into five parts, i.e. Part A-E. Part A deals with the demographic information of the respondents while Part B-E deals contain information on the four research questions of the study. Three copies of the questionnaire were given to the research expert in the Department of Library and Information Science for face and construct validity. To determine the level of reliability of the instrument, twenty copies of the instrument were administered to the undergraduate students in Obafemi Awolowo University. The data collected was subjected to Cronbach Alpha with reliability co-efficient of 0.76. A total number of 374 copies of the question of the questionnaire were personally administered by the researcher coupled with the help of the research assistance in each faculty and the respondents were asked to fill and return the instrument immediately. Out of 374

administered copies of the instrument, only 352 copies were completely filled and return which give 94% return rate. Data collected for the four research questions was analyzed using frequency counts and percentages while Pearson Product Moment Correlation Coefficient (PPMCC) was used to test the only null hypothesis of the study.

Data Presentation and Analysis

Demographic Information of Respondents

Table 1: Demographic Information of Respondents

Gender	Frequency	Percent	
Male	266	75.6	
Female	86	24.4	
Fotal	352	100.0	
Age			
16-20	134	38.1	
21-25	175	49.7	
26-30	43	12.2	
Total	352	100.0	
Academic Level of Study			
00	13	3.7	
200	38	10.8	
300	109	31.0	
400	192	54.5	
Γotal	352	100.0	

The results in Table 1 showed the demographic information of the respondents. The results revealed that out of 352 respondents, 266 (75.6%) were male while 86 (24.4%) were female. This means that majority of the respondents were male. On the age distribution of the respondents, the results confirmed that majority of the respondents fall between the ages of 21-25 represented by 175 (49.7%). This is followed by the respondents that fall between the ages of 16-20 represented by 134 (38.1%) while 43 (12.2%) respondents fall between the ages of 26-30. Based on the academic level of study of the respondents, the results revealed that 192 (54.5%) respondents were in 400 level while 109 (31.0%) were in 300 levels. Next to this are the respondents that were in 200 levels represented by 38 (10.8%) while 13 (3.7%).

Research Question 1: What are the perceived electronic information resources available to undergraduate students in Osun State University?

Table 2: Perceived Available Electronic Information Resources to Undergraduate Students

S/N	Electronic Information Resources	Available	Not Available
1	E-books	303 (86.1%)	49 (13.9%)
2	E-serials	203 (57.7%)	149 (42.3%)
3	E-database	256 (72.7%)	96 (27.3%)
4	E-magazines	294 (83.5%)	58 (16.5%)
5	E-journals	277 (78.7%)	75 (21.3%0
6	CD-ROM	226 (64.2%)	126 (35.8%)
7	Reference Database	146 (41.5%)	206 (58.5%)
8	E-mails	285 (81.0%)	67 (19.0%)
9	E-project and Dissertation	314 (89.2%)	38 (10.8%)
10	E-news group	134 (38.1%)	218 (61.9%)

The results in Table 2 showed the perceived available electronic information resources to undergraduate students. The results revealed that e-books, e-serial, e-databases, e-magazines, e-journals, CD-Rom, e-mails, e-project and dissertations are the major electronic information resources available to the respondents.

Research Question 2: What is the level of awareness of undergraduate students in Osun State University of these electronic information resources?

Table 3: Level of Awareness of Undergraduate Students of Electronic Information Resources

`S/N	Electronic Information Resources	Highly Aware	Less Aware
1	E-books	257 (73.0%)	95 (27.0%)
2	E-serials	242 (68.8%)	110 (31.2%)
3	E-databases	319 (90.6%)	33 (9.4%)
4	E-magazines	121 (34.4%)	231 (65.6%)
5	E-journals	250 (71.0%)	102 (29.0%)
6	CD-ROM	269 (76.4%)	83 (23.6%)
7	Reference Database	131 (37.2%)	221 (62.8%)
8	E-mails	240 (68.2%)	112 (31.8%)
9	E-project and Dissertation	220 (62.5%)	132 (37.5%)
10	E-news group	148 (42.0%)	204 (58.0%)

Results in Table 3 confirmed that majority of the respondents were highly aware about the availability of e-books, e-serials, e-databases, e-journals, CD-Rom, e-mails, e-projects and

dissertations. On the other hand, majority of the respondents had little or no awareness of e-magazine, reference databases and e-news group.

Research Question 3: What is the frequency of use of electronic information resources by the undergraduate students in Osun State University?

Table 4: Frequency of Use of Electronic Information Resources by Undergraduate Students

	Frequency	Percentages
Daily	129	36.6%
Weekly	183	52.0%
Monthly	28	8.0%
Yearly	12	3.4%
Total	352	100.0

The result in Table 4 showed the frequency of use of electronic information resources by the undergraduate students. The results confirmed that majority of the respondents use electronic information resources weekly represented by 183 (52.0%) while 129 (36.6%) use electronic information resources daily. This is followed by the respondents that use electronic information resources monthly represented by 28 (8.0%) while 12 (3.4%) use electronic information yearly.

Research Question 4: What are the challenges that students encountered while using electronic information resources?

Table 5: Challenges Students Encountered while Using Electronic Information Resources

`S/N	Challenges	Yes	No
1	Slow internet connectivity	263 (74.7%)	89 (25.3%)
2	Poor information searching skills	132 (37.5%)	220 (62.5%)
3	Epileptic power supply	286 (81.2%)	66 (18.8%)
4	Poor infrastructural facilities	262 (74.4%)	90 (25.6%)
5	Inadequate computer facility	285 (81.0%)	67 (19.0%)
6	High cost of using cyber café	110 (31.2%)	242 (68.8%)

Results in Table 5 identified challenges that students encountered while using electronic information resources. The results showed that slow internet connectivity, inadequate computer facility, epileptic power supply and poor infrastructural facilities are the major challenges that students encountered while using electronic information resources.

Testing of Hypothesis

 H_{01} There no significant relationship between level of awareness and the use of electronic information resources by undergraduate students in Osun State University

Table 6: Relationship between Level of Awareness and Use of Electronic Information Resources

Variables	Mean	SD	N	DF	R-cal	P-value	Remark
Level of Awareness	15.93	3.26	352	350	0.719	.000**	Sig.
Use of electronic Information Resources	25.25	6.10					

Source: Field Survey (2019) ** Correlation is significant at the 0.01 level (2-tailed)

Table 6 showed the summary of the tested hypothesis. The results showed that there is a significant relationship between level of awareness and use of electronic information resources. This is because the correlation coefficient (r) is = 0.681 while the degree of freedom= 357 and P-value is 0.000 less than the level of significant which is 0.05. This confirmed that there is a significant relationship between the awareness and use of electronic information resources. Hence, the null hypothesis is rejected and the study therefore, establishes that there is significant relationship between awareness and use of electronic information resources.

Discussion of Findings

The primary aim of this study is to examine awareness and utilization of electronic information resources among the undergraduate students in Osun State University. The first findings of the study showed that e-books, e-serial, e-databases, e-magazines, e-journals, CD-Rom, e-mails, e-project and dissertations are the major perceived electronic information resources available to the undergraduate. The importance of these resources cannot be overemphasized in the academic setting. This is because the offer numerous benefits to both the students and lecturers. This is the reason why many libraries acquires these resources into their collections. This finding corroborates with the findings of Adeniji, Babalola and Ajayi (2015) who investigated the awareness and utilization of electronic resources by Librarians of Olabisi Onabanjo University, Nigeria. The study revealed that internet facilities, e-journals, e-books, OPAC, CD-ROM are commonly available for use in the library and that librarians use electronic resources regularly for daily routine and research work, article search, Library of Congress (LC) online catalogue and OPAC largely for the purpose of in-house official duty. Furthermore, this study found that the level of awareness of undergraduate students in Osun State University is high. This is because majority of the respondents claimed that they were highly aware about the availability of

e-books, e-serials, e-databases, e-journals, CD-Rom, e-mails, e-projects and dissertations. On the other hands, the result also showed that respondents had little or no awareness about e-magazine, reference databases and e-news groupThis finding is in agreement with the work of Ali (2005) who reported that 95% users of electronic information resources in Indian Institute of Technology (IIT) library in Delhi, India have awareness about EIS provided by the library. However, this finding contradicts the work of Angello (2010) who reported that the rate of awareness of electronic resources among livestock researchers in Tanzania was very low. The implication of this is that the level of utilization of electronic information resources by the student will be low.

Furthermore, the study found that majority of the respondents use electronic information resources weekly. This finding supports the work of Gakibayo, Ikoja-Odongo and Okello-Obura (2013) who examined electronic information resources utilization by students in Mbarara University Library and found that majority of the respondents use e-resource weekly. However, this finding against the work of Konappa (2013) who examined use of electronic information resources in University libraries of Tirupati and found that majority of the respondents use electronic information resources everyday. The reason why the students use electronic information resources weekly may be attributed to the challenges that that students encountered while using e-resources. As found in this study, slow internet connectivity, inadequate computer facility, epileptic power supply and poor infrastructural facilities are the major challenges that students encountered while using electronic information resources. This finding is in line with the work of Owolabi, Idowu, Okocha and Ogundare (2016) who evaluated utilization of electronic information resources by undergraduates in the Faculties of Education and the Social Sciences in University of Ibadan and found that inadequate power supply, poor network/internet connectivity and limited access to computer terminals are the factors that hinder the use of electronic resources. The implication of this is that, the level of utilization of library resources will be reduce and library will become irrelevant. In addition, the result of the only tested hypothesis revealed that there is a significant relationship between level of awareness and utilization of electronic information. This finding is in agreement with the work of Akpojotor (2016) who examined awareness and usage of electronic information resources among postgraduate students of Library and Information Science in Southern Nigeria and found that there is a significant relationship between level of awareness of EIS and usage. This implies that more the students have knowledge about the available resources the more they will use them vise-versa.

Conclusion and Recommendation

Electronic information resources are the important information resources to the student and other information users in the tertiary institutions which offer them recent and up-to-date information. With the large amount of funds that library invested in the acquisition of these information resources, the study concluded that without creating proper awareness on the available electronic information resources in the library, information users may not have proper knowledge about the available e-resources in the library which may affect the effective utilization of these information resources. Furthermore, library management must address the challenges that users encountered while using electronic information resources. Based on the findings of this study, the following recommendations were made:

- i. Library should improve the awareness of electronic information resources in the library to the students and other information users so as to increase the use of this service. This is because the study found that large number of the students claimed that the level of awareness of the existence of e-magazine, reference databases and e-news group in the library is relatively low which in turn affect the level of utilization of most of these resources.
- ii. The library management should find an alternative way to create electricity supply in the library such as provision of generator and solar energy.
- iii. University management should subscribe to internet service provider with a very high bandwidth which will enable students to easily access and retrieve the needed information resources.
- iv. University management should increase the funding of the library so as to purchase enough computer facilities that students will use to access the information materials they need for their study.

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